

Rural Residents' Perinatal Experiences During the Initial Months of the COVID-19 Pandemic: A Qualitative Study in British Columbia

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Introduction: Many studies have explored the impact of the coronavirus disease 2019 (COVID-19) pandemic on perinatal health, but few have examined the effects of the pandemic on birthing families through a rural lens. Given that the COVID-19 pandemic has reinforced long-standing disparities between urban and rural communities, it is important that the significance of place on the health and wellness of rural populations is made visible.

Methods: In-depth interviews and focus groups with 16 participants from rural communities in British Columbia, Canada, were performed. Participants included those who had been pregnant or given birth after March 11, 2020. Data from the interviews and focus groups were analyzed using the principles of thematic analysis to understand the perinatal experiences of rural families during the initial months of the COVID-19 pandemic.

Results: Analysis of the data revealed 4 major themes: perceived risk of infection, navigating uncertainty, experience of care received, and resilience and silver linings. In general, participants conceptualized rural communities as safer bubbles. Exceptions included specific vectors of risk such as tourism travel and border communities. Challenges experienced by rural families including anxiety around changing health guidelines, reduced social support, and potential loss of their partners' support at births. Additional concerns specific to rural experiences added to this burden, including fear of traveling to referral centers for care and increased difficulties accessing resources.

Discussion: Participants reported positive, compassionate care experiences that helped to mitigate some of the added stressors of the pandemic. These findings highlight the importance of perinatal care provision that integrates physiologic and mental health supports. This study provides a foundation for a comprehensive inquiry into the experiences of rural perinatal services during COVID-19.

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INTRODUCTION

The impact of the coronavirus disease 2019 (COVID-19) pandemic on childbearing people has been significant.^{1–3} Changes in health care guidelines to ensure physical distancing and infection control have resulted in reduced face-to-face appointments, increased use of telehealth, and limitations on the number of support people allowed for ultrasound appointments and during labor and birth.^{4–6} Other key factors impacting the mental health of expectant parents include home confinement, disrupted sleep, loss of social rituals such as baby showers, loss of social support, and fear of infection within the family unit.^{4,7} Misinformation or limited informational support around public health guidelines have further contributed to heightened fear and anxiety during the perinatal period.^{4,7–9} Families that have experienced adverse outcomes during pregnancy and birth have been disproportionately impacted from reduced social support and decreased access to overburdened mental health care providers.¹⁰

In addition to understanding how changing public health guidelines impact patients' mental health, the COVID-19 pan-

dem has also provided an opportunity to evaluate how global health crises have “differential impacts based on place context.”^{11(p1)} Although significant for health outcomes,¹² the relationship between health and place extends beyond considerations of the consequences of distance traveled to regional referral centers.¹³ Place, in a phenomenological sense, is the experience of a particular location and is linked to and “produced by special practices and logics.”^{14(p2280)} A place-based analytical lens therefore considers the multiple, intersecting factors that influence patients' experiences of their own health and well-being, including relationships between economy, culture, and health care infrastructure.¹⁵ With appreciation for the heterogeneity of rural communities across Canada, rural residents face long-standing inequities in health tied to their experiences of place, such as higher rates of preventable disease, higher rates of mortality, and decreased access to health services including mental health and substance use resources.^{16–18} Malatzky et al's¹¹ research in Australia reveals how the COVID-19 pandemic has reinforced enduring health disparities across urban and rural spaces. Their research also highlights a dichotomous perception of risk, wherein rural communities become safe havens for urban dwellers with resources to escape to, and urban locations are perceived as synonymous with “sites of threat.”¹¹ This place-based perception of risk has implications for how rural childbearing persons navigate the perinatal experience, including

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Quick Points

- ◆ This study contributes to the emerging literature on the qualitative experiences of childbearing persons during the coronavirus disease 2019 (COVID-19) pandemic by positioning experiences through a rural lens.
- ◆ Participants revealed the strengths of perinatal care in rural communities, as well as the challenges that rural residents face when accessing care outside of their communities, reflecting on the importance of local care.
- ◆ This study highlights the need to appreciate the influence of isolation in rural birthers' experiences but also to appreciate attributes that smaller settings had during the COVID-19 pandemic.
- ◆ These data provide the foundation for a comprehensive inquiry into the experience of rural perinatal services communities during COVID-19, including the experiences of care providers and other key stakeholders, to develop health system responses to support rural communities during other global health crisis.

making decisions around type and frequency of care received and limiting or modifying social support.

