



Supporting Breastfeeding During Life Threatening Pandemics

*Lessons Learned During the COVID-19
Pandemic*



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Director

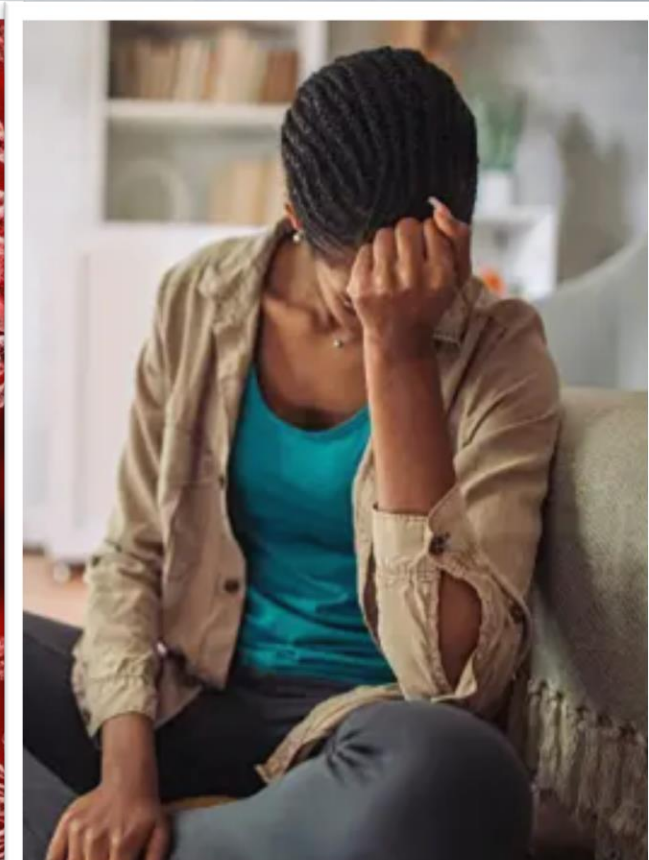
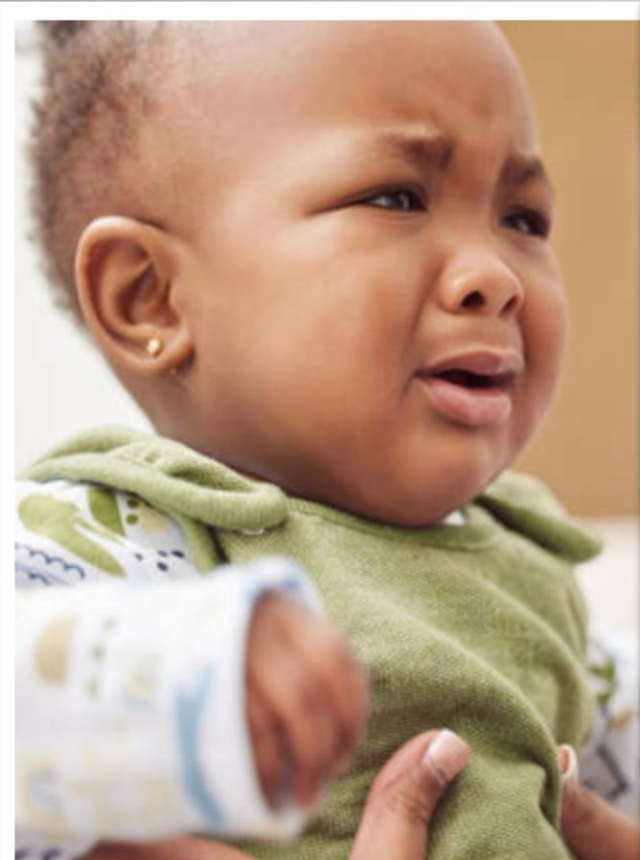
NuMIQ (Quality in Nursing and Midwifery) Research Focus Area

Closing the Gap:



Breastfeeding Support for All

But in the face of a pandemic.....



Article



International Breastfeeding Journal

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Review | [Open access](#) | Published: 14 September 2020

Breastfeeding during the COVID-19 pandemic – a literature review for clinical practice

[Welma Lubbe](#) , [Elina Botha](#), [Hannakaisa Niela-Vilen](#) & [Penny Reimers](#)

International Breastfeeding Journal **15**, Article number: 82 (2020) | [Cite this article](#)

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Abstract

Background

The COVID-19 pandemic is disrupting normal life globally, every area of life is touched. The



<https://internationalbreastfeedingjournal.biomedcentral.com/articles/10.1186/s13006-020-00319-3>



Background

Breastfeeding during the COVID-19 pandemic – a literature review for clinical practice

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Global Impact

COVID-19 has disrupted health sectors.

