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Strategies to support maternal and early childhood wellness: insight from parent and provider qualitative interviews during the COVID-19 pandemic

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ABSTRACT

Objectives The COVID-19 pandemic resulted in rapid changes to the delivery of maternal and newborn care. Our aim was to gain an understanding from parents and healthcare professionals (HCPs) of how the pandemic and associated public health restrictions impacted the peripartum and postpartum experience, as well as longer-term health and well-being of families.

Design Qualitative study through focus groups.

Setting Ontario, Canada.

Participants HCPs and parents who had a child born during the COVID-19 pandemic.

Interventions Semistructured interview guide, with questions focused on how the pandemic impacted their care/their ability to provide care, and strategies to improve care and support now or in future situations with similar healthcare restrictions.

Outcome measures Thematic analysis was used to describe participant experiences and recommendations.

Results We included 11 HCPs and 15 parents in 6 focus groups. Participants described their experiences as 'traumatic', with difficulties in accessing prenatal and postpartum services, and feelings of distress and isolation. They also noted delays in speech and development in children born during the pandemic. Key recommendations included the provision of partner accompaniment throughout the course of care, expansion of available services for young families (particularly postpartum), and special considerations for marginalised groups, including access to technology for virtual care or the option of in-person visits.

Conclusions Our findings may inform the development of healthcare system and organisational policies to ensure the provision of maternal and newborn care in the event of future public health emergencies. Of primary importance to the participants was the accommodation of antenatal, intrapartum and postpartum partner accompaniment, and the provision of postpartum services.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ We received an overwhelming response for participation from parents, indicating the importance of implementing strategies and policies that may improve the well-being of families.
⇒ Although we sampled a diverse group of participants, recruitment of healthcare providers was challenging in light of the ongoing pandemic.
⇒ We were unable to capture the perspectives of newcomers to Canada, although several of the healthcare professionals who participated specifically care for this population and could speak to common challenges.
⇒ Due to the convenience sampling approach, many of the participants recruited through social media had completed postsecondary education and reported a high household income; it is likely that individuals with fewer financial resources experienced additional barriers to accessing supports following delivery.

INTRODUCTION

Public health mandated restrictions that were implemented early in the COVID-19 pandemic may have had unintended consequences for pregnant individuals and their families. The introduction of virtual antenatal visits, restriction of in-person appointments to the pregnant individual only, limited essential care partner attendance during labour and delivery, and reduced availability of postpartum services, including lactation support,[1] may have negatively influenced the peripartum and postpartum experiences of patients. These changes may have also negatively influenced healthcare professionals (HCPs) who provide care to parents and babies. Social isolation during these critical years of childhood development may have also resulted in downstream effects for the well-being of children and their families.

A Canadian survey of 1477 expecting families found high levels of distress during the pandemic, with top concerns being hospital policies related to support persons during labour and not being able to introduce the baby to family and friends.[2] Research has also shown that the pandemic did not affect

all families equally: a population-based study in Ontario, Canada demonstrated an increase in maternal mental health visits during the postpartum period during the pandemic, with notable differences based on geographical and sociodemographic factors; these differences may have reflected barriers in accessing care among lower-income families, or a lower burden of maternal mental illness in areas with less restrictive public health measures during the course of the pandemic.[3] As public health restrictions were lifted, individuals with fewer financial resources may have had less access to resources to mitigate social isolation following delivery. Federal restrictions on travel made it more difficult to sponsor family members to travel to Canada to provide support following delivery, leaving many newcomers with limited supports. The impact of the pandemic on maternal and newborn health may continue to have adverse effects on the health and well-being of families, and understanding and mitigating these effects requires further exploration. The pandemic affected maternal and newborn care worldwide, and understanding the unique needs of mothers and families during pregnancy and postpartum may inform strategies to support families in the event of another public health emergency.

The overall aim of the study was to gain an understanding of how the pandemic and associated public health restrictions impacted the peripartum and postpartum experience, as well as longer-term health and well-being of families. The specific purpose of this study was to gather information to inform the provision of pregnancy and delivery care in the event of another pandemic and associated public health restrictions, and to understand the longer-term effects on children, which may enable strategies to mitigate the impact of the pandemic on those most affected.

