Opportunities and Challenges for Family-Centered Postpartum Care During the COVID-19 Pandemic: A Qualitative Study of Nurse Perspectives

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Abstract

Background

The global COVID-19 pandemic has forced the health care sector to make wide-ranging changes to protect patients as well as providers from the risk of infection. Many of these changes are likely to have greatest impact in contexts of care that employ family-centered models, including perinatal and maternity care. Research conducted in prenatal, childbirth and postpartum settings during the pandemic has shown that some of these restrictions have negatively impacted health care practice and outcomes, while others have been beneficial to both providers and patients. The present qualitative study aimed to understand what changes have occurred in postpartum nursing practice during the pandemic, and how these changes have affected nurses, women and families during their stay in the hospital following a new birth.

Methods

Structured interviews were completed with 20 postpartum nurses from five hospitals across Texas. The interview protocol was designed to elicit information about changes to hospital policies in postpartum units during the pandemic, nurses’ attitudes about these changes, perceived benefits and challenges for performance of their duties, and perceived effects on patients and their families. Nurses were recruited for the study using a purposive sampling approach. Interviews were conducted by telephone and lasted approximately 30 to 45 minutes. Data were analyzed using a qualitative descriptive approach.

Results

Participants reported that their hospitals placed restrictions on the number and mobility of support persons allowed to stay with the mother in the unit and prohibited all other visitation. Some challenges of these policies included reduced opportunities for hands-on learning and an increased number of patients opting for early discharge. Perceived benefits for nursing practice as well as patient outcomes included improved frequency and effectiveness of nurse-family communication, increased father involvement, and greater opportunities for maternal rest, breastfeeding, skin-to-skin care and family bonding.

Conclusions

Study findings suggest that some limitations on postpartum hospital visitation may achieve important, family-centered goals. Protected time for family-bonding, maternal rest, breastfeeding, father involvement and individualized education are critical to quality FCC. Research must examine which visitation policies maximize these benefits while preserving patient access to family and social support.

Introduction

Since the outset of the global COVID-19 pandemic, the health care sector has been forced to make wide-ranging changes to meet the threefold challenge of providing quality health care to patients, reducing the spread of the virus among the population, and protecting the frontline workforce. In-person visits have been curtailed or replaced by virtual options where possible. When in-person care is required, precautions have included restrictions on the participation of visitors and support persons, use of personal protective equipment (PPE), and social distancing or isolation of patients from each other and from providers, support persons, and visitors. These restrictions are likely to have greatest impact in contexts of care that employ family-centered models, which emphasize the inclusion and involvement of parents, relatives, and extended social support networks to the extent desired by patients and families (Clay & Parsh, 2016; Hart, Turnbull, Oppenheim, & Courtright, 2020; Park, Lee, Jeong, Jeong, & Go, 2018). It is important to understand how changes in health care related to the COVID-19 pandemic may have affected the practice of family-centered care (FCC) for women and families during this period.

There have been several studies investigating changes in perinatal care during COVID-19. Some changes have raised significant concerns about patients’ rights to family involvement in care, as well as about the impact on maternal, infant, and family health outcomes. These changes include hospital policies barring the presence of a support person from labor and delivery, separating mothers from their infants during the postpartum period, and restrictions on parental visitation in the NICU (Arora, Mauch, &
Gibson, 2020; Murray & Swanson, 2020; Stuebe, 2020; Tomori, Gribble, Palmquist, Ververs, & Gross, 2020). Some of these changes have compromised patients’ physical and mental health. Mayopoulos, Ein-Dor, Li, Chan, and Dekel (2020) found that women who were not permitted a support person during delivery experienced more pain and delivered infants with lower birthweights and had a higher NICU admission rate. Additionally, women who were not permitted visitors during the postpartum stay reported acute stress symptoms at six times the rate of women who were permitted to have visitors. Restrictions on parent presence in the NICU has impeded breastfeeding and developmental care for vulnerable neonates (e.g. positive touch, skin-to-skin holding, music therapy), introducing the potential for far-reaching impacts on infants’ health and neurodevelopment, parent-infant bonding, and parents’ mental health (Ashini, Alsoufi, & Elhadi, 2021; Scala, Marchman, Brignoni-Pérez, Morales, & Travis, 2020).