Need for Evidence

Not all publications is based on scientific evidence. Breastfeeding guidelines need to be EB.

Purpose

To strengthen clinical management with updated evidence for infant health during COVID-19.

COVID Origin & Spread

SARS-CoV-2 started in Wuhan, China, in December 2019, became a global issue.

Pregnancy & Transmission

Most infections affect adults and older children; no evidence of breastfeeding transmitting the virus.

Research

Studies show no intrauterine transmission from infected mothers.

These Guidelines

Provides management strategies for breastfeeding during the pandemic.

Focus Areas

COVID-19's impact on breastfeeding and protective benefits like skin-to-skin care



Method

Review Scope

- Publications on COVID-19 and breastfeeding (as of June 15, 2020) were reviewed for evidence-based guidance for healthcare professionals and mothers.

Inclusion Criteria

- English-language official documents, published research articles, interim guides, expert reviews, and guidelines from international associations like WHO and ICM.

Topics Covered

- COVID-19 characteristics, vertical transmission in the perinatal period, and breastfeeding's protective potential.

Exclusion Criteria

- Webpages with FAQs, media releases, and practice advisories were excluded for repetition of official statements.

Data Analysis

- Reviewed COVID-19 characteristics, transmission potential, and management of mother-infant dyads.
- Developed clinical guides and algorithms for healthcare providers and mothers.



Findings

Limited Research

COVID-19 is a novel virus with limited studies available. Knowledge from past outbreaks (SARS-CoV-1, MERS) helps guide actions.

Current Understanding

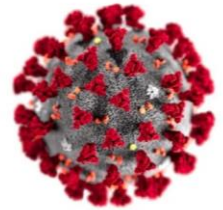
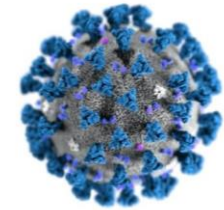
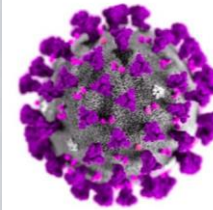
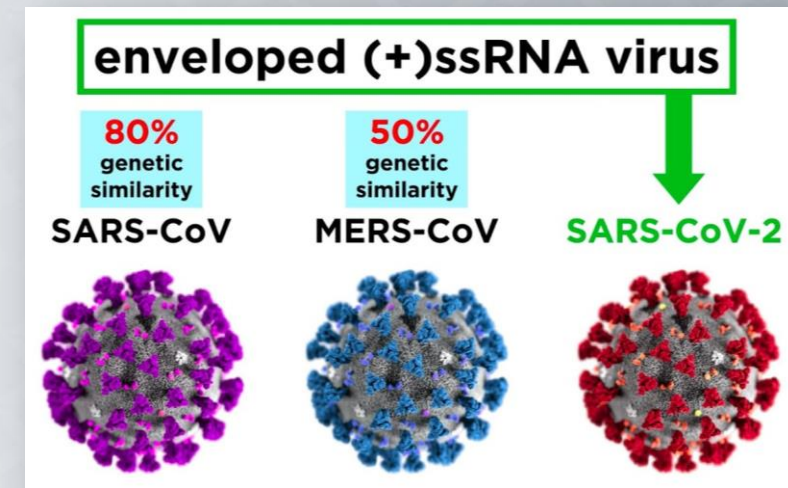
Examines COVID-19 within the breastfeeding context and how breastmilk may protect infants.

Breastmilk Properties

Existing knowledge on breastmilk's benefits can inform approaches despite limited COVID-19 data.

Research Status

Lab research on breastfeeding and COVID-19 has begun, but no published studies were available the time.



COVID-19 & Breastfeeding

Understanding the mechanism of the virus

Transmission

SARS-CoV-2, a beta coronavirus, primarily spreads through respiratory droplets from close contact, not airborne over long distances.

Vertical Transmission

Refers to mother-to-infant transmission during or after birth.

No evidence of SARS-CoV-2 transmission via breastmilk Zhu et al. (2020).

Research Findings

Testing of amniotic fluid, cord blood, throat swabs, and breastmilk found no virus presence. Case studies from various countries report no breastmilk transmission.

Systematic Reviews

Reviews by Duran et al. (2020) and Lu and Shi (2020) indicate breastmilk is not a transmission route. Detected SARS-CoV-2 RNA in one sample was non-infectious.

Best evidence

Evidence suggests respiratory viruses, including SARS-CoV-2, are not transmitted through breastmilk.

Breastfeeding and Breastmilk Benefits

Understanding the mechanism of breastmilk/ breastfeeding

Protection

Against morbidity and death, especially infectious diseases, through antibodies and anti-infective factors.