A number of researchers have called for qualitative inquiries to understand the social response to the COVID-19 pandemic.^{4,8,19–21} Qualitative inquiry fills the gaps that epidemiological research leaves in building effective interventions and thoroughly assessing causes of disease spread by illuminating attitudes and opinions about risk perception and current public health interventions.²⁰ So far, other studies that have focused on the implications of COVID-19 for rural communities have primarily been limited to telehealth,^{22–26} including rural inequities in telehealth infrastructure²⁷ and lack of telehealth access for specific populations such as the elderly²⁸ and homeless populations.^{29,30} Within this context, this article contributes to the emerging literature on the qualitative experiences of childbearing persons during the COVID-19 pandemic by positioning experiences through a rural lens.

To our knowledge, no study to date from a high-income country has specifically looked at the experiences of rural birthing families during the COVID-19 pandemic. This study aims to qualitatively explore people's attitudes, practices, and perceptions of risk throughout pregnancy, birth, and postpartum, as well as opinions of care received in low-volume, low-resource settings during the COVID-19 pandemic. Given the characteristics of rural communities, it is imperative that place dynamics are made visible to ensure that rural communities are part of ongoing conversations about planning resilient, patient-centered health systems within the context of subsequent health and environmental crises.

This study is part of a larger comprehensive evaluation on the efficacy of Rural Surgical and Obstetrical Networks (RSO) in British Columbia, Canada: a program designed to support and sustain low-volume rural services. A key part of the evaluation is documenting individuals' and families' experiences of care. As the tenure of RSO coincided with the COVID-19 pandemic, a substantial part of patient experience reflected experiences of care within the context of COVID-19. This article conveys specifically this data.

METHODS

This study used in-depth qualitative interviewing with rural residents who were pregnant or who had given birth dur-

ing the COVID-19 pandemic across 6 communities in British Columbia.

Theoretical Framework

This study was conducted using a phenomenological methodological framework, which seeks to interpret the phenomenon being studied through the lens of participants' lived experiences.³¹ This theoretical framework recognizes the importance of researcher's reflexivity in the interpretation and writing up of qualitative data.³² In an effort to engage in transparency and improve the rigor of the analysis, the researchers have included information about their background and positionality below.

Research Team Positionality

The first author (J.K.) is a rural health systems researcher, with more than 2 decades of expertise in rural perinatal care in British Columbia. The second author (E.S.) has experience in health care policy and qualitative research methodologies. The third author (A.C.) holds a degree in philosophy and has experience with rural health research. All authors identify as white, cisgender women, and only the first author (J.K.) is a rural resident herself. The impetus for this study came out of a desire to understand the impact of the COVID-19 pandemic on rural birthing residents of communities participating in the RSO project.

Participants and Settings

At the time of this study, there were a total of 6 RSO sites; 4 in the eastern-interior region of British Columbia and 2 in the north. Study site populations ranged from 313 to 7547, and all were supported with local access to cesarean birth by Family Physicians with Enhanced Surgical Skills: a subset of family physicians who are important to rural health care infrastructure because they are qualified to perform cesarean births and other select surgical procedures.³³ Participants were recruited from RSO communities through a pre-established recruitment method, which included outreach to community Facebook groups, local newspapers, and through word of mouth by community gatekeepers, including RSO community liaisons and staff from public health offices. Inclusion criteria

for participating was having been pregnant or given birth after March 11, 2020 (the date when a state of emergency was declared in Canada because of the COVID-19 pandemic) and being a resident of a rural community in British Columbia at the time. Focus groups ranged in size from 3 to 6 participants. Anyone who was not able to attend a focus group was invited to an individual interview.

Because of contact concerns during the COVID-19 pandemic, all interviews and focus groups occurred remotely through secure videoconference.