Other COVID-19-related changes in the delivery of care have had no effect on patient outcomes or have proved beneficial. For instance, the substitution of telehealth for in-person prenatal medical visits and education has raised the potential for greater access to care, increased attendance at visits, and greater continuity of care (Almuslim & AlDossary, 2021; Holcomb et al., 2020; Peahl et al., 2021). Women who received telehealth visits were not found to differ significantly from women who received in-person visits in rates of maternal and neonatal complications, but they began prenatal care earlier and received a greater number of total visits than did women who received in-person care (Duryea et al., 2021). Another study found that though women were discharged from the hospital on average 24 hours earlier during the pandemic than before its onset, emergency department visits and readmissions among postpartum women remained the same. The authors suggested that shorter postpartum stays may therefore represent a cost-effective alternative to pre-pandemic practice (Kugelman et al., 2021). Aside from this study, our review of the literature found no other studies examining postnatal care for mothers not infected with COVID-19 and their families during the pandemic.

Postpartum nurses are the frontline in postpartum care. They have the most direct contact with the mother, baby and support person immediately following the birth and are responsible for providing acute care as well as education to assist the new family in the transition from hospital to home. During the 2- to 4-day postpartum stay, nurses provide critical information on infant safety, breastfeeding support, and maternal care. Nurses also facilitate parent-infant bonding and provide basic instruction in infant care to new parents. It is important to understand how changes due to COVID-19 may have affected these key functions. The present qualitative study aimed to understand what changes have occurred in postpartum nursing practice during the pandemic, and how these changes have affected nurses, women and families during their stay in the hospital following a new birth from the perspective of the nurses providing that care.

**Methods**

**Protocol Development**

This analysis utilizes data that was collected as part of a larger study of nurse attitudes and practices regarding father involvement in postpartum education and newborn care. Some of the interviews for this larger study took place in late 2020 and early 2021, several months into the COVID-19 pandemic. By this time, hospitals had imposed several iterations of pandemic-related policies and restrictions, which changed as more information about the virus became available and as its prevalence and severity fluctuated in local populations. This study focuses on the questions specific to COVID-19 policies and practices in the interview protocol. These seven questions captured information about changes in hospital policies due to the pandemic, nurse perceptions of the impacts of these changes on their ability to provide care, and nurse perspectives on patient and family response to the changes.

Data collection protocols were approved by the University of Texas Health Center at Tyler institutional review board (IRB) and a waiver of written consent was granted. Information about the study was provided to participants and verbal consent was obtained prior to the start of interviews. All research activities were conducted in accordance with IRB guidelines and requirements.

**Participants**
Nurses were recruited for the study using a purposive sampling approach. Study coordinators distributed information about the purpose and parameters of the study via email to colleagues with established relationships with postpartum units in area hospitals throughout the state of Texas. Nurses who were interested in participating in the study were asked to contact the study coordinators. Criteria for participant selection included current or recent experience working in the postpartum unit with a preference for nurses who had worked in postpartum care before and during the pandemic. Participants were asked to refer colleagues who would like to participate in the study. Nurses were selected purposively to represent as many different hospitals as possible.

Interview participants included 20 female postpartum nurses working in five hospitals located in cities in the Gulf Coast, Central, Northern and Panhandle regions of Texas. At the time of data collection, 19 nurses had at least one year of experience working in postpartum care pre-pandemic; one had started working in postpartum care shortly after the start of the pandemic in spring 2020. One participant was a parent educator with prior experience as a postpartum nurse.

Data Collection and Analysis

The first author, an experienced researcher with doctoral level training in qualitative research methods, conducted all interviews by audio-recorded Zoom meetings, each lasting approximately 30 to 45 minutes. So that participants felt free to discuss the challenges of their work environment without fear of reprisal by their employers, written consent was waived. Verbal consent was obtained prior to the start of the interviews. Upon completion of the interviews, participants received a $75 electronic gift card as compensation for their time. Voice recordings were transcribed using Rev.com, a reputable online transcription service.