Benefit

Short- and long-term health benefits for mothers and infants. Early BF initiation reduces neonatal deaths and promotes bonding.

Impact

Could prevent 823,000 child deaths annually and reduce morbidity in diarrheal diseases by 64% and RSV severity by 74%.

Immune Support

Colostrum and breast milk contain immunoglobulins, lactoferrin, lysozyme, cytokines, and human milk oligosaccharides, supporting immune function and microbiome development.

Skin-to-Skin Contact

Promotes successful breastfeeding, stabilizes cardiorespiratory function, reduces stress, and helps develop the infant's microbiome.



Suggested Practice Guidelines (COVID-19)

WHO Guidelines

Follow WHO infection prevention measures, especially droplet protection, and hand and respiratory hygiene for exposed/infected mothers.

Mother's Choice

Mothers have the right to make informed decisions about breastfeeding during the pandemic.

Breastmilk Expression

Use individual equipment; rinse with cold water, wash with warm water and soap, and sterilize after each use. Use a dedicated pump if exposed or positive for COVID-19; express milk in isolation.

Container Handling

Transfer milk to a clean container held by someone wearing protective gear.

Consider wiping bottles with a viricidal agent or diluted bleach and store separately, though surface contamination risk is low.

Decision Support

Utilize evidence-based algorithms for quick clinical reference for healthcare professionals and mothers.

When Mom is Healthy

Category	Suggested guideline	Rationale/remarks
All infants	Avoiding separation of mother-infant dyads, including infection control precautions.	Separation of a mother and her infant may have potential detrimental effects on feeding and bonding [18, 38, 40, 43,44,45].
Infant from healthy or non-symptomatic mother	Initiate and continue breastfeeding.	Breastfeeding is the optimal source of nutrition and protection for infants [46, 47].
Infant of mother with suspected COVID-19 (potentially exposed and/or symptomatic, but well enough to breastfeed)	Continue breastfeeding while applying infection control protocols with specific attention to droplet protection.	Mechanisms of breastmilk protect the infant [40, 43,44,45]. Respiratory viruses are not transmitted in breastmilk [1, 5, 38]. Direct transfer of antibodies into breastmilk [43]. Anti-infective factors transfer to breastmilk [43]. Immunological competence and memory in breastmilk [43].
	Continue breastfeeding.	The virus is not transmitted via breastmilk [1, 5, 15, 38, 43, 44].
	All laboratory confirmed cases are isolated and cared for in a health care facility. Isolate mother-infant dyad together.	Avoid person-to-person transmission of the virus [35, 40].
	Wear a mask during feeding.	To avoid coughing or sneezing on the baby while feeding at the breast [38, 43, 44, 47, 48].
Infant of mother who test positive for COVID-19 (mother well enough to breastfeed)	Continue breastfeeding.	No virus detected in amniotic fluid [5, 15]. No virus detected in cord blood [5, 15]. No virus detected in neonatal throat swabs [5, 15]. No virus detected in breastmilk after first breastfeeding [5, 15].
Positive mother with mild symptoms	Isolate mother-infant dyad at home.	Avoid person-to-person transmission of the virus [35].
	Wear a mask during feeding.	To avoid coughing or sneezing on the infant while feeding at the breast [38, 43, 44, 47, 48].



When Mom is Too Ill

Positive mother with severe symptoms (can breastfeed)	Hospitalize mother-infant dyad.	All laboratory confirmed cases are isolated and cared for in a health care facility [35, 40].
	Isolate mother-infant dyad together in hospital.	Avoid person-to-person transmission of the virus [35, 40].
	Conduct a risk/benefits discussion between neonatologists and families to individualise infant care in the case of infants requiring neonatal care.	Admission to the neonatal unit may be required in infants that are born to COVID-19 positive mothers and/or have symptoms. This may require close observation and may lead to separation, however, not necessarily to discontinuation of breastfeeding [38].
		Temporary separation may be needed in case of mothers who need medical care in hospital -continue to express milk [40, 47].
Infant of mother who test positive for COVID-19 (mother too ill to breastfeed)	Express milk and feed with clean cup or spoon.	Prevent accidental transmission of pathogens via surface areas [35, 44].
	<i>*Practical note:</i> Mother can decant milk from her container into a clean container held by a healthy person to prevent transmission via the containers surface.	
	Wear a mask during expressing.	Prevent accidental transmission of pathogens via air [35, 44, 47].
	Ask a healthy person to feed the baby expressed milk.	Prevent accidental transmission of pathogens via person-to-person contact or air [38, 47].
	In case of separation, ensure appropriately trained mental health and psychosocial support for parents.	The prevalence of common mental disorders in the antenatal and postpartum period is high [43].



