

# Enablers and Challenges of Breastfeeding During the COVID-19 Pandemic

Caitlin J. Regner, MD; Aleksandra E. Zgierska, MD, PhD; Robert P. Lennon, MD, JD; Ellen Goldstein, PhD, MFT

## ABSTRACT

**Introduction:** The COVID-19 pandemic greatly affected access to breastfeeding support. Limited research has evaluated the pandemic's impact on postpartum individuals' decisions to breastfeed during this time. This qualitative survey study described breastfeeding-related attitudes, decision-making, and experience of postpartum people early in the COVID-19 pandemic.

**Methods:** New mothers (<6 months postpartum) were identified via electronic health records at 2 academic health care systems located in Northeastern and Midwestern United States and were invited via mailings and phone to complete a cross-sectional online survey assessing the impact of COVID-19 on mental and physical health and coping. Thematic analysis was conducted to organize responses into categories of impact (positive, negative, neutral), highlighting the major themes of the influence of COVID-19 on breastfeeding.

**Results:** A total of 216 participants responded (66 Northeast, 150 Midwest), and the majority (64.6%) were age 31 to 45 years old. The predominance of positive themes associated with the pandemic that enabled participants' decisions to breastfeed were health benefits, convenience and ease, and changes in work routines, whereas the major challenges exacerbated by the pandemic were access to lactation support, mental health/stress, and COVID-19 restrictions. Breastfeeding decisions that were not explicitly affected by the pandemic included prior feeding intention and experience, as well as knowledge of importance and benefits.

**Conclusions:** Findings from this survey study enrich our understanding of the pandemic's impact on breastfeeding motivations and practices. As health care systems and policymakers seek to improve support for breastfeeding, feedback from postpartum mothers may suggest new ways to overcome barriers that arise in times of crisis.

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**Author Affiliations:** Access Community Health Centers, Madison, Wisconsin (Regner); Department of Family Medicine and Community Health, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin (Regner); Department of Family and Community Medicine, College of Medicine, Penn State, Hershey, Pennsylvania (Zgierska, Lennon); Departments of Anesthesiology and Perioperative Medicine, and Public Health Sciences, College of Medicine, Penn State, Hershey, Pennsylvania (Zgierska); Department of Population Health Science Nursing Science, University of Illinois at Chicago, Chicago, Illinois (Goldstein).

**Corresponding Author:** Caitlin Regner, MD, Family Medicine Physician and Assistant Clinical Professor, Joyce & Marshall Erdman Clinic, 2202 S Park St, Madison WI 53713; email Caitlin.Regner@accesshealthwi.org; ORCID ID 0000-0002-5815-0306

## INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic placed a strain on the US health care system and led to dramatic changes in medical and social operations,<sup>1</sup> which affected pregnancy, postpartum, and infant care.<sup>2,3</sup> Early in the pandemic, support for breastfeeding initiation was affected by the separation of mothers from their infants in the case of COVID-19 infection, a higher frequency of early hospital discharges, and reduced inpatient lactation support.<sup>4,5</sup> For instance, the Centers for Disease Control and Prevention (CDC) showed a 17.9% reduction of in-person lactation support by the end of 2020.<sup>4</sup> Moreover, breastfeeding support outside of the hospital was limited due to lockdowns, disruptions in health care operations, and restrictions on services provided by peer- and community-based organizations,<sup>2,6</sup> resulting in reduced support for breastfeeding during several critical stages during the postpartum period.<sup>5</sup> In light of reduced lactation support, several studies have demonstrated reduced breastfeeding rates during the COVID-19 pandemic.<sup>7,8</sup>

Women's responses to these changes were mixed.<sup>9</sup> In some regions, women rated their breastfeeding experience as negative during the early pandemic compared to prepandemic.<sup>10</sup> Negative breastfeeding experience was particularly prevalent in mothers who were separated from their infant, struggled with breastfeeding,

or perceived decreased family and professional support. Other women noted a positive experience of breastfeeding, particularly in subsets who had greater partner support and more time at home.<sup>11,12</sup>

Given the varied breastfeeding experiences during the early COVID-19 pandemic in other regions, the purpose of this study was to contribute to the existing literature by describing the attitudes, decision-making, and experiences among postpartum people in the Northeastern and Midwestern United States. This information may allow for optimization of pregnancy and postpartum care and breastfeeding support in the future.

