Implications of the COVID-19 Pandemic Response for Breastfeeding, Maternal Caregiving Capacity and Infant Mental Health

Karleen Gribble, Kathleen Marinelli, Cecilia Tomori, & Marielle Gross

Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected.

Interim guidance
13 March 2020

This is the second edition (version 1.2) of this document for the novel coronavirus SARS-CoV-2, causing COVID-19 disease. It was originally adapted from the publication Clinical management of severe acute respiratory infection when MERS-CoV infection is suspected (WHO, 2019).

This document is intended for clinicians involved in the care of adult, pregnant and paediatric patients with or at risk for severe acute respiratory infection (SARI) when a SARS-CoV-2 infection is suspected. Considerations for paediatric patients and pregnant women are highlighted throughout the text. It is not meant to replace clinical judgment or specialist consultation but rather to strengthen clinical management of these patients and to provide up-to-date guidance. Best practices for infection prevention and control (IPC), triage and optimized supportive care are included.

This document is organized into the following sections:
1. Background
2. Screening and triage: early recognition of patients with SARI associated with COVID-19
3. Immediate implementation of appropriate infection prevention and control (IPC) measures
4. Collection of specimens for laboratory diagnosis
11. Adjunctive therapies for COVID-19: corticosteroids
12. Caring for pregnant women with COVID-19
13. Caring for infants and mothers with COVID-19: IPC and breastfeeding
14. Care for older persons with COVID-19
15. Clinical research and specific anti-COVID-19 treatments

Appendix: resources for supporting management of severe acute respiratory infections in children

These symbols are used to flag interventions:
- Do: the intervention is beneficial (strong recommendation) OR the intervention is a best practice statement.
- Don’t: the intervention is known to be harmful.
- Consider: the intervention may be beneficial in selected patients (conditional recommendation) OR be careful when considering this intervention.

This document aims to provide clinicians with updated interim guidance on timely, effective and safe supportive management of patients with suspected and confirmed COVID-19. It is organized by the patient journey. The definitions for mild and severe illness are as Table 2, while those with critical illness are defined as patients with acute respiratory distress syndrome (ARDS) or sepsis with acute organ dysfunction.

The recommendations in this document are derived from WHO publications. Where WHO guidance is not available, we refer to evidence-based guidelines. Members of a WHO global network of clinicians, and clinicians who have treated SARS, MERS or severe influenza patients, have reviewed the recommendations (see Acknowledgements). For queries, please email: ourteam@who.int with “COVID-19 clinical question” in the subject line.
Many organisations and hospitals worked against enabling these practices
Policies needed to weigh up the importance of skin-to-skin, maternal proximity and breastfeeding against the risks posed by COVID-19

Mistakes from the HIV pandemic should inform the COVID-19 response for maternal and newborn care

Karleen Gribble, Roger Mathisen, Mija-tesse Ververs and Anna Coutsoudis

Abstract

Background: In an effort to prevent infants being infected with SARS-CoV-2, some governments, professional organisations, and health facilities are instituting policies that isolate newborns from their mothers and otherwise prevent or impede breastfeeding.

Weighing of risks is necessary in policy development: Such policies are risky as was shown in the early response to the HIV pandemic where efforts to prevent mother to child transmission by replacing breastfeeding with infant formula feeding ultimately resulted in more infant deaths. In the COVID-19 pandemic, the risk of maternal SARS-CoV-2 transmission needs to be weighed against the protection skin-to-skin contact, maternal proximity, and breastfeeding affords infants.

Conclusion: Policy makers and practitioners need to learn from the mistakes of the HIV pandemic and not undermine breastfeeding in the COVID-19 pandemic. It is clear that in order to maximise infant health and wellbeing, COVID-19 policies should support skin-to-skin contact, maternal proximity, and breastfeeding.

Keywords: COVID-19, HIV, Prevention of mother-to-child-transmission, Infant and young child feeding in emergencies, Policy development
Impact of skin-to-skin on infants

- Placed skin-to-skin after birth, healthy newborns perform a series of behaviours culminating in breastfeeding (Widström et al., 2019).