How to Handle Breastmilk Expressing

Expressing breastmilk:	<i>Assumption:</i> COVID-19 is not found in breastmilk, therefore general expressing guidelines apply.	
	Apply all general infection prevention measures.	Prevent accidental transmission of pathogens [35, 38, 47]
	PUI and positive mothers should express in the area where they are isolated.	Prevent potential infection of non-infected areas and persons.
	Do not share equipment for breastmilk expressing.	Milk particles can be left within any parts of the equipment and transferred to the next person. Any pathogens surviving on surfaces can be transferred via equipment [38, 49].
	Rinse all expressing equipment in clean, cold running water before sterilising.	Prevent proteins in milk to coagulate due to heat, cold water removes milk residue [38].
	Decant expressed milk into a clean container held by a healthy person wearing protective clothing.	Prevent transmission of the virus via container surface area potentially infected by positive mother via surfaces [42].
	Wipe down bottles with a viricidal agent of 1:10 diluted bleach.	Kill pathogens on surfaces, such as bottles handles by infected person [37].
	Wash expressing equipment with hot soapy water with domestic detergent, rinse under running water and dry with a paper towel.	Kill pathogens [38, 47].
	Sterilise equipment after each use [42].	Kill pathogens [38].



Infection Control “as Always”

General infection control measures		
Personal hygiene	Washing hands often for 20 s with soap and water or using alcohol-based hand rub (based on 80% ethanol or 75% 2-propanol).	Prevent accidental transmission of pathogens via person-to-person contact [4, 47, 50].
Personal hygiene	Cover mouth and nose with a disposable tissue or elbow when coughing and sneezing.	Prevent accidental transmission of pathogens via air [4, 14].
Personal hygiene	Wash hands before and after contact with the infant.	Prevent accidental transmission of pathogens via person-to-person contact [38, 43, 44, 47, 48].
Environment	Thoroughly cook meat and eggs.	Prevent accidental transmission of pathogens in food sources [4].
Environment	Clean/disinfect contaminated surfaces immediately.	Prevent accidental transmission of pathogens via surfaces [43, 44, 49].
	Surface disinfection with 0.1% sodium hypochlorite or 71% ethanol reduces coronavirus infectivity on surfaces within 1-min exposure time.	Human coronaviruses can remain infectious on surfaces for up to 9 days [49].
Social distance	Keep mother and baby together and practice safe skin-to-skin contact and rooming-in.	Immediately after birth, during establishment of breastfeeding and whether mother or infant have suspected, probable, or confirmed COVID-19, 24 h/day [18, 43, 51].
Social distance	Avoid close contact with anyone who is coughing and/or sneezing.	Prevent accidental transmission of pathogens via air [4].
Social distance	Avoid crowds of people such as church gatherings, shopping malls and large events.	Prevent accidental transmission of pathogens via person-to-person contact or air [4].
Social distance	Do not allow anyone to kiss the infant and ask them to disinfect their hands when they come into the house or plan to touch the infant.	Prevent accidental transmission of pathogens via person-to-person contact [4].
Social distance	Do not allow anyone who is ill to visit the mother and infant.	Prevent accidental transmission of pathogens via person-to-person contact or air [4].



Mental health of mothers during COVID-19 pandemic

No need for alarm.

Children (aged 1–16 years) accounted for roughly 5% of total patients with COVID-19 in China, but frequently do not have a notable disease and no transfer via breastmilk has been confirmed [1, 5, 7, 13, 52].

Use self-isolation time to bond with infant at home.

Bonding improves relationships and mental health and overall wellbeing [51].

Maternal Mental Health – Always Important!



What we knew during COVID

Prevention Measures

Apply global measures like hygiene and social distancing to prevent pathogen spread to infants.

Breastfeeding Benefits

Continuing breastfeeding and avoiding mother-infant separation is optimal, as respiratory viruses like COVID-19 are not transmitted via breast milk.

Guidance Variations

ACOG: Infants of COVID-19-positive mothers should be isolated, but breastfeeding is recommended.

AAP & CDC: Suggest temporary separation, with mothers expressing milk for infants.

ICM & UNICEF: No evidence of breast milk transmission; recommend continued breastfeeding with infection control.