## METHODS

This study analyzed data from a larger cross-sectional survey examining the impact of the COVID-19 pandemic on pregnant and postpartum persons at 2 independent sites, with study protocols that were approved by each Institutional Review Board. The aim of this qualitative analysis of the open-ended questions on breastfeeding was to understand how early responses to the COVID-19 pandemic affected breastfeeding-related attitudes, decisions, and experiences among pregnant and recently postpartum persons.

### Study Design

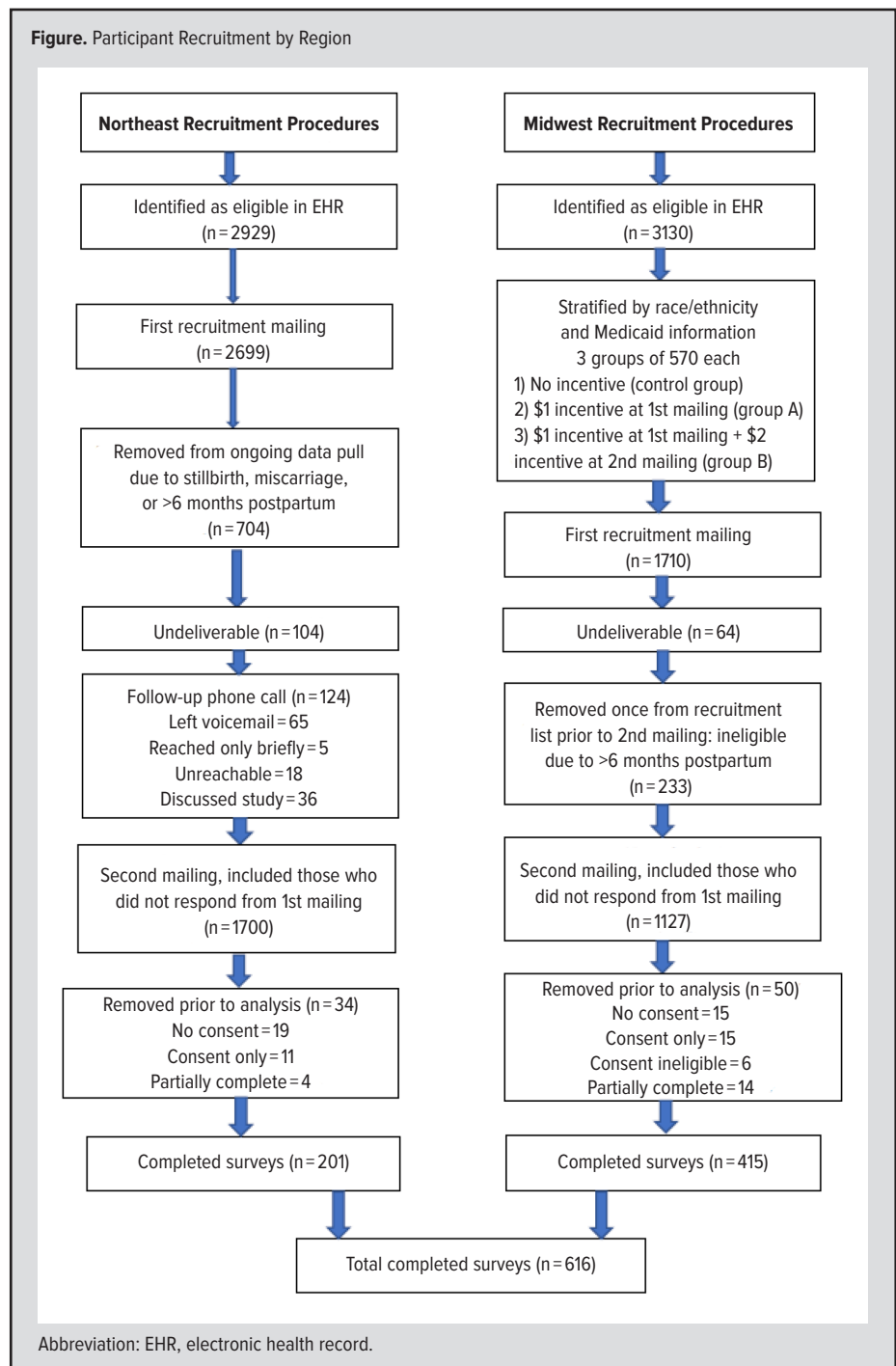
The overall purpose of the survey was to assess the impact of COVID-19 on mental and physical health and coping, as well as to address social needs among pregnant and postpartum persons. Potentially eligible adults were identified by searching the electronic health records of the 2 participating academic health systems. Eligible persons were adults aged 18 years and older, English-speaking, and pregnant or postpartum (within 6 months of birth). The eligibility criteria and survey questions were identical at the 2 study sites; however, the study timing and recruitment methods differed slightly between the 2 geographical locations as reported elsewhere.<sup>13</sup> The Figure shows the recruitment flow chart by region.