Design

Interview Methods

Interviews were conducted by the RSON project evaluation principal investigator (J.K.), in collaboration with the qualitative analyst (E.S.), both of whom are researchers experienced in qualitative interviewing. A semistructured interview guide was used to explore the pregnancy, birth, and postpartum experiences of rural persons during COVID-19. The guide covered the following broad topics such as the impact of the pandemic on participants' mental health, their daily routine, and the care they received from a physician or midwife. Probing questions were used to further expand and clarify participants' narratives with a foundational commitment to unstructured interviewing.

Data Analysis

Audio files from the interviews and focus groups were transcribed by an external transcription service and checked against the audio files for accuracy. The coders (E.S. and A.C.) immersed themselves in the data by reading the transcripts multiple times. Using principles of thematic analysis,³⁴ and NVivo qualitative data analysis software, each coder independently developed a codebook that categorized participants' narratives of their lived experience. Each codebook reflected a breakdown of the semantic identification of recurring ideas and common trends: *codes*.³⁵ The 2 codebooks were then compared for congruence to ensure consistent interpretation of the data and to look for any dissonance in understanding.³⁶ As congruence was high, the codebooks were merged and applied to all transcripts by the primary coder (A.C.). Through this process, themes and subthemes on the experiences of perinatal persons in rural British Columbia during COVID-19 were identified. After performing thematic analysis, the research team determined that data saturation had been reached, because of the recurring identification of main themes and subthemes in participants' narratives.³⁷ The process remained flexible and themes were consistently checked against the multiple transcripts to ensure accurate reflection of the data.

Ethics approval for this study was granted by the University of British Columbia's Behavioral Research Ethics Board on May 8, 2020 (H18-01940). Verbal informed consent was obtained from the participants prior to data collection. Participant privacy was further protected through redaction of names and identifiers in data sets and password encryption of all transcripts.

Table 1. Themes and Subthemes

Theme	Subthemes
1. Perceived risk of infection	Safety of rural communities Risk from family members Border communities and tourism
2. Navigating uncertainty	Changing information landscape Disruptions to the perinatal experience Access to additional resources
3. Experience of care received	Changes in guidelines Support from local health care providers Traveling for care
4. Resiliency and silver linings	Unintended positive consequences

RESULTS

In total, 5 interviews and 4 focus groups were conducted with 16 participants from RSON sites across Interior and Northern Health jurisdictions between May and October 2020. At the time of data collection, 7 of the participants were pregnant and 9 were postpartum.

Four overarching themes were identified through thematic analysis of the transcripts. The themes and subthemes are listed in Table 1 and are explicated below.

Perceived Risk of Infection

Safety of Rural Communities

The first theme was the perception of risk of COVID-19 infection while living in a rural community. In general, participants thought that living rurally put them at low risk of contracting COVID-19, particularly when compared with those living in urban communities. This perception of low risk affected stress levels as well as behaviors related to social distancing.

I think I would feel a lot more stressed being in a bigger city where you know, there would be people in the hospital with COVID-19 at the same time as us delivering our babies, so I felt a lot safer being in a small town for that reason alone. (Participant [P]4)

One participant who contracted COVID-19 during her pregnancy emphasized her surprise at testing positive, reiterating the perception that previously she thought COVID-19 was something to be found "only in the city, you know, in Toronto and Vancouver and that's it." (P10)

Risk from Family Members

Despite a generally low perception of risk, several factors contributed to individual's perceptions of risk, including whether

or not participants' partners worked outside of the home, as well as prepregnancy level of anxiety. One participant noted, "I was worried about my husband contracting [COVID-19] from his job and in the end our doctor actually wrote my husband a leave note [...] so we knew he would be safe." (P6) Another expanded:

It panics me because I don't want to be this overly paranoid person that lets COVID-19 control my life, but at the same time, I have to be precautious because I want my partner to be in the delivery room with me, I want to have a healthy baby, I want to be able to hold him when he's born, you know? (P2)

Given differing levels of perceived risk across a community, some participants described how conflict arose when well-meaning friends or family did not understand why they could not be physically near the newborn.

