GUIDANCE FOR MOTHER-BABY CONTACT AND INFANT FEEDING IN EMERGENCIES

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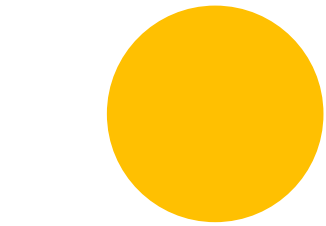

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HCAC Technical Committee of the Breastfeeding Advisory Group as following :

Name	Affiliation	Position
H.E Prof Raeda Al Qutob (committee chairman)	Jordan University	Medical college Faculty member
Dr. Reema Safadi	Jordan University	Nursing college
Dr. Hadeel Al Sayeh	Ministry of Health	Director - Woman and child health directorate
Dr. Hanan Najmi	Ministry of Health	Woman and child health directorate
Dr. Areej Hijawi	Ministry of Health	Woman and child health directorate
Dr Hashem Al Aqrabawi	Royal Medical Services	Head of PEDIATRIC SERVICES
Dr. Faten Al Tamimi	Breast Feeding Support Association	director
Dr. Joulia Abuasbeh	Independent Practitioner	Expert
Buthynah Al-Khatib	UNICEF	BFHI project manager
Amira Elian	HCAC	Project Manager

INTRODUCTION

COVID 19 is a severe acute respiratory syndrome caused by coronavirus 2 virus (SARS-CoV-2), a new human respiratory disease virus that can spread from person to person respiratory droplets. A wide range of symptoms for COVID-19 has been reported that include: Fever or chills, Cough Shortness of breath or difficulty breathing New loss of smell or taste Nausea or vomiting Diarrhea The estimated incubation period is between 2 and 14 days with a median of 5 days. It is important to note that some people become infected and do not develop any symptoms or feel unwell.

The COVID19 pandemic poses significant challenges for countries to ensure that high-quality, essential maternal and new-born health services are provided as well as other healthcare services. Pandemic countries may need to divert significant resources, including midwives, from regular service delivery to response efforts.

Concerns have been raised as to whether mothers with COVID-19 can transmit the SARS-CoV-2 virus to their infant or young child by breast-feeding. The mother-to-child contact and breastfeeding recommendations should be based on full consideration not only of the potential risks of infant COVID-19 infection, but also of the morbidity and mortality risks associated with non-breastfeeding, the inappropriate use of infant formula, and the protective effects of skin-to-skin contact.

This guide will examine up-to-date pieces of evidence on the risks of transmission of COVID-19 through breastfeeding from an infected mother to her baby, as well as evidence on the risks of non-breastfeeding to the health of children. As well as full guidance for recommended practices to promote and encourage successful breastfeeding through emergencies. This guidance has been adapted for Jordan's use from the WHO document
entitled: Clinicahttps://apps.who.int/iris/handle/10665/332196l management of COVID-19: interim guidance, 27 May 2020.

SUMMARY

Breastfeeding is one of the key Pillars of maternity and neonatal care, as breastmilk provides infants with the ideal nutrition Vitamins, proteins, and fat), in addition to enhancing their immunity, which is crucial during emergencies, including pandemics as COVID-19.

Currently reviewed evidence suggests that neonates are at low risk of acquiring SARS—CoV-2 from their feeding mothers. Furthermore, data suggests that there is no difference in the risk of infection transmission whether the neonate is cared for in a separate room or remains in the mother's room.

Enhancing existing, the coronavirus pandemic and the mandatory effort on reducing infection has interrupted many of these positive developments and adversely affected mother-baby contact and infant feeding.

COVID-19 new enforced measures, such as; wearing face masks, social distancing, lockdown, and isolation, have puzzled the lives of women and their families worldwide. Also, the rapid changes within the health service units, including; separation of mothers and babies, adding restrictions on parental visiting., the use of masks and personal protective equipment, staff redeployment and shortages, unavailability of virtual contact between mothers and staff, on top of that the implementation of Jordanian version of Baby Friendly Initiative accreditation program follow up. Taken together, that these new measures have created a threat to immediate and close contact between mothers and new-born infants, and the initiation and continuation of breastfeeding, we propose the following guidance of best practice on enhancing mother-baby contact the evidence base and best practice on enhancing infant feeding.