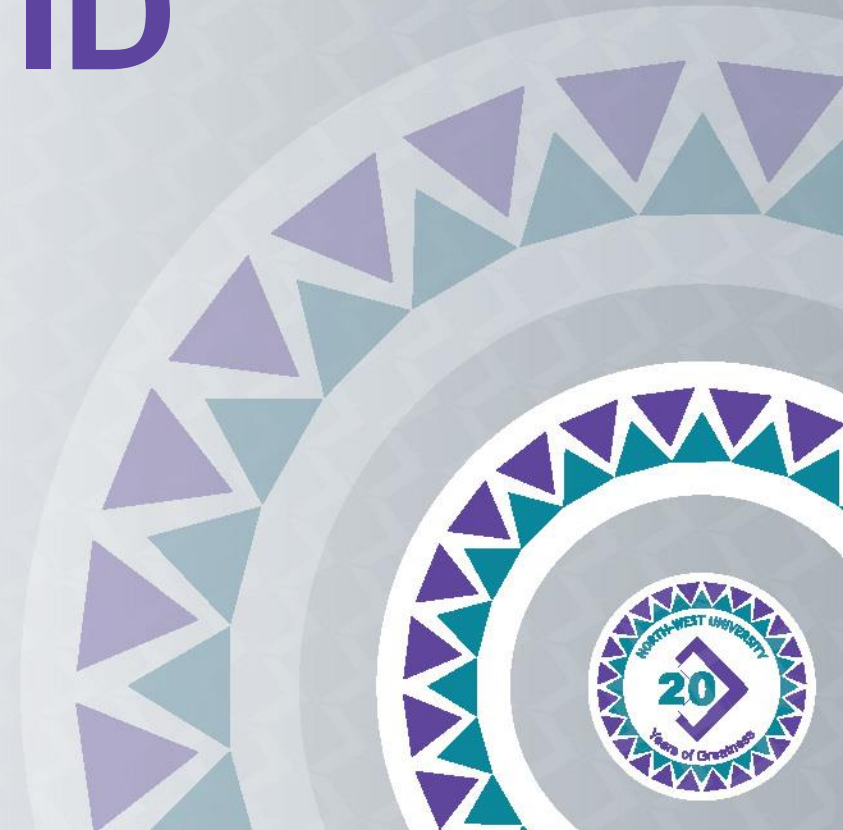
Separation Impact

Separation negatively affects maternal and infant health; should be **limited and well-justified**.





What did COVID teach us?