This study employed a qualitative descriptive (QD) approach to data collection and analysis; this approach is particularly useful for exploring topics that are not well-researched (Colorafi & Evans, 2016; Kim, Sefcik, & Bradway, 2017). Data coding and analysis were done in NVivo version 12 (QSR International, 1999). Interviews were coded using both content and thematic analyses (Hsieh & Shannon, 2005; Sandelowski, 2000). In a first round of coding, responses were grouped by interview questions. An inductive approach was then used to code themes within and across questions (Elo & Kyngäs, 2008). The final coding scheme is provided as supplementary data. Coding was conducted by two of the authors. All ambiguous cases were discussed to reach consensus. Coders also reviewed 10% of each other's coded transcripts to check for agreement. No discrepancies were encountered. After 20 interviews, saturation was reached for all themes, as participant responses were remarkably consistent.

Results

Changes to Hospital Policy

The nurses in this study reported that their hospitals placed restrictions on the number of support persons allowed in postpartum units and the degree to which support persons could move around within the hospital and come-and-go from the hospital. All of the hospitals where the nurses worked prohibited any visitors during the postpartum stay aside from a single support person. As the pandemic waxed and waned in local communities, hospitals loosened or tightened visitation policies accordingly. Some hospitals allowed support persons to switch out at specified intervals (e.g., 12 or 24 hours). For instance, the father could be present the first day and then go home and the grandmother come to stay for the second day. Policy also varied across hospitals and over time regarding whether support persons were permitted to leave the hospital and return during the mother's stay. In most cases where the mother was not positive for COVID-19, support persons were permitted to leave the room to get food from the cafeteria or get items from their car. There was greater variation as to whether the support person could leave the hospital premises and return. In later months of the pandemic, many hospitals allowed the support person to go home to collect belongings or get food to bring back to the hospital; others did not. Some allowed a support person to leave the hospital, but they could not return until the next day. One of the hospitals in this study eventually began permitting two support persons during the mother's postpartum stay.

The nurse participants noted that in most cases, the support person (usually the father), stayed with the mother for the entire stay. Hospital accommodations for support persons included either a couch or pull-out bed, and in some cases, queen size beds
that they could share with the mother. If support persons were not permitted to leave the hospital, they were either provided with a tray of food like the mother, or they could purchase their own food in the cafeteria.

**Challenges For Nursing Practice**

Nurses indicated that for patients who tested negative for COVID-19, they visited patient rooms and carried out all their usual care and education activities, including lactation support, in the same way and to the same degree as they had prior to the pandemic. Nevertheless, social distancing measures taken by hospitals reduced opportunities for hands-on teaching and learning in some areas. For example, one nurse noted that her hospital cancelled their childbirth and parenting classes previously offered in-person or switched them to a virtual format. Nurses found the virtual format to be somewhat less effective in conveying information that involves hands-on tasks, such as diapering, bathing, and swaddling a newborn. They also felt that a virtual format, particularly when video was not available, made it more difficult for them to gauge parents’ level of understanding of the material. See Table 1 for example quotes. It was noted by many nurses that because classes had been cancelled, parents were arriving at the hospital for their delivery less prepared than they were prior to the pandemic. Further, some in-hospital policies even exacerbated this lack of preparedness. In some hospitals, parents were not able to participate directly in the baby's first bath because they were barred from the nursery due to social distancing rules. In another hospital, infants were wheeled over to the door, away from the mother's bedside, for assessments, tests, and baths. These distancing measures may have limited opportunities for teaching and learning during these important activities.

Additionally, nurses reported that many families opted for early discharge during the pandemic, which meant nurses had significantly less time to perform their many duties. A typical postpartum stay prior to the start of the pandemic was approximately 2 days for a vaginal birth without complications, and up to 4 days for a caesarean birth. During the pandemic, nurses reported that many families opted to leave after 24 hours for a vaginal birth, and 48 hours after a caesarean (assuming there were no complications). Nurses perceived various reasons for the increase in early discharges, including parents’ fear of COVID-19 infection, feeling isolated from family and friends, lack of childcare for older siblings, and feeling “cooped up” or “trapped” in the hospital or room.