BACKGROUND:

The importance of mother-baby contact and breastfeeding

Enhancing close, ongoing contact between mothers and new-born infants and enabling women to breastfeed or to use breastmilk substitutes as effectively and safely as possible, are key elements of maternity and neonatal care. Breastfeeding with breast-milk optimizes the immune system, confers active and passive immunity, and protects against infection. As it protects against life-threatening conditions for preterm, such as; necrotizing enterocolitis, sepsis, and pneumonia. Instant and ongoing Skin-to-skin contact, has physiological as well as psychological benefits for all new-born infants. Especially among preterm, and unwell infants, kangaroo care reduces mortality rates and improves these infants' health outcomes (7).

On the other hand, Evidence shows that Infant feeding rates are strongly socio-economically patterned. Women and new-born infants from population groups already likely to be more vulnerable to coronavirus are least likely to breastfeed, contributing to the cycle of nutritional deprivation (8).

Routes of transmission

Transmission of SARS-CoV-2, the virus that causes COVID-19, to neonates is believed to occur primarily through respiratory droplets during the postnatal period during close contact between people when an infected person coughs, sneezes, or talks. When neonates are exposed to mothers or other caregivers with SARS-CoV-2 infection. Spreads. So far infectious SARS-CoV-2 virus has not been found in breastmilk.

Until writing this guidance, Limited reports in the literature have raised concerns of possible intrauterine, intrapartum, or peripartum transmission, but the extent and clinical significance of vertical transmission, which appears to be rare, is yet unclear, As there is no conclusive evidence of in-utero transmission and through breastmilk. But it’s important to mention that viral RNA was detected in 10 samples from 4 women.1 However, environmental contamination or retrograde flow from an infected infant could not be ruled out(1). The implications of transmission risk need to be framed in terms of COVID-19 prevalence in breastfeeding mothers and the scope and

severity of COVID-19 infection in infants if the transmission occurs in comparison to the adverse consequences of using breastmilk substitutes and separation of new-borns and young infants from their mothers. Given this, It is essential to continue to keep this situation under review.

The existing evidence support mother-baby contact and breastfeeding, based on their benefits and positive impact on short, medium, and long-term outcomes for both women's and new-born infants, mortality, health, wellbeing, and development. World Health Organization and UNICEF recommend exclusive breastfeeding for six months and thereafter with other foods for two years and beyond. (9,10)

Changes resulting from the current pandemic

The coronavirus pandemic and the inevitable focus on reducing infection have disrupted many of these developments that adversely affected mother-baby contact and infant feeding, augmenting the barriers that still exist. Mother-baby contact has been reported as being reduced or stopped in some contexts. (15,16)

Infant feeding services in a recent (unpublished JUH data BF monitoring) survey reported that their staffing was reduced as a result of the COVID-19 pandemic. This is anticipated to negatively impact women and new-born infants in both community and hospitals, as it affects infants who are; infected or healthy, in-need for admission to the neonatal unit or not, adding to impacting every stage of the continuum, in pregnancy, birth, after birth and after discharge.

Presence of variable emerged inconsistent guidance on breastfeeding infants among suspected or confirmed mothers with corona appeared ranging from baby -maternal separation and avoiding breastfeeding by Chinese working group (17) to adopting different three breastfeeding approaches by the previous AAP guidance issued 10th April 2020. (18) Moreover, the WHO and UNICEF guidance (6.7) was to encourage mothers to practice skin-to-skin, initiate and continue to exclusive breastfeeding after counselling them on the benefits of breastfeeding that substantially outweigh the potential risks for transmission. This was consistent with the Royal College of Obstetrician And Gynaecologist (RCOG 2020) (19) and Italian National Institute of Health (ISS 2020) guidance that was endorsed by the Union of European Neonatal & Perinatal Societies (20) of avoiding maternal-infant separation and advising breastfeeding taking into account Hygiene measures including hand washing and wearing face mask before handling the baby) unless the mother is unwell. In this context the initial CDC guidance issued 9th of June (21) did not have a firm recommendation of maternal-baby separation as the first choice to be considered and the risk and benefit of this separating were needed to be shared with the mother taking into account avoid of kissing and before feed washing hands and putting mask and keeping the distancing of their baby by 2 m away from sick mother and using physical barrier during rooming-in, However, a further clearer recommendation was updated on 3rd of August to reflect new *Evaluation and Management Considerations for Neonates At Risk for COVID-19, further* Update in 23rd of October on Evaluation and Management Considerations for Neonates at Risk for COVID-19 released on 23rd October is available on CDC website *(https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-newborns.html.* However, these updated CDC recommendations suggest that there are insufficient

data to make recommendations on routinely delayed cord clamping or immediate skin-to-skin care to prevent SARS-CoV-2 transmission to the neonate. (22,23).