METHODS

Approach

We used basic qualitative description to explore the views of parents and HCPs on how the pandemic influenced the peripartum and postpartum experience, and the health and well-being of themselves and their baby.[4] To do so, we conducted focus groups with parents who had children born during the first 2 years of the pandemic, as well as providers (physicians, social workers, educators, speech/language pathologists and occupational therapists) who care for pregnant individuals and/or children. Basic qualitative description is an approach commonly used in health services research to assess problems and derive solutions that do not employ or generate theory.[5] We conducted focus groups rather than one-on-one interviews because group discussion can stimulate interactive, synergistic exploration of a novel or sensitive topic.[6] We complied with the Consolidated Criteria for Reporting Qualitative Research[7] (online supplemental file 1). All participants provided informed consent prior to interviews and parent participants received a US$50 e-gift card following interviews. There was no prior relationship between the researchers and participants.

Sampling and recruitment

We used convenience sampling to recruit providers that look after pregnant individuals and young children (here referred to as HCPs) and parents aged 18+ in Ontario who had a child delivered on or after 10 March 2020 (corresponding to the first COVID-19-related death in Ontario, after which public health mandated restrictions were implemented on 15 March 2020). Eligible HCPs included early childhood educators/childcare centre supervisors, paediatricians, family physicians/nurse practitioners, midwives, speech language pathologists and occupational therapists who care for pregnant individuals/infants and young children and their families. We recruited HCPs through the authors' (ANS and DC) professional networks and through snowball sampling to achieve a diverse range of multidisciplinary perspectives. A list of names and emails of potential participants were provided to a research coordinator (AS) who contacted individuals directly (with one follow-up email, if there was no response within a week) and through social media (Twitter). Interested participants were asked to contact our research coordinator (AS), who then sent an informational letter and demographic survey. Parents of children born during the pandemic were recruited through social media advertising on Facebook and Instagram using the @PandemicPregnancyGuide accounts. The advertisement directed parents who were interested in participating to email the research coordinator (AS), who sent back an informational letter about the study and a demographic data survey to determine inclusion criteria. The survey asked questions regarding age, gender, educational background, employment status, household income, ethnicity, whether the participant has recently immigrated to Canada, and the first three digits of their postal code. The participant could also include information on how the pandemic had affected them. The data provided on this survey were used to invite participants for focus groups, with the goal of achieving a broad range of experiences and perspectives. We aimed to involve a minimum of 25–30 participants with 6–8 per focus group.[8]

Patient and public involvement

Patients were invited to participate in this study through focus groups; they were primarily recruited via social media. We also sought broad representation from other key stakeholders who provide care to this population of patients. Dissemination of the results of this work will be through peer-reviewed publication and social media channels to ensure public access.

Data collection

We conducted three focus groups with parents and three focus groups with HCPs between July 2022 and October 2022. Focus groups were conducted by a third-party certified professional facilitator and were done virtually

on Zoom. The focus group questions were derived from study objectives (online supplemental additional file 1). We asked parents about how having a child during the pandemic affected them/their partner and their baby, and what strategies could improve peripartum and postpartum care and support for families in the context of an ongoing pandemic or in future similarly restricted situations. We asked HCPs how the pandemic affected parents and babies, how it affected their ability to provide peripartum and postpartum care and support for families, strategies needed to improve care and support now or in the future, and what single strategy they prioritised and why. Focus groups ranging from 52 to 103 min were audiorecorded and transcribed.

Data analysis

We conducted inductive thematic analysis through constant comparison and used Microsoft Office Word to manage data.[9] ARG and HB (masters in public health research associate) independently coded the first parent and HCP focus group transcripts, then met to compare and discuss coding technique and themes to generate an initial codebook (first level coding). Thereafter, HB coded remaining transcripts, expanding or merging themes in the codebook (second level coding) and consulting with ARG weekly. ARG independently reviewed final coding. We tabulated data (themes, quotes) and compared themes between parents and HCPs, using summary statistics to describe participants and text to describe key themes (online supplemental file 2).

RESULTS

Participants

We included 11 HCPs and 15 parents in 6 focus groups, 3 each with HCPs and parents (table 1). Two (18%) of HCPs were male; all parent participants were female. HCPs included physicians (paediatrics and family practice), a nurse practitioner, a speech language pathologist, an occupational therapist and early childhood educators/childcare centre supervisors. Eight (53%) of the parents experienced their first birth during the pandemic; the majority were from urban areas (n=10, 67%) and had completed postsecondary education (n=11, 73%).

Themes

Online supplemental additional file 2 includes all themes and quotes organised by group (parents, HCPs) and focus group questions. Quotes show participant type and focus group number. Table 2 summarises themes with exemplar quotes. Themes with select quotes are discussed here, organised by focus group questions, noting any discrepancies between participant views.