While early discharge alleviated some of the emotional and logistical strains facing parents during the pandemic, it significantly limited the amount of time nurses had to provide care and education to parents. Nurses reported that they “try to get all the tests and still ensure the safety and provide all the care that we’re supposed to, to those patients” in a shorter timeframe, and as a result had felt “rushed.”
Table 1
Perceived challenges for patient care and education due to COVID-19

| Code                                      | Examples                                                                                                                                                                                                 |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reduced opportunities for hands-on education | “Unfortunately, when it comes to our online classes, I'm not able to have their video cameras on... so now I just see a brief name, I can't see them anymore. So I'm not sure who's attending. So it's a little more difficult for me to... I don't feel like I'm getting everything that I want to get across to everyone.” |
|                                           | “There are things that we had in place that I liked that we have kind of stopped doing education wise, like car seat education and stuff.... We had like a car seat that we would take into the rooms and it had a baby in it and we would like show them how to proper installation of a car seat and making sure baby's in there safe. But we don't necessarily like bring that car seat in and out now.” |
|                                           | “Prior to COVID, I really liked to bring both parents into the nursery... for the first bath, especially first-time parents and let them really be involved in that process so they could feel comfortable and not be reluctant when that time came at home. Unfortunately, that's something that we're no longer able to do. We can't take families into the nurseries.... And so that has been sort of a downside because then they're just kind of watching through the window.” |
| Time constraint due to early discharge     | “… So you have the patient asking, but you also have the physicians offering to send them home sooner. It just kind of speeds it up with how much time you have to give them teaching and how much time they have in the hospital to receive help from lactation or stuff like that.” |
|                                           | “And so just [from a] nursing standpoint, there's just a lot to do, a lot that has to be done in 24 hours for mom. We want to make sure pain's under control before we send her home. And then baby, the hearing screens, CCHD, the PKU, make sure [bilirubin] is okay. So there's a lot of things that has to be done, and sometimes it can be rushed. Well, as a nurse, I feel rushed…” |
|                                           | “[Early discharges] affects [my ability to do my job] a lot because we have less time. We try to get all the tests done and still ensure the safety and provide all the care that we’re supposed to, to those patients in less timeframe.... I do feel a little rushed when they request ... to go home early.” |

Benefits For Nursing Practice

Despite these challenges, nurses’ attitudes toward COVID-19-related policy changes for patients who were not COVID-19 positive -- specifically restrictions on visitation -- were overwhelmingly positive. Nurses consistently reported that the absence of visitors made it much easier to do their job and increased their effectiveness in educating new parents. Theme codes and example quotations are shown in Table 2.
Table 2
Positive attitudes and perceived benefits for nursing practice of visitor restrictions during COVID-19

| Code                        | Examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Positive attitudes          | "We were all kind of like, ‘Oh, this is great. There’s not 8,000 family members coming in,’ which would sometimes interfere with care.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                             | "I think it’s worked better. Like I enjoy, I mean, not having all those visitors.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                             | "I think, as far as I know the nurses love it. They really like not having family around.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| More nurse-parent interaction| "I definitely have more time to interact with my patient and... with the dad. Because every time I come into the room, if there's visitors, other than dad, then I usually just check on them real quick and leave the room, but if there's only mom and dad and baby, I can have a little more conversation and answer more questions. Yeah, definitely spend more time with mom and dad during the COVID."                                                                                                                                                                                                                                                      |
|                             | "I think that there's been a tremendous benefit and it being limited to just mom, dad, and baby, we’re able to really focus in on what they need. And they’re able to have that space to ask questions that they might not have otherwise asked if family and visitors were in the room.”                                                                                                                                                                                                                                                        |
|                             | "I think it's better. Like I said, not having to deal with visitors coming in and out; we got more time for each mom and dad. I get to focus more on them and get to spend more time with them.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| More effective education    | "... I'm able to not just teach them, but also get to know them and their family dynamic at home, whether it be them having older kids, and how to get them involved, and just how mom and dad interact with each other, and how they can help each other out.”                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                             | "Like I enjoy, I mean, not having all those visitors because... you couldn't really interact with the mom and dad because they were too busy trying to entertain everybody and you couldn't really teach them. But now with nobody in there, they're very involved and they want to learn...”                                                                                                                                                                                                                                                                                                                                                                                   |
|                             | "So I feel like it has been better, in a sense, that it’s kind of more one on one and not so mom, grandma, grandpa, and cousins are in the room. So giving education may not be spread between eight people, and not really direct. So that's been a little bit easier, it's more one on one.”                                                                                                                                                                                                                                                                                                                                                       |
| More father involvement     | "Without those outside influences... in some ways maybe it gives dad a little bit more space to be there, and ask his own questions, and... there's less pressure from their mother-in-law, or the mom's mom, I guess.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
**Improved Patient Outcomes**