Current practice, developments' advances and challenges in Jordan

In Jordan, extensive evidence-based positive developments in policy and practice to promote and support mother-baby contact, attachment, and breastfeeding have been implemented in five Hospitals. The first phase of the project 'Establishing a Jordanian Quality Recognition Program for Baby-Friendly Hospitals' was completed in 2018 and the first version of the recognition system was tested in five hospitals. In 2019, the final version of the recognition system was adopted by HCAC as a result, a Baby-Friendly Hospital Certificate was established, with 3 different levels of achievement; Platinum, Gold, and Silver. All five participating hospitals were awarded the Certificate; 3 Gold and 2 Platinum. (11)

Though such changes have not yet been implemented universally and barriers still exist in many Jordanian settings. These include immediate, uninterrupted, and ongoing skin-to-skin contact at birth and early initiation of breastfeeding and Other Positive developments that are needed to be implemented include: supporting the families and mothers for Post-natal Breastfeeding counselling.

As for all new-borns and babies in neonatal units, the main challenges are: implementation of kangaroo care, maximizing breastmilk intake, and considering parents as partners in care with unrestricted access to their babies (12). Besides, supporting mothers at work and establishment post-discharge breastfeeding counselling services is highly encouraged, including telehealth services, trustable mobile applications, TV, radio programs, and social media. Not all babies in Jordan are now born in a BFI accredited environment, so part of the planned positive developments is to start implementing BFI accreditation. highlighting that low persistent Jordanian exclusive breastfeeding rates of 25% in 2016 (Jordan DHS survey 2017)(13).

Multidisciplinary staff education and training in infant feeding remain a great challenge however, women and new-born infants do not reliably receive consistent care and support, such as focus group discussions as r4evealed by HCAC's breastfeeding committee.

Implementing and updating the national Jordanian maternity and neonatal policies and setting standards for maternity and neonatal services, outreach health visiting services, and university pre-registration for breastfeeding counselling during antenatal visits have been reported as key elements in promoting evidence-based practice for establishing BFI accredited environment. (14)

The United Nations Population Fund (UNFPA) reported declines in the number of women and girls receiving critical reproductive health care, including antenatal services, safe delivery services, and family planning (24. There is a risk to the initiation and continuation of breastfeeding due to Health service changes that included reducing contact between mothers and babies, service re-design including visiting restriction policies, use of masks and personal protective equipment (PPE), staff redeployment, and shortages (JUH experience) and the interruption of BFI accreditation programs (JUH unpublished data).

SUMMARY OF EVIDENCE :

- The breastfeeding benefits outweigh the theoretical risks for healthy babies of a suspected or confirmed mother with COVID-19. However, there is not yet clear evidence about unhealthy or pre-term babies of suspected or confirmed mother with COVID-19.
- Breastmilk protects against many illnesses and is the best source of nutrition for most infants (2). The unique value of breastfeeding to new-born infants, women, and public health especially in this pandemic should be recognized and highlighted by health professionals, policymakers
- Breastfeeding is strongly recommended for all women and their new-born infants.
- Infection control should always be applied and integrated as described in detail in the guide to minimize any risk of mother-to-infant transmission; involving at least: wearing a mask, hand washing, cleaning and disinfection finally social distancing.
- Taking steps to involve parents in decisions and to alleviate potential problems for the baby's health and well-being and breastfeeding and attachment. Sensitive conversations about infant feeding should be conducted with all women and should include information, encouragement, and support to consider breastfeeding. Infection control precautionary measures approach should be adopted to minimize any risk of mother-to-infant transmission
- Under-representative women, such as, but not limited to; refugee and disabled women, require special attention and treatment.
- Psychological support should be available to all women in pregnancy and from the first feed onwards to enable them to initiate and continue breastfeeding, including breastmilk expression.
- Accessible resources for women will be needed to inform and enable them to breastfeed, this effective intervention will be needed to enable them to start and continue to breastfeed,
- Writing institutional policy and practice is recommended for all organizations provide maternal- child services. The policy needs to outline proper management for mother

and babies suspected or confirmed Covid 19 and related adjustment in the services, practice resource, staff schedule isolation measures and locations ext.