Potentially eligible participants were mailed invitation letters containing their unique study identification (ID) number and a URL to access the survey. Once online, they were presented with a brief study summary and prompted to enter their ID num-

ber before proceeding to eligibility screening. Informed consent was obtained by directing participants to read the “Summary Explanation of Research” and agreeing to initiate the anonymous REDCap survey.

At the Northeast site, the survey was accessible from August 4, 2020, through November 24, 2020, with 201 persons completing the “parent” survey (94 pregnant, 107 postpartum). At the Midwest site, the survey was accessible from January 15, 2021, through April 15, 2021, with 415 individuals who completed the “parent” survey (209 pregnant, 206 postpartum). Only postpartum respondents who answered the optional open-ended ques-

**Figure.** Participant Recruitment by Region



**Table.** Sample Demographics and Breastfeeding Responses From Survey Participants, N = 216

	N (%)
<b>Region</b>	
Northeast	66 (31)
Midwest	150 (69)
<b>Age range (years)</b>	
19–30	77 (35.6)
31–45	139 (64.4)
<b>Race (225 responses)<sup>a</sup></b>	
American Indian or Alaskan Native	5 (2.2)
Black or African American	8 (3.6)
White	191 (84.9)
Asian	12 (5.3)
Other Race	3 (1.3)
Prefer not to answer	6 (2.7)
<b>Ethnicity</b>	
Hispanic or Latino	9 (4.2)
Non-Hispanic or Latino	200 (92.6)
Prefer not to answer	5 (2.3)
Missing	2 (0.9)
<b>Education</b>	
High school diploma/GED	13 (6.0)
Partial college	20 (9.3)
Completed college	116 (53.7)
Graduate degree	65 (30.1)
Prefer not to answer	1 (0.5)
Missing	1 (0.5)
<b>Marital status</b>	
Married, or in a domestic partnership	207 (95.8)
Divorced or separated	1 (0.5)
Single	7 (3.2)
Missing	1 (0.5)
<b>Employment status (217 responses)<sup>a</sup></b>	
Working	144 (66.4)
Maternity leave/sick leave/temporarily laid off	34 (15.7)
Homemaker	32 (14.7)
Disabled, permanently or temporarily	1 (0.5)
Student	6 (2.8)
<b>How difficult is it for you to live on your total household income right now?</b>	
Extremely difficult	1 (0.5)
Very difficult	3 (1.4)
Difficult	13 (6.0)
Somewhat difficult	49 (22.7)
Not at all difficult	150 (69.4)
<b>Did you breastfeed or pump breast milk to feed your new baby after delivery, even for a short period of time?</b>	
Yes	213 (98.6)
No	3 (1.4)
<b>Did the COVID-19 pandemic influence your decision to breastfeed?</b>	
Yes	16 (7.4)
No	200 (92.6)

<sup>a</sup>Some participants answered more than once.

tions on breastfeeding were included in the present analysis, producing a combined sample of 216 participants (66 Northeast, 150 Midwest).

### Outcome Measures

The “parent” survey consisted of 52 questions on the socioeconomic, medical, and psychological well-being and needs of the participants. Three survey questions were related to breastfeeding, including 1 open-ended question (“Please consider sharing your thoughts about your decision regarding breastfeeding during the COVID-19 pandemic”) and 2 closed-ended questions with yes/no answer choices (“Did you breastfeed or pump breast milk to feed your new baby after delivery, even for a short period of time?” and “Did the COVID-19 pandemic influence your decision to breastfeed?”).

### Data Analysis

Demographics and 2 closed-ended questions on breastfeeding were analyzed using Stata.<sup>14</sup> Qualitative data were analyzed thematically and entered into a Microsoft Excel spreadsheet for data sorting and coding.<sup>15</sup> The data were organized into 3 separate columns by meaning unit, theme, and category assigned as positive, negative, or neutral. The work of the primary coder (CR), a physician with experience in family medicine, obstetrics, and breastfeeding, was reviewed by a second coder (EG), a social and behavioral scientist. Any discrepancies were discussed and resolved via consensus. The calculated frequency of categories, domains, and themes demonstrated how often similar content was mentioned.