Mother's experiences of BF during the pandemic



Stress



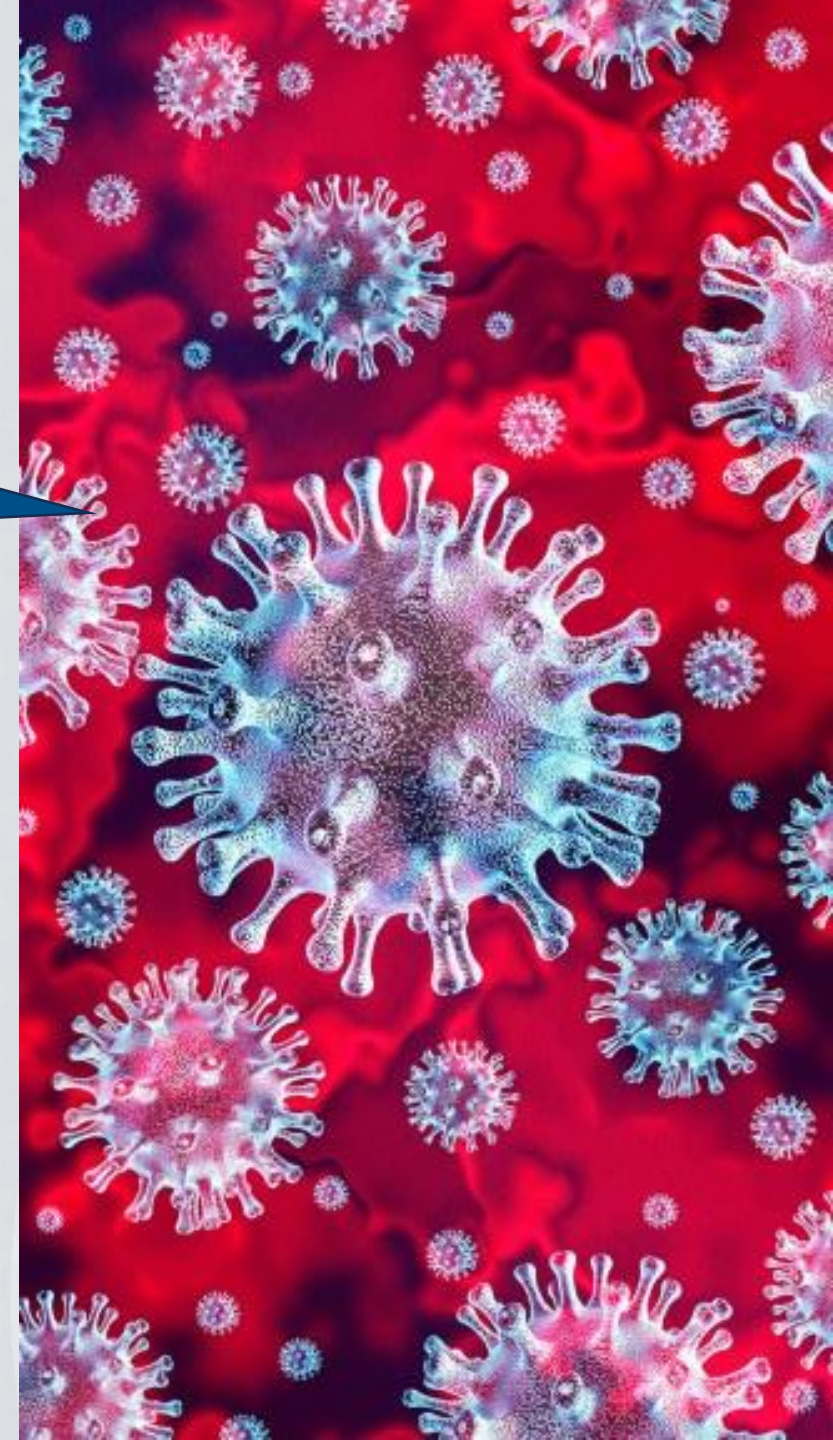
Anxiety



Isolation

Why did mother's **stop BF** during lockdown?

- Not enough support
- Felt isolated



The Gap



Due to poor support
Poor support due to gap in knowledge

Separation is detrimental to feeding and bonding

- When isolation is needed – keep mom and baby together in skin-to-skin

Breastfeeding provides optimal protection

- Understand the mechanism of breastfeeding to guide decisions
- Continue at all cost

Keep up infection control

- Personal hygiene
- Depending on the threat
 - environment (surfaces)
 - social distance (air borne pathogens)
- The outlier – understand the virus

Maternal mental health

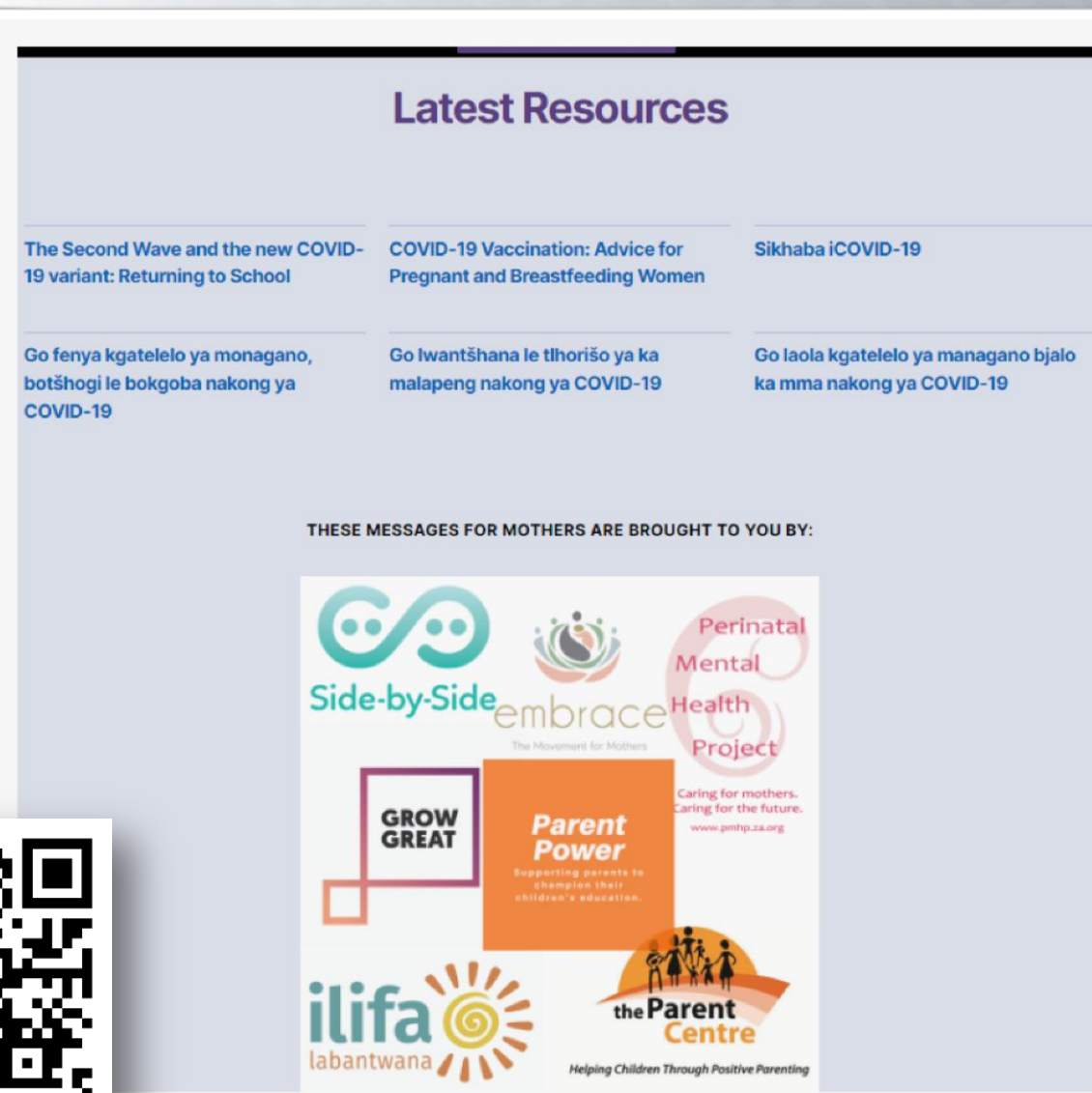
- Prevent unnecessary alarm
- Support zero-separation
 - **Mom and baby is a dyad – capitalise on protective factors**
 - Breastmilk
 - Microbiome
 - Neuroscience