- Detailed training guidance for staff and services on infant feeding in the current context should be available and monitored for competencies and implementation.
- Resources for staff will be needed to enable them to inform and support women and to have appropriately sensitive conversations with women.
- All staff working in maternity and neonatal care need support.

KEY FINDINGS AND RECOMMENDATIONS:

Breastfeeding Recommendations for Suspected or Confirmed Mothers and Newborn babies

1. What is known about the newborn risk for COVID-19?

Currently, the vertical transmission cannot be completely ruled out, as there is no conclusive evidence of in utero transmission. Also, the risk of new-born testing positive for SARS-CoV-2 in the first few hours or days after birth from a mother with COVID-19 is low as reported by both published case series and the Perinatal American COVID-19 Registry (25, 26), who studied more than 1500 cases. Also, a systematic review which studied 49 published papers and included new-born infants and 655 women (K.F. Walker et al., 2020) concluded that ***Neonatal COVID-19 infection is uncommon***, almost never symptomatic, and the rate of infection is very low when the baby is born vaginally and breastfed (27)and it has been confirmed by the WHO Scientific Brief too. t (28).

Current data suggest that approximately 2-5% of infants born to women with COVID-19 near the time of delivery have tested positive in the first 24-96 hours after birth. It is not yet known if any of the new-borns reported to the AAP Registry have become ill at home following hospital discharge.

There are few case series of pediatric COVID-19 published to date, but clinicians and families should be aware that there are published reports of infants requiring hospitalization before one month of age due to severe COVID-19 infection.

2. **Can COVID-19 be passed through breastfeeding?**

There are no conclusive reports of transmission of coronavirus in breastmilk or by giving breastmilk that has been expressed by a mother who is confirmed/suspected to have COVID-19. It is essential to continue to keep this situation under review (29,30). Moreover, there are no conclusive reports of transmission of coronavirus in breastmilk. Until writing. A report demonstrated that viral RNA was detected in 10 samples from 4 women. however environmental contamination or retrograde flow from an infected infant could not be ruled out. Larger cohorts are needed for an adequate investigation. Further work is required on the reliability of amniotic testing for the virus, and the significance of virus-specific antibodies in neonatal blood and breastmilk.

3. **the guidance that should be considered when attending a delivery of a suspected or confirmed mother with COVID-19.**

Prevention control precautions:

Prevention control precautions should be taken for infection prevention and control measures to attend a delivery from a mother with suspected or confirmed COVID-19. Adherence to infection prevention and control measures is essential to prevent contact transmission between COVID-19 suspected or confirmed mothers and their newborns and young infants by Performing hand hygiene using hand sanitizer .and using Personal Protective Equipment (PPE)

Recommended Personal Protective Equipment include:

- Isolation gown.
- Approved N95 filtering face-piece respirator (use a facemask if a respirator is not available).
- Face shield or goggles.
- Gloves.

General Guidance:

- Initiation and continuation of breastfeeding as the best choice for infant feeding, this is strongly supported by Aap, who and CDC, RCOC. Mother's own milk should always be the first choice as this is responsive to her and her baby's environment.
- In general, mothers with suspected or confirmed sars-cov-2 infection and their neonates should be isolated from other healthy mothers and neonates and cared for according to recommended infection prevention and control practices for routine healthcare delivery. (37)
- Several published studies have detected sars-cov-2 nucleic acid in breast milk. It is not yet known whether the viable, infectious virus is secreted in breast milk, nor is it yet established whether a protective antibody is found in breast milk. Given these uncertainties, breastfeeding is not contraindicated at this time. There is no conclusive evidence at this time that the covid-19 infection can be passed through breastmilk or donor breast milk. However, if mother's own milk is not available or where it needs supplementation, the donor human milk is the option of choice, especially for vulnerable infants (28,31.37,38,39,)

- To facilitate breastfeeding, mothers and babies should be enabled to stay together as much as possible, to have skin-to-skin contact, to feed their baby responsively, and have access to ongoing support when this is needed

Measures to minimize the risk of transmission. These include (37) :

The 3 Ws (37) :

*W*ear a mask during feeding

*W*ash hands with soap before and after touching the baby:

*W*ipe and disinfect surfaces regularly.