Nurses not only perceived benefits for their own job performance because of restricted visitation, but also for patient and family outcomes. Among the benefits commonly cited were more rest for the mother and support person, more time for the new family to bond, and more breastfeeding (see Table 3). One participant noted that infants in her unit experienced less weight loss after birth, because mothers were able to focus more on newborns’ hunger cues and to feed more frequently. Participants also noted that greater privacy led to greater intimacy and more time for parents to process their experience, adjust to their new infant, and bond as a family unit. One participant summarized the multiple benefits of restricted visitation saying: “We find that moms are resting better, which helps with their blood pressure… We noticed that moms are breastfeeding better. They’re sleeping better. They’re asking questions. They’re learning stuff. Dad is getting involved. Dad does skin to skin… It’s bonding time for mom, dad, and baby, or mom and baby.”

Table 3

| Examples |
| --- |
| “I feel like our moms are much more well rested since we don’t have visitors. I feel like they are breastfeeding better. I feel like bonding and stuff is better and there’s less stress for mom to have to worry about constant visitors in and out of the hospital and not worrying about breastfeeding in front of her family and that kind of stuff.” |
| “The lack of visitors too has helped with breastfeeding. It’s helped with both of the parents getting more rest because they’re not worried about people coming in...” |
| “I’ve had several moms and several dads comment on the fact that, even though they miss their families they really, really love … not being able to have all the family come visit. It gives the parents time to rest. It gives them a small version of privacy, outside of the million hospital staff that come in the room for different things. They don’t feel the need to entertain or to engage with all the family that wants to come in and fill the whole hospital room.” |
| “The other thing I’m seeing is both the parents… are really liking not having a lot of visitors in the room so that they can focus on just them…. There’s not a lot of entertainment going on, so they are focusing more on the actual care of that baby a little bit more now. They’re not being distracted.” |

Footnote:

[1] In this paragraph, and in Table 1, references are to “fathers” rather than "support person" because nurses were asked to reflect on father engagement, specifically, as part of the larger study of nurse-father interaction.

**Discussion**

The public health demands of the COVID-19 pandemic imposed extraordinary constraints on family and social life and curtailed individual freedoms in various ways. As the threat of COVID-19 begins to subside across the country, institutions must weigh the costs and benefits of COVID-era policies and determine the way forward in a post-COVID world. The findings of this study raise important questions about these restrictions and the implementation of FCC in postpartum settings following the pandemic.

The foundational principles for family-centered postpartum and newborn care include: 1) parents have access to the infant and are able to participate in all aspects of newborn care,[2] 2) patient and family autonomy and authority are respected (above and beyond the convenience of healthcare providers), 3) patients have access to family and social support to the extent desired, and 4) healthcare providers give individually tailored education designed to empower parents during their transition into the parenting role (Public Health Agency of Canada, 2019; Curley, Hunsberger, & Harris, 2013; Zwelling & Phillips, 2001). Policies and practices which have limited parents’ access to their infant and their participation in newborn care run counter to FCC. This includes social distancing measures which take newborns away from the mother’s bedside and those which restrict parental presence in the nursery. Further restrictions on patients’ and support persons’ mobility also run counter to FCC.

According to study findings, the question of visitation policies on FCC is complex. The involvement of family and other sources of social support in the perinatal period has associated with reduced pregnancy risk factors, lower maternal stress and depression, and improved birth outcomes (Ginja et al., 2018; Harris et al., 2012; Milgrom, Hirshler, Reece, Holt, & Gemmill, 2019;
Racine et al., 2018). In studies of family-centered postpartum care, both mothers and fathers expressed the desire for visitation policies that allow visitors (family or otherwise) at flexible times during their stay (Gaboury, Capaday, Somera, & Purden, 2017). And yet, mothers also value “quiet time” without visitors, to allow them better rest and recuperation as well as private family time (Beake, Rose, Bick, Weavers, & Wray, 2010; Gaboury et al., 2017). Mothers have also identified having visitors in the room as a barrier to skin-to-skin care (Ferrarello & Hatfield, 2014).