## RESULTS

### Sample Characteristics (n = 216)

The analysis sample included postpartum participants from the Northeast (N = 66) and Midwest (N = 150). There were no major differences in demographics by region. The majority of participants were between 31 to 45 years old (64.4%), White (84.9%), married or in a domestic partnership (95.8%), and working (66.4%), while 83.8% held at least a college degree, and 69.4% reported no difficulty living on their household income. In total, 213 (98.6%) reported having attempted breastfeeding or pumping breast milk postpartum, and 16 (7.4%) reported that their decision about breastfeeding was affected by the COVID-19 pandemic. See Table.

### Participants’ Perceptions

Responses from postpartum participants about the perceived impact of the pandemic on breastfeeding were categorized as positive (enablers), negative (challenges), and neutral (enablers and challenges not impacted by COVID-19). Descriptions of the most common themes and exemplar quotes are presented below.

**Positive Impacts on Breastfeeding (122 responses, 6 themes):** Six themes highlighted how the COVID-19 pandemic positively

affected participants' breastfeeding decisions or experiences and promoted its initiation or continuation.

**Health Benefits (88 responses):** Some participants placed an emphasis on their dedication to breastfeed—particularly considering the pandemic—due to the nutritional and immune-building benefits. “*I feel breastfeeding is even more important during the pandemic to provide the baby with even more protection with antibodies*” (Patient [P]-138). Several participants shared that pandemic-related uncertainty contributed to extended amounts of time breastfeeding and was often coupled with participants' desire to provide prolonged health benefits to their infant. For example, “*...because of the pandemic, I decided to breastfeed my baby longer and more for his immunity*” (P-167). At the time this study was conducted, the COVID-19 vaccine had recently been approved for use, and several women attributed the vaccine as a motivation to continue breastfeeding.

**Convenience and Ease (19 responses):** As a result of the pandemic, some participants described change in routine, increased support from partners, less time spent pumping, and increased ease of breastfeeding: “[*Breastfeeding*] is easier this time around because I'm always home” (P-186).

**Changes in Work Routine (7 responses):** Some noted changes in work settings and routines that affected breastfeeding during the pandemic: “*Working from home during COVID-19 has actually made breastfeeding easier*” (P-126).

**Limited Formula Supply (4 responses):** A few remarked that difficulties obtaining formula increased their motivation to breastfeed: “*I decided that I should attempt [breastfeeding] due to the uncertainty of formula available*” (P-152).

**Lactation Support (2 responses):** Though many experienced difficulties obtaining lactation support, a few respondents shared that they received good lactation support during the pandemic, which allowed them to breastfeed despite challenges. “*I received lots of [breastfeeding] support in the hospital and during our NICU [neonatal intensive care unit] stay*” (P-203).

**Financial (2 responses):** Participants also shared that COVID-19 positively influenced their decision to breastfeed as a means of “*saving money*” (P-42).

### **Negative Impacts of Pandemic on Breastfeeding (38 responses, 5 themes)**

Five themes emphasized how the COVID-19 pandemic negatively affected participants' breastfeeding decisions or experiences.

**Difficulty Accessing Lactation Support and Attending Medical Visits (17 responses):** Many participants reported that the lack of in-person lactation support during the pandemic negatively affected their breastfeeding experience. While some people continued breastfeeding despite the challenges, others stopped altogether due to the lack of lactation support. “*We stopped breastfeed-*

*ing after only a month or so because of not being able to get enough hands-on help to teach us and the baby how to breastfeed*” (P-19). One woman expressed her frustration when she finally had to go into the clinic due to a medical issue: “*I called the lactation hotline multiple times and had to go into the clinic for in-person treatment when I developed mastitis*” (P-202).

Apart from the challenges obtaining hands-on breastfeeding support, there was a general sentiment regarding the difficulties participants experienced when attending medical visits out of the home. “*I wasn't comfortable bringing a newborn into a doctor's office for extra visits...*” (P-64). In addition to having less lactation support, several expressed a more general lack of support from family, friends, or peers that affected their breastfeeding experience: “*Everyone seems too scared of everyone else (COVID-19 was continuing to spread at that time) to really help much so we ended up switching to formula*” (P-104).