Engineering controls: maintaining a physical distance of >6 feet between the mother and neonate or placing the neonate in an incubator, should be used when feasible.

Breast-feeding from an infected mother with COVID-19

- Use alternative feeding method as a cup and spoon to feed babies with expressed breastmilk when too sick to breastfeed
- When mothers are too ill to breastfeed, they should seek immediate medical advice.
- It may still be possible to express milk and ask a non-infected member of the family to feed the baby using a clean cup or cup and spoon.
- It will be even more important to follow the 3 Ws at all times to keep the baby healthy and safe.

What to do if the new-born infant may become possibly or infected after birth. (38)

- The new-born infant may become infected after birth. Minimizing the number of caregivers, the infant is exposed to is essential to reduce the infection risk both for the infant and for the caregivers (Stuebe,2020). (Try Keeping new-born infants with their mothers is key to this. (39, 40)
- If well infant with Suspected or confirmed COVID-19 infants and infants who have been in contact with suspected or confirmed COVID-19 positive mothers. He/she should not be cared for in neonatal units where the risk of infecting caregivers and immune-compromised infants is high units where the risk of infecting caregivers and immune-compromised infants is high.

- If Sick infant with Suspected or confirmed COVID-19 infants and infants who have been in contact with suspected or confirmed COVID-19 positive mothers:
- Infected infants will be potentially infectious and Locating neonates with suspected or confirmed SARS-CoV-2 infection in a NICU may unnecessarily increase the risk of exposing other vulnerable infants and NICU staff to SARS-CoV-2. there are concerns that illness could potentially be more severe in preterm or otherwise immune-compromised babies (Zeng et al., 2020; Royal College of Paediatrics and Child Health, 2020). (39,40.41)
- Need to be in isolation in single room negative pressure if possible. An Isolate (incubator) inside the incubator for air droplet prevention precaution)
- They should be kept with their mothers in situations where women can practice effective hygiene measures and self-isolation at home if the mother is well enough, or in a sideward.
- Isolating infants with suspected or confirmed SARS-CoV-2 infection in a Neonatal Intensive Care Unit (NICU) should be avoided unless the neonate's clinical condition warrants NICU admission.
- If the NICU may be the only suitable environment for appropriate care of an isolated neonate. Therefore, the determination about best placement should be made at the facility level.
- Mothers of NICU infants may express breast milk for their infants during any time that their infection status prohibits their presence in the NICU. Health Institutes should decide to receive this milk from mothers until they can enter the NICU. This may be fed to the infant by other uninfected caregivers.

Dealing with mother who is acutely ill with COVID-19

- The mother may not be able to care for her infant safely.
- In this situation, it may be appropriate to temporarily separate mother and newborn or to have the newborn cared for by non-infected caregivers in the mother's room

- Health care workers should use gowns, gloves, standard procedural masks before providing care for well infants. There is a potential risk of SARS-CoV-2 transmission to the neonate via contact with infectious respiratory secretions from the mother, caregiver, or other persons with SARS-CoV-2 infection, including just before the individual develops symptoms when viral replication may be high. When this care is provided in the same room as a mother with COVID-19, healthcare workers may opt to use eye shields and N95 respirators in place of standard procedural masks, if available.
- If non-infected partners or other family members are present during the birth hospitalization, they should use masks and hand hygiene when providing hands-on care to the infant before and while caring for a neonate.
- Of note, plastic infant face shields are not recommended and masks should **not** be placed on neonates or children younger than 2 years of age.

Dealing with women who need supervision (minor ethnicity, disabled mothers-etc.)