Pandemic effect on care and support

Parents and HCPs agreed on several themes. Both noted the considerable impact of care partners not being

Table 1 Characteristics of healthcare providers and parents of children born during the pandemic who participated in focus groups

Healthcare providers	
Profession	
Family physician	1
Paediatrician	3
Nurse practitioner	1
Speech language pathologist	1
Occupational therapist	1
Early childhood educator/childcare centre supervisor	4
Practice setting	
Community	4
Academic	6
Not specified	1
Sex	
Male	2
Female	9
Parent participants	
Age group	
18–25	0
25–34	7
35–44	4
Not specified	4
Sex	
Female	15
Male	0
Parity	
First child	10
Second or more	5
Ethnicity	
Asian	6
Black or African	1
White or Caucasian	7
Multiracial or biracial	1
Recent immigration (within 5 years)	0
Annual income	
>100 000/year	9
No answer	6
Educational level	
College/university	6
Graduate studies	5
Not indicated	4
Employment status	
Employed full time	10
Unemployed	1
Not indicated	4

Continued

Table 1 Continued

Geographic location	
Urban	12
Rural	1
Northern	1

allowed at the birth, or in prepartum or postpartum appointments, describing the experience as 'traumatic'.

> Who I feel for is my husband, really he missed out on pretty much everything, and I have a history of miscarriage I was like I have like a bit of trauma when it comes to ultrasounds. And having to go to those like alone was really hard. Yeah, my husband just missing the ultrasounds, like the appointments. (Parent group 2)

Parents and HCPs described difficulty accessing prepartum (eg, education) and postpartum (eg, postpartum physical examination, well baby checks) care and services. Both groups reported stress and anxiety due to this lack of care and support, as well as feelings of isolation. Mental health issues were heightened among first time parents, and less for those who had arranged for midwives, or could afford and had arranged for postpartum doulas. Parents and HCPs also talked about development delays. Parents remarked on babies being shy due to lack of socialisation. Many HCPs also noted this, along with other development delays in speech, and cognitive and physical development, noting that the long-term impact was unknown and voicing concern that it might be too late to intervene if such problems did not get diagnosed until the child started school.

Parents noted additional adverse impacts of the pandemic including poorly coordinated in-hospital care during and directly after birth, shortcomings of virtual visits and challenges with in-person visits due to restrictions, hesitancy to reach out to doctors for help given messaging about the overburdened healthcare system, having to search for information online, fear of getting the vaccine and of getting COVID-19, and babies being constantly sick on starting daycare.

> I was so hesitant to reach out for help. The messaging everywhere from doctors, from the media was don't go, don't call, don't overrun the system. So anytime I had a question or there was something that seemed off to me, I was just so hesitant to call my doctor or to call anyone for help (Parent group 1)

HCP ability to care for parents and babies

HCPs said it was upsetting to witness the distress of parents.

> As somebody who really values the infant-parent dyad…bearing witness to that distress for families was really challenging and just really hard to see (HCP group 1)

With the shift to virtual care, many HCPs found it difficult to perform postpartum and early childhood visits. Given a lack of access to primary care and other support services, HCPs indicated that they did their best to coach families on what they could do themselves at home, how to navigate the healthcare system, and tried to make up for short-falls in the healthcare system to address the needs of parents.

> We had to pivot to doing all our visits virtually…you can't do the same kind of standardized assessment in a virtual visit as you can with in-person (HCP group 3)

> We were trying to give them things they could do to support their children at home while they wait[ed] for services (HCP group 2)

> The programs that existed…they all changed during the pandemic…my practice has changed a lot, having to first off know what's changed, and second, helping families understand what they can access (HCP group 2)

> At the center I was in, it's a house where they have a refugee center, and clinics in the basement. We're super basic there, you cannot socially distance at a site like that, there's not enough space. We had to really promote virtual. We would have some visits outside sometimes. If it was the winter, it was not feasible. If it was warm, we would do weights and circumferences and throat checks outside (HCP group 1)

Given the challenge of building trust, HCPs tried to better connect with parents and babies by modifying personal protective equipment and by going outdoors to visit with parents.