FCC places a central focus on patient and family education and empowerment. Empowerment is to be achieved through personal relationships with health care professionals who take the time to assess their unique needs and strengths and provide personalized education through sensitive and collaborative interactions with the patient and family (Curley et al., 2013). Studies of postpartum women's learning needs and preferences have found that mothers value one-on-one instruction and time spent with their nurse, saying that it empowers them to better care for themselves and their newborn at home (Buchko, Gutshall, & Jordan, 2012; Gaboury et al., 2017). They have also expressed the desire for greater attention and support for fathers, and for mothers and fathers to be treated as individuals, with distinct needs for learning and support (Gaboury et al., 2017).

Study participants reported that, prior to the start of the pandemic, their hospitals had no restrictions on visitation. Findings of this study suggest that unlimited visitation may pose challenges both for nurses who are trying to provide care and education during this brief but critical time, and for families who are trying to incorporate a large amount of information in a short time span while bonding with their new baby. Many nurses in the study said they hoped restrictions would continue after the pandemic, and one said her director was already planning to retain some of the COVID-era visitation policies in the long term, because of the observed benefits to patients and their families.

Family-centered postpartum units are encouraged to restore policies that favor patient and family access to their infants, restore autonomy (e.g., mobility), and provide for hands-on teaching and learning (perhaps with additional virtual options for those who prefer it). Findings of this investigation suggest that, rather than a wholesale return to unrestricted visitation, hospitals may wish to explore options that balance patients’ access to family and social support, with the benefits of rest, bonding time, and individualized education for the mother and support person(s).

However, more research is needed before specific policies can be formulated or recommended. Studies exploring patients’ preferences for postpartum visitation policies, as well as impacts of different visitation models on patient satisfaction and health outcomes are needed. Nurses in this study perceived benefits of restricted visitation for patients including more rest, more breastfeeding and skin-to-skin care, and greater parent engagement in education and newborn care. Quantitative evidence is needed to verify these perceptions from more healthcare providers and importantly, from the families. Studies should not only assess impacts on health behaviors and outcomes, but on learning outcomes and parental competency and self-efficacy, as well. Additionally, research may identify a need to provide nurses with training and education to improve attitudes and practices toward FCC. Studies conducted in postpartum and other healthcare contexts have found that nurses often hold attitudes inconsistent with and experience challenges implementing family-centered models of care (Boztepe & Kerimoğlu Yıldız, 2017; Bruce & Ritchie, 1997; Buek, Cortez, & Mandell, 2021; H. Coats et al., 2018; Heather Coats et al., 2018; Coyne, Murphy, Costello, O'Neill, & Donnellan, 2013; Mirlashari et al., 2020; Petersen, Cohen, & Parsons, 2004).

Footnote:

[2] Participation in some aspects of care may not be feasible in the case of high-risk newborns in the neonatal intensive care unit. Parent involvement in care should be encouraged, in these cases, to the extent feasible given the infant’s condition.

Conclusion

Family-centered models of care place the needs and wishes of the patient and family at the forefront. Many hospitals have interpreted and implemented the FCC principle of access to family and social support through policies of unlimited visitation during the postpartum stay. However, present findings suggests that some limitations on visitation may achieve important, family-centered goals. Protected time for family-bonding, maternal rest, breastfeeding, father involvement and individualized
education are critical to quality FCC. Research must examine which visitation policies maximize these benefits while balancing patient access to family and social support.

**Abbreviations**

COVID-19 Coronavirus Disease of 2019  
FCC Family-centered Care  
NICU Neonatal Intensive Care Unit  
QD Qualitative Descriptive

**Declarations**

**Ethics approval and consent to participate**

Data collection protocols were approved by the University of Texas Health Center at Tyler institutional review board (IRB) and a waiver of written consent was granted (#1088). Information about the study was provided to participants and verbal consent was obtained prior to the start of interviews. All research activities were conducted in accordance with IRB guidelines and requirements.

**Consent for publication**

Not applicable

**Availability of data and materials**

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

**Competing interests**

The authors declare that they have no competing interests.

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**Authors' contributions**

KB and DM developed the interview protocol and conducted the interviews. KB and MO developed the coding scheme and applied codes to the data. KB drafted the manuscript and MO and DM reviewed and provided feedback on each draft. All authors read and approved the final manuscript.

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