- Infants placed skin-to-skin have more effective first breastfeeds. These breastfeeds occur during a time when infants have high levels of catecholamines (adrenaline and noradrenaline) in their system which enhance learning. Breastfeeds during skin-to-skin form a foundation for continued effective feeding (Bystrova et al., 2009; Moore et al., 2016).

- Infants placed skin-to-skin after birth are less likely to be exposed to infant formula in hospital and to breastfeed for longer than infants not placed skin-to-skin (Moore et al., 2016).
Impact of skin-to-skin on mothers

• When an infant is placed skin-to-skin on their mother’s chest at birth she experiences a surge of release of oxytocin and a reduction in the release of cortisol (Matthisen et al., 2001; Handlin et al., 2009)

• Mothers who experience skin-to-skin contact seek greater proximity to their infants, speak to their infants more, touch them more, and are more gentle in their touch in the days after birth (Widstrom et al., 1990; Dumas et al., 2013)

• Mothers who experience skin-to-skin have more positive interactions with their baby and are more affectionate in their touch for up to a year following birth than mothers who do not experience skin-to-skin (Chateau & Winberg, 1977, 1984; Bystrova et al., 2009)
Impact of breastfeeding on infants

• Infants are born with an immature immune system and mothers’ milk provides external immune support (Cacho & Lawrence, 2017; Vieira et al., 2018)

• Multiple ingredients in breastmilk actively and passively protect infants against infection and assist in development of the infant’s own immune system

• Breastfeeding enables provision of the nutrition and interpersonal interactions necessary for normal growth and brain development (Victora et al., 2016)
Impact of breastfeeding on mothers

- The hormones oxytocin and prolactin are released during breastfeeding and act on the maternal central nervous system to promote social responsiveness, maternal behaviour, maternal proximity, and reduce stress responsivity (Uvnas-Moberg et al., 1987; Uvnas-Moberg, 1998)

- The close and repeated contact necessary for breastfeeding results in more affective touch and care by breastfeeding mothers (Smith & Forrester, 2017)

- Breastfeeding mothers exhibit heightened responses in brain regions associated with maternal sensitivity as compared to non-breastfeeding mothers (Kim et al., 2011)
What is rooming-in?

Rooming-in means the mother and infant share a room

AND

Infant bed-shares with their mother, is in an attached side-car crib, or right by her bedside in a stand-alone cot (Jaafar et al, 2016)
Impact of rooming-in on breastfeeding

- Close physical contact is necessary for mothers to identify and respond to their infant’s feeding cues, and to feed frequently (Winberg, 2002)
- Frequent breastfeeding is necessary to successfully establish and maintain breastfeeding. Closer infants are to mothers the more frequently they breastfeed - even infants in a crib by their mother’s bedside feed less frequently than infants in a side-car bed (Ball et al., 2006)
- Nursery care obviously restricts feeding frequency. A mother 1.5–2 m from her infant will breastfeed less (especially if she has had a caesarean). Women whose infants are behind a screen will experience greater difficulty identifying their infants’ visual hunger cues and feed less frequently.
Impact of rooming-in on mothers

- Mothers whose infants room-in in the days after birth touch, kiss, smile, and talk more to their babies during feeding, and have higher maternal attachment scores than mothers whose infants are cared for in a hospital nursery (Norr et al, 1989)
What is the impact of policies separating infants from their mothers
Preventing skin-to-skin and separation from mothers has had a devastating impact on breastfeeding and maternal wellbeing during COVID-19

If no skin-to-skin, infants were 2.5x more likely not to be exclusively breastfed between 1 and 3 months than infants with skin-to-skin

If mothers and infants kept in separate rooms, infants 4x more likely not to be exclusively breastfed between 1 and 3 months than infants who room shared

If no direct breastfeeding in hospital, infants nearly 6x more likely to not be exclusively breastfed between 1 and 3 months compared to infants who directly breastfeed

29% of separated mothers who tried to breastfeed were unable to

58% of mothers separated from their infants were very distressed

(Bartick et al., 2020)
Premature cessation of exclusive and continued breastfeeding has adverse health and developmental outcomes.