> We did adopt the clear mask and that was helpful for doing therapy (HCP group 3)

> We put swaddles between the staff and the child so they could hold the children. And then I bought aprons for staff so they didn't have to wear all those gowns and swaddles (HCP group 2)

> We had them meet outside so they could speak to parents and teach them and talk to them (HCP group 2)

Recommended strategies

Table 3 summarises themes with exemplar quotes. Themes with select quotes are discussed here, noting any discrepancies between participant views. Parents and HCPs agreed on several themes. Both groups said that both the birthing parent and a support person should be allowed at the birth and prepartum and postpartum appointments. To this, HCPs added that the birthing parent and baby should be considered as a single entity. Both groups suggested training additional midwives, and homecare and community health workers. Parents

Table 2 Effect of pandemic on parents and their babies

Theme	Exemplar quotes	
	Parents	**Healthcare providers**
Care partner not allowed during appointments or birth	I also felt a bit sad that my husband couldn't be there for any of the appointments. That he couldn't see any of the ultrasounds and do anything like that. I didn't feel like he was as connected to this baby at the beginning (Parent group 1)	If the mum was in the unit it meant the dad couldn't be in the unit, and the mums felt and expressed a lot of guilt about wanting to work on breastfeeding but wanting their partner to also have access to their baby (HCP group 1)
Difficulty accessing prenatal and postnatal care and services	Prenatal My biggest concern was that I had no prenatal education. I delivered at<hospital> and this was in July of 2020, and the OB floor was completely locked down. They weren't giving any and it was so new to the pandemic I don't think they had transition to like a virtual model (Parent group 2) POSTNATAL I was a bit surprised when I had my six week checkup postpartum and there wasn't a physical exam…I had a bit of a traumatic birth so I thought there may be more follow up but there wasn't. (Parent group 3)	Prenatal Lack of accessing prenatal care, which can lead to kind of more difficulties with babies (HCP group 3) Pstnatal Some parents…might not be able to financially afford to be able to go into these programmes (HCP group 3)
Poorly coordinated hospital care during and after birth	And I went in and the doctors were really busy and [the nurse] came and she told me that she broke my water, but she didn't. I went for multiple hours of contractions again but my labour didn't actually progress. Then there was a shift change, the nurse came in and she said they didn't actually break your water and that's why you've been in labor for this long. So they had to call the doctor but the doctor was busy, so a few hours later, they finally broke my water (Parent group 1)	---
Virtual visits too short and insufficient	I don't feel like there were as many questions, as many checks. It was very like okay, okay, okay you're fine, bye (Parent group 3)	---
In-person visits stressful due to COVID-19 protocols	Wearing all these masks, I was so exhausted going to the appointments. I couldn't even focus properly on the pregnancy when I was at these appointments because I was just so tired of not being able to breathe properly, and also being worried about who was around me and am I walking in the right spot. I think there was just a lot of stress regarding the appointments (Parent group 1)	---
Hesitant to reach out to doctors for help	The messaging everywhere from doctors, from the media was don't go, don't call, don't overrun the system. Anytime I had a question or there was something that seemed off to me, I was just so hesitant to call my doctor or to call anyone for help (Parent group 1)	---
Having to search for information online	Women are left to their own devices, searching social media. For example, I made myself sick in safe sleep groups, to the point that I couldn't sleep…I was so scared… that was a very sad thing (Parent group 2)	---
Fear of getting the vaccine and COVID-19	I even paid extra to get the private room, and they were like, well we can't guarantee it. I'm like, what do you mean? The pandemic isn't over, you can't put me and my newborn child with two people that I don't know (Parent group 2)	---
Stress and anxiety due to lack of care and support, and heightened anxiety about child safety	The uncertainty that I've experienced as a mother, coupled with the uncertainty of the pandemic has exacerbated my imposter syndrome to be a mom and provide the right care for my child (Parent group 3) Less stressful for those with midwives and who already had a child Because it was my first child, when she was first born, I wanted help, I wanted visitors, I wanted people around. And I just felt like we were so alone. (Parent group 2) I had the midwives come to my house for the first 10 days after birth, so they were really good about following up (Parent group 2)	I saw significant stress and distress among parents. And I felt that often this led to anxiety, and some of it very warranted around a lack of equitable access to care (HCP group 1) That mental health piece, we saw that in infants right away, and we felt it with parents as well, their anxiety to leave the child (HCP group 2) It's maternal mental health for sure, but also all the things that go along with being a first time parent and your feeling of competency (HCP group 2)