Border Communities and Tourism

Many participants felt unease when family members traveled from out-of-town to visit or to help care for a newborn during restrictions on nonessential travel. One participant described the discomfort and guilt she felt when her mother traveled from Alberta, a neighboring province with higher case counts and distinctive red license plates, to her home in British Columbia to help her recover from a cesarean birth, saying:

No one gave us directly a hard time about it, but I know that there's been a lot of judgment about red plates around town and it's been a big thing. [There is also] the social responsibility you feel in a small town and as a health professional, to not be you know, disregarding the rules. (P3)

Some participants were concerned about tourists during the summer. Participants wondered whether the opening of the province to interprovincial, nonessential travel would disrupt their rural bubbles and increase their risk of infection. "We're in a bubble right now we haven't got many cases, but I worry about when [tourists] start moving back and forth a bit more that it's going to hit us again..." (P2)

Navigating Uncertainty

Changing Information Landscape

The second theme related to participants having to navigate uncertainty and inconsistency in public health guidelines and guidelines. Constantly changing guidelines meant that participants found it challenging to prepare for the birth and the postpartum period. This uncertainty was particularly difficult for families experiencing their first pregnancy.

This was my first pregnancy, so I think the general discomfort and unknowns at the end of pregnancy were just amplified by the pandemic because you already don't know what [the birth] is going to look like, but then throwing all of the COVID-19 stuff into it just made me a little more anxious to get things moving. (P3)

For participants who had other children, not knowing what guidelines would be in place at the hospital and how to arrange childcare during birth was an additional challenge.

To ensure that their partner could be in the delivery room during birth in case public health guidelines became stricter, some participants used a strategy of risk aversion, going above and beyond public health guidelines during pregnancy.

We just felt like with the changing information all the time, the only way we could really do our part to ensure that my husband would be at the birth was to just completely be at home and not see anybody at all until the birth. (P11)

Disruptions to the Perinatal Experience

In terms of the impact of changing guidelines on expectant parents' mental health, participants expressed that loss of social support—both in and outside of the care center or hospital—was the greatest challenge.

I haven't been allowed to bring my husband to appointments and that is something that we really love to do together [...] this is an IVF baby so there are a lot of extra emotions that have gone on throughout this whole process and not having him there has been tough. (P8)

The gravity of the loss of social support during labor and birth was amplified for participants who reported adverse pregnancy outcomes. For example, one participant who was notified about a pregnancy loss during an in-person appointment while her husband waited in the car said: "I think where COVID had the biggest impact on me was when I originally showed up at the hospital... [my husband] wasn't allowed to be there with me, so I found out about the fetal demise all on my own." (P13)

Participants also noted the loss of celebrating meaningful events such as baby showers, having family fly in to meet the infant, and traveling to shop for cribs and other supplies.

Access to Additional Resources

Some participants in these rural communities found it increasingly difficult to access certain resources and plan for their newborn's arrival during the pandemic. Participants noted that where they may have relied on online ordering to access certain resources unavailable in their rural communities, these services were not always available because of disruptions to mail services.

Even going to buy the cribs, the car seats, the strollers, we don't have those resources [here] [...] so we would have to travel out of town to get the necessary things to bring a baby home. I've ordered what I can order online, but I mean the mail systems have been so backed up. It's been pretty stressful... what if the baby comes early and I don't have a car seat in, how are we going to get the baby home? (P1)

The level of access to social resources such as prenatal classes, breastfeeding support, and peer support groups varied from community to community. In one community, health care providers offered a virtual question-and-answer session for expecting parents during the pandemic. A participant who

attended such a session said: “[the providers] were giving us lots of information. I felt they were really keeping us in the loop even though things were changing.” (P2)

Experience of Care Received

Changes in Guidelines

The third theme in participants’ narratives related to care received, both at local hospitals and having to travel to receive more acute care. Regarding changes to prenatal care, participants found that childbearing persons were one of the few groups who continued receiving in-person care, although appointments were generally reduced to minimize nonessential trips to the clinic. Some participants expressed frustration over changes to frequency of in-person care. For example, one participant, whose number of ultrasound appointments were significantly reduced, expressed: “You can put a hazmat suit on me and a mask, but I would prefer to have the ultrasound [...] not having that has been really disappointing.” (P8)

All participants voiced concerns about whether hospital guidelines would prevent their partners from being with them in person during the birth. In general, participants who were anticipated to have uncomplicated vaginal births were able to have one support person at their birth, but participants who had planned or emergent cesarean births were not permitted a support person in the operating room. In these instances, anxieties around birth were amplified by the fear of facing birth alone.