Our country's strengths

- Excellent healthcare workers
- Expertise to mobilise
- Multi-disciplinary teamwork
- Efficient communication systems – M4M



What we did well



SEE ALL ENGLISH
CONTENT

SEE ALL AFRIKAANS
CONTENT

SEE ALL ISIXHOSA
CONTENT

SEE ALL ISIZULU
CONTENT

SEE ALL SEPEDI
CONTENT

SEE ALL SOTHO
CONTENT



What you need to know about breastfeeding and COVID-19: “For mothers, pregnant women & health workers”

1 Why is breastfeeding important during emergencies like COVID-19 pandemic?

Breastfeeding is the best way to provide your baby with optimal nutrition, and to protect your baby from illness. Breastfeeding strengthens the baby's immune system by directly transferring antibodies from the mother. Mothers should breastfeed their babies exclusively for 6 months and thereafter provide them with appropriate complementary foods, with continued breastfeeding for up to 2 years of age or beyond.

2 Why should a baby still be placed skin-to-skin immediately and breastfed within the first hour after birth – even in emergencies?

There are many benefits of skin-to-skin contact. Skin-to-skin contact calms the mother and the baby and helps to stabilize the baby's heartbeat and breathing. It keeps the baby warm with heat from the mother's body. It reduces infant crying, thus reducing stress and energy use. It facilitates bonding between the mother and her baby and supports early initiation of breastfeeding thus normalizing the baby's blood sugar.

- Immediate and continued skin-to-skin care, including kangaroo mother care, and keeping the baby warm, is linked with fewer newborn deaths.
- Placing the newborn close to the mother also enables early initiation of breastfeeding which helps the baby receive colostrum, which is protective against illness, UNLESS if the newborn or the mother is too ill to practice skin-to-skin contact.



Hand expressing is the safest option. The expressed breastmilk should be fed to the baby preferably using a clean cup by a caregiver who are healthy and practicing appropriate hygiene measures.

5 Can COVID-19 be passed through breastfeeding?

- Given the current scientific evidence, the COVID-19 virus has not been found in breastmilk. Therefore, it appears unlikely, that COVID-19 would be transmitted through breastfeeding or by giving breastmilk that has been expressed from a mother who is confirmed/ suspected to have COVID-19.
- Breastfeeding is recommended for all mothers including mothers suspected/ confirmed to have COVID-19.

3 Should a mother breastfeed if she is confirmed or suspected to have COVID-19?

- Yes, the immune protection for the baby is important and this means if the mother is well she should be encouraged and supported to breastfeed, while practicing appropriate infection prevention measures. There is no evidence that COVID-19 is transmitted through breastfeeding, or in breastmilk expressed by the baby's own mother and given to her baby.
- If the mother is confirmed to have COVID-19, she should still continue to breastfeed. If she is unwell and unable to breastfeed, then she should be encouraged to express breastmilk and ask a caregiver who is well to feed her express milk to the baby.

6 What are the hygiene recommendations for a breastfeeding mother confirmed or suspected of having COVID-19 or any other infectious respiratory diseases that may be transmitted through coughing or sneezing?

A mother should:

- Regularly clean and disinfect surfaces.
- Wash hands frequently with soap and running water for 20 seconds or use alcohol-based hand sanitizer, especially before touching the baby. Always wash hands before and after breastfeeding your baby.
- Wear a cloth mask or scarf that covers your mouth and nose while feeding. It is important to:
 - Avoid touching the mask while the baby is breastfeeding or when spending time with your baby
 - Ensure that you do not touch the inner side of the mask.