**Mental Health and Stress (11 responses):** Several women noted increased anxiety about caring for their baby during the pandemic. Others were diagnosed with mental health disorders, which consequently affected infant feeding choices. One mother shared, “*Due to the pandemic, my mental health has not been well. I knew I needed medications that could possibly have an effect on my breastfeeding, so I decided to formula feed instead*” (P-143). Another mother's response highlights the impact of social changes from the pandemic on mental health: “*I think maternity leave/immediate postpartum periods are isolating for mothers. COVID-19 made this isolation more dramatic for some mothers, including myself, which led to worse postpartum depression than I have previously experienced after my first child*” (P-123).

**COVID-19 Restrictions (5 responses):** Some women shared their experience of being diagnosed with COVID-19 and its impact on breastfeeding. For instance, participants shared that they were not allowed to see their infant, while others had trouble caring for an infant while wearing a mask and face shield. In one instance, “*...I did find it more difficult to learn how to breastfeed as the mask limited my field of vision when trying to see how our baby was latching*” (P-69).

Several mothers expressed concern about breastfeeding due to being separated from their newborn: “*[The COVID-19 pandemic] made me afraid I potentially wouldn't be able to [breastfeed] for a couple weeks... For the moms who did separate from their children, they're strong as hell. But I couldn't mentally do it*” (P-16).

**Social Isolation (3 responses):** Some lamented the challenges that COVID-19 restrictions imposed on their postpartum experience, such as reduced opportunities for connection with other mothers and an increased sense of isolation. “*Mother-baby hour is only available virtually right now and does not provide the same opportunities for connections with other mothers that in-person meetings did*” (P-168).

**Safety Concerns (2 responses):** A few participants noted concerns about safety and hygiene of pumping outside of the home

that were related to the COVID-19 pandemic, such as “[due to the COVID-19 pandemic] I worry about my pumping pieces and if it’s still safe to pump” (P-26).

### **Neutral Impacts of Pandemic on Breastfeeding (326 responses, 7 themes)**

The majority of participants shared that the COVID-19 pandemic did not affect their breastfeeding choices and experiences, yet still provided rationale for their decisions related to breastfeeding. Seven themes on the neutral impact of the pandemic on breastfeeding were identified.

**Advanced Decision-making About Breastfeeding (232 responses):** The most common experience respondents expressed regarding breastfeeding was having a plan already in place. For most participants, this prior plan already included a decision to breastfeed: “I always knew I’d want to try to breastfeed, pandemic or not, and did so for 12 weeks (P-65). Only a small proportion of respondents expressed they had made advanced plans not to breastfeed. “I didn’t want to breastfeed to begin with” (P-45).

Interestingly, even those with an advanced plan to breastfeed still had comments to share related to their pandemic experience. One mother said, “I intended to breastfeed either way but feel it is even more important during this time” (P-1). Another mother commented: “I was going to breastfeed regardless of the pandemic; however, it did make me try maybe a little bit harder to make sure that my supply was good since formula was hard to come by in the beginning of the pandemic” (P-207).

**No Impact of Pandemic on Breastfeeding Choices and Experiences (60 responses):** Many participants simply stated that COVID-19 did not impact their breastfeeding choices at all: “I breast fed as long as I had milk supply; COVID-19 played no role in that” (P-183).

**Safety Planning (11 responses):** Although many stated that the COVID-19 pandemic did not affect their breastfeeding decisions or experiences, their comments revealed that it was still on their mind, as indicated by contingency plans or anxieties related to choices they might make if diagnosed with COVID-19: “We keep a strict quarantine, and I haven’t had COVID (tested 8 times at the local testing center)” (P-25).

**Breastfeeding Challenges (9 responses):** Some commented on the breastfeeding challenges they experienced that were unrelated to COVID-19: “I’m not able to produce enough breast milk to feed my baby” (P-67).

**Pumping (6 responses):** Despite participant comments that COVID-19 did not affect breastfeeding choices, several women shared specifically about plans for pumping. While not necessarily directly related to COVID-19, some comments suggested that pumping provided a helpful alternative for mothers who were unable to feed directly at the breast: “Breastfeeding was challenging and my baby had difficulty latching, but I chose to exclusively pump so that she could have breastmilk for the first 6 months” (P-162)

**Medical Problems Unrelated to COVID-19 (5 responses):** Several women commented on external medical factors that were unrelated to COVID-19, yet affected their breastfeeding choices: “Baby had high bilirubin, so doctors made me put him on formula” (P-81).

**Issues with Formula (3 responses):** Several participants commented on difficulties obtaining formula, even if they did not think it directly impacted their breastfeeding experience.