Continued

Table 2 Continued

Theme	Exemplar quotes: Parents	Exemplar quotes: Healthcare providers
Babies more susceptible to getting sick	Since we started back at daycare in May, cannot keep her healthy. I know there's a little period of adjusting, but it seems so much more frequent to me than I experienced with my son (Parent group 3)	---
Babies have delayed development	He wants to be social and wants to interact with people, but also has no idea how to and it makes him nervous (Parent group 3)	Socially and emotionally they're also affected because a lot of the children were very, very attached to their parents (HCP group 3) Because of all the mask wearing, they're not seeing how your mouth is actually moving. A lot of speech is what we're noticing a lot (HCP group 2)
More bottle than breast feeding	---	We saw their breastfeeding success rates decrease. A lot of parents, both moms and dads, said, 'let's just do bottles. Let's just get out of here as fast as possible.' (HCP group 1)
Entire families hit by COVID-19 due to lack of paid sick days	---	COVID would hit the house, or a parent would think they had symptoms and they wouldn't stay home because they had to put food on the table…I was literally seeing in my practice how lack of paid sick days were impacting parents and the children (HCP group 1)

HCP, healthcare professional.

and HCPs thought it was important to provide free or subsidised services for marginalised groups. Both agreed on the need for better access to postpartum services including regular follow-up monitoring by healthcare providers. In addition, parents wanted credible informational resources, and HCPs recommended better advertising the services available; offering services in different locations at times convenient for working people and in different languages; and a coordinated centralised system. Parents and HCPs suggested that pregnant/postpartum individuals would benefit from peer support groups to reduce isolation, and parents would benefit from more subsidised daycare spaces. Parents also emphasised more opportunity for in-person medical appointments and choice of in-person or virtual for other services.

HCPs discussed several unique strategies: improve the virtual care system to more effectively triage patients to in-person or specialist care, and provide technology to families in need; catch up on the backlog of visits to asses child development, use clear masks to help children with speech development and alternative funding models for HCPs so that they are not limited by time per visit.

DISCUSSION

Focus groups with 15 parents and 11 HCPs revealed that pandemic-imposed restrictions resulted in traumatic experiences for parents stemming from partners not allowed at the birth, or at prepartum or postpartum appointments; difficulty accessing prepartum and postpartum healthcare and other services; confusing and poorly coordinated in-person care during and after the birth, and short-comings of virtual visits; and lack of knowledge about where to find information for self-support to address gaps in care. This resulted in feelings of isolation, stress and anxiety. The impact appeared to be heightened among groups unable to pay for services and without access to technology. HCPs devised creative solutions to connect with parents and babies in person (eg, modifying personal protective equipment or meeting outdoors), and had difficultly with virtual services like postpartum visits, but they coached parents on self-support. Although rapid changes in the provision of care during the pandemic have generally not resulted in inferior perinatal outcomes (eg, no difference in rates of stillbirth,[10] pre-eclampsia or severe maternal morbidity[11]), the mental health and well-being of families delivering at this time should not be underestimated. This study is unique from other research that largely focused on describing experiences and challenges faced by parents and HCPs because we also explored strategies to improve maternal care should another situation arise that places restrictions on healthcare services. The importance of a holistic, team-based approach that does not rely on an individual's ability to pay for or independently search for additional services was emphasised.

The findings of this study are corroborated by other research. A systematic review of 56 studies (21 included in meta-analysis) of changes in maternity healthcare

Table 3 Strategies to improve care and support for parents and babies

Theme	Exemplar quotes	
	Parents	Healthcare providers
Consider birthing parent and baby as single entity to allow support person to attend birth and visits	Supposed to be a joyful moment, you just had a kid. So you're there by yourself and you're scared, there's fear. If there's someone with you, usually it's less stressful (Parent group 1)	We've treated the birthing parent and the baby as a dyad, they are one unit. And now the visitor or the second person at the bedside is the second parent (HCP group 1)
Better access to in-person medical appointments	Under a certain age…virtual appointments don't work. Especially when you're talking about medical things…they need to see your baby (Parent group 1) I took my daughter to the hospital…and they're having people wait outside and it was winter. And your child is already sick (Parent group 1)	---
Offer choice of in-person or virtual for other services	We took prenatal classes through our hospital…initially we felt disadvantaged because they were virtual…but afterwards, we were quite satisfied… we really appreciated having that as an option (Parent group 2)	---
Train more midwives, and homecare and community workers	It was very hard to find midwives around my area that were taking new patients, if they were overbooked (Parent group 2)	We need to really ensure that we have adequate home care health workforce and continue to train people to work in child care in the community (HCP group 1)
Provide free or subsidised services/ policies to support the vulnerable	I think more free or low cost prenatal support (Parent group 2)	The funding for programmes in in areas that don't necessarily have that sort of support (HCP group 3)
Facilitate access to postnatal services	Credible information material Maybe downloadable resources in a reputable place so that if you are searching, you will find something from a hospital or from a healthcare professional, and not moms on the Internet (Parent group 2) Follow-up monitoring by healthcare providers Some way of checking in on both baby and mom (Parent group 2)	Follow-up monitoring by healthcare providers Doing a check-in, even once a month. And just connecting to see 'how's everyone doing?' (HCP group 2) Better advertise what is available Spreading the word, because I find we have a lot of families come, and they don't even know that it's available (HCP group 3) Offer in different locations at convenient times It's about making things as easy as possible for them to be able to get to it and be able to use it (HCP group 3) Provide interpreters having more interpreters, making things like that easier for families to access if language was a barrier (HCP group 3) Coordinated centralised system A more centralised, easy access system that allows families to get what they need would make many of our lives a lot easier and hopefully their lives easier (HCP group 2)
Peer support for mothers to address isolation	Having other new mothers around somehow to meet… Just to feel like you're not completely by yourself (Parent group 1)	More community support groups where parents can support each other who are going through similar situations (HCP group 1)
Accommodate more daycare spots	Even if the daycare had 20 kids, maybe with the alternated days, would still help. Like maybe on Monday, Wednesday, could be your kid, and then on alternate days, it could be other people's kids (Parent group 1)	Provide more subsidised childcare spaces will be good for parents. And making the process faster. (HCP group 3)