4 What if the mother is ill?

- If the mother is confirmed/suspected to have COVID-19 and is very ill and unable to directly breastfeed, she should be supported to express breastmilk if possible. Expressing breastmilk is also important to sustain breastmilk production so that mothers can breastfeed when they recover.



9 Is it advisable for a mother with confirmed/suspected COVID-19 or any other respiratory infections who is breastfeeding, to give a 'top-up' with infant formula milk?

- No. If a mother is breastfeeding, there is no need to provide a 'top-up' with an infant formula milk.
- Giving a 'top-up' will reduce the amount of breastmilk produced by a mother.
- Mothers who are worried about not having enough breastmilk should:
 - Make sure that their baby is positioned and attached effectively on the breast.
 - Seek additional practical help from a health worker or a lactation consultant to ensure that their baby is attached efficiently.

- Respond to their infants' hunger and feeding cues and breastfeed their baby as much as the baby wants.

10 Are health facilities or other organizations allowed to accept free supplies of formula milk for infants to distribute to mothers during disaster / emergency situations like in the context of the COVID-19 pandemic?

- No. Donations of infant formula should not be sought or accepted. If needed, supplies should be purchased based on assessed need through the normal procurement systems.
- Acceptance of donated formula is a violation of the Regulations Relating to Foodstuffs for Infants and Young Children (R991).
- Acceptance of donations can undermine breastfeeding.
- In the long run, mothers and their infants become dependent on breastmilk substitutes and may not be able to afford to purchase them once the donations stop. Mothers/care givers then over dilute infant formula or using inappropriate alternatives which can be dangerous and lead to malnutrition.

For more information:

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- After each use, cloth masks should be washed with soap and water and ironed when dry
- Replace masks as soon as they become damp from breathing.
- Do not touch the front of the mask but untie it from behind.

- Follow good respiratory hygiene: cough or sneeze into your bent elbow covering your mouth and nose, or into a tissue which you must then straight away, throw into a closed container and wash your hands again with soap for 20 seconds or use alcohol-based hand rub.
- Regularly clean and disinfect surfaces within your home.
- For women expressing breastmilk, wash hands before expressing. Breast pumps or cups if used should not be shared between mothers. Follow recommendations for breast pump cleaning after each use. Consider asking someone who is well to feed expressed milk to the baby (mother can decant milk from her container into a clean container held by a healthy person to prevent transmission via the containers surface).

7 Is it necessary for a mother with confirmed or suspected COVID-19 or any other respiratory infections to wash her breast before she breastfeeds or before expressing milk?

- It is not necessary to wash the breast before every breastfeed or prior to expressing milk.



- If a mother is confirmed or suspected to have COVID-19 has just coughed over her exposed breast or chest, gently wash your chest with soap and lukewarm water for at least 20 seconds prior to feeding.

8 If a mother confirmed or suspected to have COVID-19 is not able to breastfeed due to other reasons, what is the best alternative way to feed her infant?

- The best alternatives to breastfeeding for a newborn or young infant are expressed breastmilk or donated human milk.
- The risks associated with giving infant formula milk apply to situations where:
 - There is poor or limited access to health services if a baby becomes unwell.
 - There is poor access to clean water.
 - Access to supplies of infant formula are difficult or not guaranteed, not affordable and not sustainable.
- If expressing breastmilk, the extra basic measures that can be followed includes:
 - Hand washing for at least 20 seconds beforehand expression.
 - Wear a mask while expressing breastmilk directly into a clean feeding cup or clean storage container.
 - Ensuring that milk storage containers, feeding utensils and breastmilk pumps if used are appropriately washed after each use with dish washing liquid and warm water. Rinse after with hot water for 10-15 seconds. Breast pumps should not be shared between mothers.












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What can we do better?



Conclusions – principles to support BF

COVID-19	Standard care	Future pandemics
<p>Breastfeeding: Remains the best protective measure for infants during COVID-19. It should continue without interruption.</p>		
<p>Mother-Infant Bonding: Avoid separation and maintain skin-to-skin contact.</p>		
<p>Infection Control: Apply strict hygiene measures; exposed/infected mothers should use a <u>surgical mask</u> when handling infants.</p>		
<p>Milk Expression: Support mothers to express milk if too ill to breastfeed. Feed the infant with expressed milk from a healthy individual.</p>		
<p>Safety: Current evidence suggests SARS-CoV-2 is not transmitted via breast milk. The benefits of breastfeeding outweigh potential risks.</p>		<p>Understand transmission</p>
<p>Breastfeeding messages: Ensure breastfeeding messages are aligned across professions, facilities, platforms</p>		

Let us close the gap:



Strengthen Breastfeeding to Support All