Other changes in care related to increased access to pain management care at home and early inductions to minimize the amount of time women were in the hospital. One woman recalled her experience with her midwife, saying, “We do have the one midwife and [the providers don’t] typically do any medications at home, but in an effort to keep us out of the hospital longer, she actually did a morphine shot at home.” (P3) She expanded:

[The doctors] started trying to induce me a bit earlier to manage some of these women that were all due coming into the first wave [of infections]. We were just kind of navigating it together, trying to get the babies out before things got worse. (P3)

Support from Local Health Care Providers

Within the context of rapidly changing guidelines and uncertainty around labor and birth, most participants thought that the care they received at their local hospital was very good. In general, participants thought their local perinatal care providers went above and beyond to ease some of the extra stressors and anxieties related to COVID-19.

Locally, I feel the resources are great. I felt well supported and that [health care providers] could make something work if we needed to. It wasn’t insurmountable because of the pandemic, they were being creative and innovative. I think it would be really different in a city, I think you could feel a lot more lost. (P3)

Another participant commented, “I feel we were quite lucky because we had more of a personalized service here—in the city you’re one of many.” (P2)

Additionally, participants reported feeling safe and comfortable at their local hospital as they were familiar with care providers because of interactions outside of the clinical setting. A participant explained, “The nurse that is in the doctor’s office and the doctor were masked and gloved and it helped that both of them are also friends and so I trusted that they had been following all of the guidelines.” (P6)

One participant who was COVID-19 positive commented on the personalized care that she received, despite the added barriers of personal protective equipment:

I knew [care providers] were going to be masked, but I didn’t realize the full-on gas masks, hazmat kind of thing, but they were really making eye contact with me, touching me [...] I felt very dirty but they would still touch me, like put their hand on my shoulder and reassure me that everything was okay. (P9)

Traveling for Care

Some participants had to travel to a regional referral center to receive a higher level of care than their local hospital could provide. These participants expressed discomfort leaving their rural community, in part because traveling was associated with increased risk of infection. One family who had to travel to a referral center for care was quickly discharged after the birth but told to stay in the referral city at a hotel for a few days. This participant noted, “We weren’t sure how safe it was to stay at a hotel, you know? This is where people travel, so is this really a good place to be with a new baby?” (P9)

One participant, without local access to midwifery care, noted that although she had opted to travel to a neighboring town for midwifery care during previous pregnancies, the burden of traveling for care during this pregnancy outweighed her desire to have her previously preferred perinatal care provider. Despite having previous positive experiences with midwifery care, distance was a limiting factor in her seeking it during COVID-19.

The stress of having to traveling for care for rural pregnant persons was intensified during the pandemic because of confusion over changing public health guidelines, navigating in an unfamiliar community during a public health emergency, and uncertainty about the safety of logistics such as lodging and food.

Resiliency and Silver Linings

Unintended Positive Consequences

Amid the disruption of the early months of the pandemic, participants also noted some silver linings to changes in social support, including increased time with spouses, more flexibility in parental leave and work schedules, and decreased disruption visitors. One participant elaborated,

I did find in those first few weeks, it’s busy with a newborn and having people over into our house would’ve felt really overwhelming. Whereas [because of COVID-19] we just got to be a family of three [...] it was just so relaxing and peaceful. (P4)

Other participants shared that the pandemic meant that partners were able to work from home, or take more time off

of work, resulting in increased paternal support and family bonding time.

Some participants also described the help they received from their local community, which was invaluable for new parents during the pandemic, noting that communities came together in the early days to make sure that new parents had what they needed.