Continued

Table 3 Continued

Theme	Exemplar quotes: Parents	Exemplar quotes: Healthcare providers
Improve virtual care system	---	Triage to in-person or specialists We didn't have triage processes to realise who should be seen in what format. We have to continue to develop an appropriate virtual care health system that sees people at the right time in the right place, and turns people, if more appropriate, to in person settings too (HCP group 1) Provide technology to those without Support for families who don't have access to technology was a really big thing (HCP group 1)
Catch up on backlog of visits to assess child development	---	Catch up on the backlog of visits and consults and procedures, and everything that needs to be done (HCP group 1)
Use clear masks to help with speech development	---	Getting higher quality masks that are clear that can show our mouths…it will continue to impact speech from them not seeing the mouth motions (HCP group 3)
More funding and alternative funding models for healthcare professionals	---	The way I get paid is a little bit different from other people, and that allows me to actually spend the time to be able to get families the services that they need and follow-up with them, but not all physicians are able to do that because of the way that they're paid (HCP group 2)

provision and healthcare-seeking by pregnant individuals during the COVID-19 pandemic revealed a significant decrease in the number of antenatal clinic visits and unscheduled care visits per week, and an increase in virtual antenatal care visits and hospitalisation of unscheduled attendees.[12] A qualitative evidence synthesis of 48 studies published from January 2020 to June 2021 involving 9348 patients and 2538 HCPs revealed negative experiences among both groups including altered maternity care due to COVID-19 restrictions and challenges navigating support systems among patients, and professional and personal challenges among HCPs.[13] A survey of 253 patients and 77 HCPs at a single academic hospital in the USA found that most patients and HCPs felt that virtual visits improved access to care, but some expressed concerns about healthcare inequities including unequal access to virtual visits and that lack of technology such as home blood pressure cuffs could affect quality of care and safety.[14] A survey of 4604 pregnant persons in Canada between 5 April 2020 and 1 June 2020 found that cancellation of prenatal appointments and birth plan changes such as lack of support person attending the birth were significantly associated with greater odds of clinically elevated depression, anxiety and/or pregnancy-related anxiety symptoms.[15]

Mitigating strategies recommended by participants of this study raise implications for future policy, practice and research. The most common and strongly articulated recommendation was to allow both the birthing parent and a support person to be present throughout the course of prenatal, intrapartum and postpartum care. Research shows that continuous support during childbirth from a spouse or partner reduces the need for medical interventions, and improves both maternal and neonatal outcomes.[16] Concordant with our findings, a qualitative study in Australia found that partners and support persons of childbearing individuals reported feelings of isolation, psychological distress and reduced bonding time with babies.[17] Given such profoundly negative experiences, healthcare system and organisational policies to accommodate birth accompaniment should be developed for rapid operationalisation during future emergency situations. Pregnant and postpartum individuals are a unique group who require thoughtful accommodations for support during this time, and these accommodations differ from other healthcare-seeking individuals.