UK an estimated 31% of hospital admissions for infections are attributed to infants breastfeeding for less than 3 months compared to breastfeeding at least 6 months (6 weeks exclusive breastfeeding) (Payne & Quigley, 2016)

More deprived the environment the greater the adverse impact (Quigley et al., 2006)
Lives Saved Tool applied to COVID-19 and mother-infant separation

Low- and middle-income countries
Assumed: 10% of mothers had COVID-19 and 30% infected their infant with 0.09% of infants dying from COVID-19 - 2800 infant deaths

If infants separated from mothers with confirmed or suspected COVID-19 and do not breastfeed - 188 000-273 000 infant deaths

Nearly 100x more deaths from separation than COVID-19
Separation undermines maternal caregiving capacity

Young mothers whose infants were cared for in a hospital nursery had increased rates of substantiated maltreatment, inadequate caregiving and were less likely to have care of their children in the second year of life than those who shared a room with their babies (O’Connor et al., 1980)

Nursery care and restricted breastfeeding has been associated with increased rates of infant abandonment in Thailand, Russia, and Costa Rica (Mata et al., 1988; Buranasin, 1991; Lvoff et al., 2000)
Premature cessation of breastfeeding increases risk of maltreatment

Australian research found children not breastfed were 3.8 times more likely to have maternal neglect substantiated over their childhood than children breastfed for 4+ months (Strathearn et al., 2009)

Shorter durations of breastfeeding have been associated with greater rates of disorganised attachment in infants (Tharner et al, 2012)
Rates of child abuse and neglect increase in times of crisis (Seddighi et al., 2019)

Those most vulnerable are young mothers, impoverished mothers, mothers with a history of intergenerational trauma, or those who use drugs (Norr et al., 1989; O’Connor et al., 1980; Abrahams et al., 2010)

Abuse of babies is up by a fifth during Covid crisis, Ofsted says

Chief inspector says virus has put extra strain on families, with rise also in accidental deaths

- Coronavirus – latest updates
- See all our coronavirus coverage

‘Tighter restrictions have brought increased tensions for many, especially in the most troubled families,’ says Ofsted chief Amanda Spielman. Photograph: Kieran Doherty/Reuters

The number of babies in England that have suffered serious injury through abuse or neglect during the Covid pandemic is up by a fifth on the same period last year, and eight have died from their injuries, according to Ofsted.
The infant’s early environment is the mother, providing physiological and emotional regulation. Equally, proximity to the infant powerfully affects and even regulates maternal physiology and psychology. The cost of depriving mothers and infants of one another is very high.
Very clear that there should be increased support for mothers and infants to experience skin-to-skin, close proximity, and breastfeeding during COVID-19...but policies are continuing to separate mothers and infants
Re-Engineering Postnatal Unit Care and the Transition Home to Reduce Perinatal Morbidity and Mortality

Kristin Tully, PhD  University of North Carolina at Chapel Hill  May 7, 2021
Disclosures

• The Postnatal Patient Safety Learning Lab is funded by the Agency for Healthcare Research and Quality R18HS027260.

• I have no conflicts of interest with the presentation content. I am an inventor and the founder of Couplet Care, LLC.

• My program of research is compliant with the World Health Organization Code of Marketing Breast Milk Substitutes.

• The objective of improving meaningful healthcare support is personal.
Resilience

“Well, I mean, just because we are in a pandemic, I really didn't know what to expect. There was a lot of uncertainty with all of the changes and given that this is my second child, I had envisioned the labor and birth to go similar to the first one. But, I knew that we had to stay a little bit flexible because of the pandemic.”

I do wish...but I understand.
Life transition

**Sadness.** “So my mom came with my just because I started to get worse and she was concerned that maybe I was going to have the baby, which is what I did, but since because of COVID she wasn't able to switch out with my husband, so he wasn't able leave until he came home from the hospital, and I felt real sad about that.”