DISCUSSION

This qualitative study provides insight into the experiences of rural birthing families in British Columbia during the initial months of the COVID-19 pandemic. Overall, participants expressed a low perception of risk of infection but noted fear of specific vectors of transmission, including summer tourism and living on the border of the neighboring province, which had higher rates of infection. Participants expressed challenges related to navigating changing health care policies and guidelines, weighing decisions around social support and holistic risk assessment, and grieving the loss of prepandemic birthing-year rituals. These themes were similar to findings from other qualitative studies, which have emphasized the increased psychosocial burden of the pandemic on childbearing people.^{4,7–9,38} However, participants in our study expressed heightened concern regarding travel—actual or potential—outside of their communities as it was presumed to increase the risk of exposure to COVID-19. This loomed as a concern during pregnancy for some but also factored into trips to purchase supplies that were not available locally.

Participants in this study also described the strengths of perinatal care in rural communities. This dimension of participants' narratives reveals how rural health provision might mediate inequities in access to other types of services.¹⁵ Several participants noted the benefit of the relationships they had developed with their care providers over time and many felt this underscored perinatal care providers "going above and beyond" to mitigate pandemic-induced stress. Mitigating factors included providing virtual question-and-answer sessions to help families adapt to quickly changing public health guidelines, being available to patients outside of clinic hours, and making sure care was personalized even while wearing heavy personal protective equipment. Although relationship-based care is not unique to rural communities or contingent on rural characteristics, the sites in this study were all small enough to see care providers playing multiple roles as physicians but also as community members. These increased points of contact lead to more layered relationships than those who may only know a physician-patient relationship.

At a health systems level, there is growing evidence pointing to the importance of including patient-reported outcomes as markers of quality of care.³⁹ Patient perspectives reveal the challenges that rural residents face when accessing care outside of their communities during a pandemic, reflecting on the importance of local care. This study documents the experiences of birthing families during the initial onset of COVID-19 in a way that highlights the need to appreciate the influence of isolation in birthers' experiences but also appreciate attributes that smaller settings provided during the COVID-19 pandemic. These findings from study participants highlight the importance of care that recognizes the integration of phys-

iologic and mental health supports. Furthermore, they provide a foundation for a comprehensive inquiry into the experiences of rural perinatal service communities during COVID-19, including the experiences of care providers and other key stakeholders. This perspective can help inform health system responses to current and future public health crises in a way that is sensitive to place-based dynamics and actively addresses arising and historical inequities in health care.

Implications for Policy and Practice

The COVID-19 pandemic has highlighted the importance of scaling up health care practices and technologies that can mitigate risk of infection, and reduce pressure on hospitals. This includes (1) expansion of telehealth, to enable rural residents to stay in their communities rather than travel to referral centers; (2) expansion of midwifery care into rural communities, which means that more childbearing people have the option to give birth in the safety of their own homes, reducing anxiety about traveling to hospitals to give birth and relieving pressure on hospitals; and (3) increasing the availability of perinatal services in rural communities. Pre-COVID-19, the trend toward centralization of services had resulted in the closures of small rural hospitals in British Columbia, causing childbearing people to relocate to referral centers for birth.

Although most participants reported positive perinatal experiences, some described practices such as early induction of labor and restrictions to the number of support people at the hospital. It is important for care providers to communicate changes in perinatal practices because of COVID-19 clearly to clients and offer postpartum follow-up and referral for those whose physical or mental health was negatively impacted by the pandemic.

Limitations

A limitation of this study is the relatively limited number of participants and lack of demographic diversity among participants in terms of ethnicity and socioeconomic status. Limitations around patient recruitment and representation were due to the need to select participants from 6 rural communities across British Columbia included in the RSON project in a short time span. Nevertheless, having reached data saturation, we felt that the identified themes reflect this demographic of rural residents' overarching experiences.

CONCLUSION

The importance of local perinatal services in rural British Columbia has been underscored by the COVID-19 pandemic. Investing in strategies that stabilize rural perinatal services is essential to provide safe care closer to home, relieve pressure on referral centers, and reduce costs associated with emergency transfers and the burden of travel, on the individual and the environment. This study provides a foundation for a comprehensive inquiry into the experiences of rural perinatal services during COVID-19.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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