Virtual visits are likely to continue postpandemic, although physician payment for virtual antenatal and postpartum care has been discontinued in some jurisdictions, such as Ontario. Research shows that virtual maternal care is as safe as usual care. Evaluation of telehealth integrated care delivered from 20 April 2020 to 26 July 2020 compared with conventional care delivered from 2018 to 22 March 2020 at a single academic hospital in Australia found no significant difference in the number of babies with fetal growth restriction, number of stillbirths or pregnancies complicated by pre-eclampsia across low-risk and high-risk models.[18] However, both parent and HCP participants in our study found telehealth unsatisfactory for prepartum and postpartum care, thus planning is needed on how to improve virtual maternal support. Our participants identified three strategies that could improve virtual care. One, they recommended peer support groups for pregnant and postpartum individuals to impart experiential knowledge and reduce isolation. A scoping review

of 21 studies showed that online peer support reduced feelings of isolation and improved the mental health of new parents.[19] Two, HCP participants recommended a system to prioritise and triage patients to in-person or virtual care. Referring to telehealth in general, given the pandemic, others have also recommended that a standardised triage protocol be developed to assess acuity and prevent underestimation of illness severity, sort patients to place of service and determine if there is a need to escalate to an in-person evaluation or higher level of care.[20] Three, parent participants recommended being provided or referred to credible educational material because they hesitated to contact HCPs due to messaging about the overburdened healthcare system, and as a result, said they spent a lot of time on fruitless searches for information. Future research is needed to compile and package and/or develop prepartum and postpartum resources. That material should be disseminated direcly to pregnant persons and also to HCPs who can share the information with their patients.

Support is also needed for HCPs who provide virtual maternal care. HCP participants said that they did their best to coach parents on what they could do themselves at home given the restrictions on prepartum and postpartum services. HCPs recommended several strategies. They recommended training additional workers to provide maternal services. Community health workers are non-HCPs that provide a wide range of health-related services and can reduce health inequities in marginalised populations because they often represent those groups and/or have knowledge of the sociocultural norms, values and behaviours of clients along with skill in communication and counselling.[21 22] Further research is needed on how to grow, legitimise and integrate community health workers into the mainstream healthcare system. HCPs also recommended compensating HCPs through alternative funding models so that they are not limited by time per visit, and implementing a coordinated centralised system to connect parents with the services they need. These recommendations can only be addressed at the healthcare system level through ongoing communication leading to policy changes. In addition, study participants recommended three strategies to ensure that disadvantaged group access maternal services: (1) provide free or subsidised services to marginalised groups; (2) offer services in different languages and locations at times convenient for working people and (3) equip families with technology for virtual visits. In response to pandemic-imposed barriers to accessing virtual care during the pandemic, a narrative review identified three additional strategies to promote equitable access to virtual care: simplify complex interfaces and workflows, use supportive intermediaries and actively engage marginalised community members in planning virtual care.[23]

This study featured several strengths. We employed robust qualitative research methods[4 6 24] and adhered to standards for conducting and reporting qualitative research.[7] We explored experiences and recommendations among both parents and HCPs to gather diverse and comprehensive insight on how to improve future care. We achieved thematic saturation within and across groups as parents and HCPs articulated common experiences and recommendations. A few limitations must be noted. All participants were recruited in Ontario, Canada so the findings may not be transferable or relevant to parents or HCPs elsewhere in Canada, or in other countries with differing healthcare systems. Although social workers, midwives and family medicine obstetric providers were eligible for participation, we were not able to recruit them for participation. In general, HCP recruitment was challenging, likely due to significant healthcare worker strain during the pandemic. In contrast, we received an overwhelming response from parents to participate, likely indicating an unmet need to support young families during these challenging times. While our primary goal was to generate recommendations to mitigate the effects of the pandemic by families who were affected, the participants emphasised how traumatic their delivery experiences were, and hence this became a larger focus of the study, as it was of key importance to the participants. We were also unable to capture the perspectives of newcomers to Canada, although several of the HCPs who participated specifically serve this population. Lastly, due to the convenience sampling approach, many of the participants recruited through social media had completed postsecondary education and reported a high household income; it is likely that individuals with fewer financial resources experienced additional barriers to accessing supports following delivery.

CONCLUSIONS

Public health mandated restrictions during the COVID-19 pandemic resulted in experiences of isolation, stress and anxiety for parents with children born during the pandemic, and these experiences were heightened among marginalised groups. HCPs devised innovative solutions to the provision of maternal and newborn care but experienced significant challenges in the delivery of care in these unprecedented times. The knowledge from this study may be used to inform the provision of care in future times of public health mandated restrictions, acknowledging that pregnant individuals and their babies may require exceptions to these restrictions (particularly intrapartum), and marginalised groups in particular may require additional supports to technology or the option of in-person visits. The strategies recommended in this study may be applicable to pregnant individuals and families globally.