## **DISCUSSION**

This study described breastfeeding attitudes, decision-making, and experiences among postpartum women during the early COVID-19 pandemic in the Northeastern and Midwestern United States. Participants noted that their breastfeeding decisions and experiences were affected by COVID-19 in a variety of ways. Pandemic-related factors that positively enabled participants’ breastfeeding included additional health benefits (eg, immunity), convenience and ease, and changes in work routines, whereas impediments to breastfeeding exacerbated by the pandemic were access to lactation support and medical care, increased stress and negative effects on mental health, and COVID-19 restrictions. Factors that were unaffected by the pandemic included prior feeding intentions, as well as knowledge of the importance and benefits associated with breastfeeding.

Focusing more on the positive effects, our study findings were in accordance with other studies, in which women noted that the COVID-19 pandemic had given them more time at home to establish breastfeeding.<sup>6,11</sup> As of 2020, less than 20% of the female workforce had access to paid family leave following birth,<sup>16</sup> despite the fact that longer maternity leave is shown to increase the duration of breastfeeding.<sup>17-19</sup> Although these findings are not surprising, they highlight the need to review best practices to support breastfeeding for working parents. In addition to the importance of longer maternity leave, other studies have highlighted the positive effects on breastfeeding afforded by flexible work hours and lactation support in the workplace.<sup>18,20-22</sup> Specific workplace interventions shown to support breastfeeding include designated space for lactation and pumping, support from colleagues, and ability to work from home where possible.<sup>22</sup>

Similar to other studies evaluating postpartum social support during the COVID-19 pandemic,<sup>2,6</sup> participants in this study reported reduced support and increased stress and isolation as factors that negatively affected their breastfeeding experience. Many of the survey respondents commented on the importance of access to lactation support—especially for new parents—and yet medical support during the early pandemic was limited by early hospital discharges, reduced lactation support in hospital and outpatient settings, and limited availability of peer and community lactation support.<sup>2,4,23</sup> Recognizing how much these factors affect breastfeeding, the Baby-Friendly Hospital Initiative<sup>24</sup> provides

evidenced-based hospital practices that support lactation initiation. For their part, outpatient medical practices would do well to incorporate similar evidence-based practices<sup>18,25</sup> that promote and normalize breastfeeding in the office and provide immediate postpartum and lactation follow-up, with priority given to in-person lactation support.<sup>11,26</sup>

Unrelated to the effects of the pandemic, many participants commented on the potential immune benefits of breastfeeding. It is well known, for instance, that breastfeeding is associated with improved health outcomes in infants, including decreased rates of lower respiratory tract infection and severe diarrhea, as well as reduced obesity rates.<sup>25</sup> With regard to COVID-19 infection in particular, however, studies have found antibodies against the SARS-CoV-2 virus in breastmilk samples from women with a personal history of COVID-19<sup>27,28</sup> and those who were vaccinated against it, indicating that antibodies can be transferred to infants through breastmilk and may confer protection against infection.<sup>29-31</sup> This has been further substantiated by evidence that maternal receipt of 1 or more COVID-19 vaccines in pregnancy is associated with reduced risk for COVID-19-related hospitalization among infants <6 months.<sup>32</sup> In light of these data, which further augment participant comments on immune protection, clinicians are encouraged to have ongoing conversations about infant feeding choices with patients and to share data relevant to immune benefits that may impact breastfeeding and immunization decisions.

### Limitations

This study had several limitations. Although recruitment included a variety of medical practices and diverse patient populations, respondents were mostly non-Hispanic, White, and married, with a high level of educational attainment and subjective social status, raising concern for participation bias. Despite this lack of diversity in respondents' backgrounds limiting generalizability, postpartum people comprise a vulnerable group that were negatively affected by potentially lasting challenges that were elicited from this study. Future studies should focus on a more targeted sampling from populations with greater racial, ethnic, and socioeconomic diversity. Furthermore, this study relied on participant self-report, which is an inherent limitation of survey research that can lead to response bias. Additional limitations include (1) the cross-sectional nature of the data, (2) self-selection bias, (3) only 1 independent data coder, and (4) limited survey questions with a lack of ability to follow-up or clarify responses.

### CONCLUSIONS

Findings from this study offer important insights into the varied and complex ways the pandemic affected breastfeeding and related decisions. As health care institutions and policymakers look to improve breastfeeding initiation and duration rates, considering

the experiences and perspectives of postpartum mothers during the COVID-19 pandemic may help shed light on potential ways to support breastfeeding in times of crisis.

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