**Anxiety.** “At least on the day that I gave birth, they were not allowing birth doulas. So, that was very disappointing for me and made me much more anxious about my birthing experience. I didn't feel mentally ready to give birth.”
Companionship

“It was the world. It meant the world to me, especially with everything that's going on. I felt like that I had somebody in my corner that knew me and knew the experiences that we had leading up to giving birth.”
Protections can feel restrictive

*Isolating.* “It was different than I expected it to be, just because of everything going on with coronavirus right now. It was – it could only just be my husband there with me. He couldn’t leave to go get us anything, or people couldn’t drop stuff off for us, so it was kind of isolating in a lot of ways than I had expected it to be.

Because of the coronavirus they only have one place open in the cafeteria I guess, and so those food options weren’t really – it wasn’t the best situation I guess. And then because he couldn’t leave to go get food and come back, it was – that was not the best thing. That, again, had nothing to do with the hospital or my experience. It was just because of the coronavirus he couldn’t leave, and a lot of the cafeteria was closed off.”
Communication challenges

**Cues.** “Just not being able to leave into the hall if I wanted to take a walk, stuff like that, you know. Like I said, COVID-19 stuff. And seeing people, well the doctors and nurses come in with masks on their face, and I have a hard time reading social cues in general like normally, so it was hard to tell if they are being serious or if, you know, like whether I should be concerned or not, just because I can't see their mouth and that bottom part of their face.”
Safety is multi-faceted

Postnatal safety definition themes by birthing parent ethnicity and race.

HISPANIC:
- Privacy
- Responsiveness
- SDoH resources
- Mom feeling competent with infant care

NON-HISPANIC BLACK:
- Not feeling alone
- Baby outcomes
- Keeping track of baby
- Mom physical health
- Mom emotional health
- Following protocols
- Clinicians attentive and caring
- Information access
- Mom feeling in control

NON-HISPANIC WHITE & OTHERS:
- Physical support
- Clinician awareness
- Clear communication
- Bedside manner
- Care coordination
Mother-newborn rooming-in

**Differential experiences.** “It [separation] is voluntary, but I think that message gets missed or that message gets maybe misperceived.

It's hard to know where the disconnect is. What we see is the result, which is disproportionate numbers of Spanish-speaking families – being separated. So, yeah. It's hard to know where the kind of break in the system is. I mean, I think it is – it think it is probably safe to assume that those conversations maybe don't go quite the same way as they would with an English-speaking family or in a conversation where there doesn't need to be interpretation. And that yes, maybe the recommendations are framed in a way that doesn't feel like a recommendation.”
Proactive support

**Vigilance.** “She went to go put her stethoscope on my baby, and she didn't wipe it with an alcohol pad or alcohol wipe, and that really made me cringe because it's like I know you guys are using this on different babies, and I don't know what's going on out there in these other rooms, and it made me feel really uncomfortable to see you just come in.

It's very important to do these things in front of parents so that they have the reassurance and their minds are at peace.”
Postnatal unit feeding

N=197
n=53 Spanish (ESP)
n=144 English (EN)
Postnatal unit feeding

N=197
n=53 Spanish (ESP)
n=144 English (EN)
Postnatal unit feeding

N=197
n=53 Spanish (ESP)
n=144 English (EN)

Meet goals so far? N=151
Spanish no: 13.8%
English no: 29.5%
“Baby loses interest.”
Concerns about COVID-19

- My immediate family members or me getting COVID-19.
- Missing out on the social or emotional experiences I wanted, such as meeting with friends or other new mothers.
- How grandparents or other family might travel to visit, such as their safety traveling, where they might stay, and whether they need to quarantine.
- The needs of other family members, including other children (such as childcare or schooling).
- Not being able to receive support from friends, family members, or others.
- Being able to access COVID-19 vaccine.
Improving resources

**Outpatient challenges.** “I have so many families who were told, "Oh, you don't need a pump," or, "We don't do that," or they're not providing lactation support in the WIC office. Folks are having to go other places.

So, kind of getting bad information and there's just pretty much very little lactation support and certainly very little lactation support for low-income families.”
“We have some hospital systems that are still, you know, fragmented in the way they treat people. There’s not a lot of tons of standards out there from what I gather, so I’m hopeful that we’ll get there. It’s sad that we’re not there yet.”