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REFERENCES

1 Roberts NF, Sprague AE, Taljaard M, *et al*. Maternal-newborn health system changes and outcomes in Ontario, Canada, during wave 1 of the COVID-19 pandemic-a retrospective study. *J Obstet Gynaecol Can* 2022;44:664–74.
2 Bogler T, Hussain-Shamsy N, Schuler A, *et al*. Key concerns among pregnant individuals during the pandemic: online cross-sectional survey. *Can Fam Physician* 2021;67:e257–68.
3 Vigod SN, Brown HK, Huang A, *et al*. Postpartum mental illness during the COVID-19 pandemic: a population-based, repeated cross-sectional study. *CMAJ* 2021;193:E835–43.
4 Sandelowski M. Whatever happened to qualitative description *Res Nurs Health* 2000;23:334–40.
5 Thorne S, Kirkham SR, MacDonald-Emes J. Interpretive description: a noncategorical qualitative alternative for developing nursing knowledge. *Res Nurs Health* 1997;20:169–77.
6 Morgan D. Planning focus groups. In: *Planning Focus Groups (Focus Group Kit*). 2455 Teller Road, Thousand Oaks California 91320 United States : SAGE Publications, Inc, 1997.
7 Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349–57.
8 Leung FH, Savithiri R. Spotlight on focus groups. *Can Fam Physician* 2009;55:218–9.
9 Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006;3:77–101.
10 Simpson AN, Snelgrove JW, Sutradhar R, *et al*. Perinatal outcomes during the COVID-19 pandemic in Ontario, Canada. *JAMA Netw Open* 2021;4:e2110104.
11 Snelgrove JW, Simpson AN, Sutradhar R, *et al*. Preeclampsia and severe maternal morbidity during the COVID-19 pandemic: a population-based cohort study in Ontario, Canada. *J Obstet Gynaecol Can* 2022;44:777–84.
12 Townsend R, Chmielewska B, Barratt I, *et al*. Global changes in maternity care provision during the COVID-19 pandemic: A systematic review and meta-analysis. *EClinicalMedicine* 2021;37:100947.
13 Flaherty SJ, Delaney H, Matvienko-Sikar K, *et al*. Maternity care during COVID-19: a qualitative evidence synthesis of women's and maternity care providers' views and experiences. *BMC Pregnancy Childbirth* 2022;22:438.
14 Peahl AF, Powell A, Berlin H, *et al*. Patient and provider perspectives of a new prenatal care model introduced in response to the Coronavirus disease 2019 pandemic. *Am J Obstet Gynecol* 2021;224:384.
15 Groulx T, Bagshawe M, Giesbrecht G, *et al*. Prenatal care disruptions and associations with maternal mental health during the COVID-19 pandemic. *Front Glob Womens Health* 2021;2:648428.
16 Lunda P, Minnie CS, Benadé P. Women's experiences of continuous support during childbirth: a meta-synthesis. *BMC Pregnancy Childbirth* 2018;18:167.
17 Vasilevski V, Sweet L, Bradfield Z, *et al*. Receiving maternity care during the COVID-19 pandemic: experiences of women's partners and support persons. *Women Birth* 2022;35:298–306.
18 Palmer KR, Tanner M, Davies-Tuck M, *et al*. Widespread implementation of a low-cost telehealth service in the delivery of antenatal care during the COVID-19 pandemic: an interrupted time-series analysis. *Lancet* 2021;398:41–52.
19 Yamashita A, Isumi A, Fujiwara T. Online peer support and well-being of mothers and children. *J Epidemiol* 2022;32:61–8.
20 Kobeissi MM, Ruppert SD. Remote patient triage: shifting toward safer telehealth practice. *J Am Assoc Nurse Pract* 2021;34:444–51.
21 Taylor B, Mathers J, Parry J. Who are community health workers and what do they do? Development of an empirically derived reporting taxonomy. *J Public Health (Oxf)* 2018;40:199–209.
22 Najafizada SAM, Bourgeault IL, Labonte R, *et al*. Community health workers in Canada and other high-income countries: a scoping review and research gaps. *Can J Public Health* 2015;106:e157–64.
23 Shaw J, Brewer LC, Veinot T. Recommendations for health equity and virtual care arising from the COVID-19 pandemic. *JMIR Form Res* 2021;5:e23233.
24 Auerbach CF, Silverstein LB. *Qualitative data: an introduction to coding and analysis*. New York: New York University Press, 2003.