- Special attention is needed for women in these groups concerning promoting contact and enabling women to breastfeed, as well as being alert about preventing infection and taking pro-active measures to avoid all forms of discrimination.
- There is emerging evidence that the these under supervised population (ethnicity, socioeconomic deprivation,) is more susceptible to COVID-19. (42,43) There are increased rates of mortality in women and babies from these groups(44)

Infants in-need for intensive care

- It is rare for mothers with suspected/confirmed COVID-19 to have a baby who requires care in the neonatal unit. (45)
- Mothers of Nicu infants may express breast milk for their infants during any time that their infection status prohibits their presence in the NICU and if prevention precautions are optimal. Health institutes should decide to receive this milk from

mothers until they can enter the NICU. This may be fed to the infant by other uninfected caregivers. Allow using expressed breast milk (EBM)

- A mother who has suspected or confirmed covid-19 and whose baby needs to be cared for on the neonatal unit, a precautionary approach should be adopted to minimize any risk of mother-to-infant transmission; while at the same time, taking steps to involve parents in decisions and to mitigate potential problems for the baby's health and well-being, breastfeeding and attachment. (29,46.47,48)
- Precautionary approaches are:
    - Infants should be admitted to a single patient room if requiring neonatal intensive care and respiratory support optimally with the potential for negative room pressure (or other air filtration system). If this is not available, or if multiple COVID-exposed infants must be cohorted, there should be at least 6 feet between infants and/or they should be placed in air temperature-controlled isolates.
    - Isolate (incubator) care does not provide the same environmental protection as the use of negative pressure or air filtration but can provide an additional barrier against droplet transmission.
    - Gown and gloves and use either an N95 respirator, and eye protection goggles or an air-purifying respirator that provides eye protection, for the care of infants requiring supplemental oxygen at a flow >2 LPM, continuous positive airway pressure, or mechanical ventilation. https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
- Mothers /parents with suspected/confirmed covid-19 should be advised not to visit their infant until they meet the criteria:
    - She has been afebrile for 24 hours without the use of antipyretics.
    - At least 10 days have passed since her symptoms first appeared (or, in the case of asymptom**atic women identified only by RT-PCR screening tests, at least 10 days have passed since the positive test)** and symptoms have improved.

Recommended Practices During Delivery And Hospitalization

Delayed-cord clamping practices:

The Updated AAP and WHO consider delayed cord clamping (DCC) practices should continue per usual center practice. Mothers with COVID-19 should use a mask while holding their baby during delayed cord clamping (31). CDC guidance suggests that there are insufficient data to make recommendations on routinely delayed cord clamping or immediate skin-to-skin care to prevent SARS-CoV-2 transmission to the neonate (32).

skin-to-skin contact

There are no grounds for separating asymptomatic, healthy mothers and newborn infants. Immediate and uninterrupted contact should be encouraged, including skin-to-skin/kangaroo care, and women and newborn infants should be kept together thereafter. (28) However, The CDC reported in Aug 2020, that there is yet insufficient data to make recommendations on routine immediate skin-to-skin care to prevent SARS-cov-2 transmission to the neonate. (32).

Initiation of breastfeeding at the delivery rooms

Mothers with suspected or confirmed COVID-19 should be encouraged to initiate or continue to breastfeed. Mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks for transmission. (28)

Rooming-in infants with their mothers

- current evidence suggests the risk of a neonate acquiring SARS-CoV-2 from his mother is low. Further, data suggest that there is no difference in risk of SARS-CoV-2 infection to the neonate whether a neonate is cared for in a separate room or remains in the mother's room.
- Based on available evidence, WHO, CDC, AAP, and UNICEF recommendations on the initiation and continued breastfeeding of infants also apply with suspected or confirmed COVID-19 room-in with their well newborns when precautions are taken to protect the infants from maternal infectious respiratory secretions. (19, 28,31.33.)
- Families can be informed that evidence to date suggests that the risk of the newborn acquiring infection during the birth hospitalization is low when precautions are taken

to protect newborns from maternal infectious respiratory secretions. This risk appears to be no greater if the mother and her infant rooming-in together using infection control measures compared to the physical separation of the infant in a room separate from the mother.

- Mothers with suspected or confirmed SARS-CoV-2 infection may feel uncomfortable with this potential risk. Healthcare providers should respect maternal autonomy in the medical decision-making process
- Ideally, each mother and her healthcare providers should discuss whether she would like the neonate to be cared for in her room or a separate location if she is suspected or confirmed of having COVID-19, It's easiest to begin this conversation during prenatal care and continue it through the intrapartum period. Taking into account the following considerations.
- Considerations for discussions on whether a neonate should remain in the mother's room include:
- Early and close contact between the mother and neonate has many well-established benefits. The ideal setting for care of a healthy, term newborn while in the hospital is in the mother's room, commonly called "rooming-in."
- Mothers who room-in with their infants can more easily learn and respond to their feeding cues, which helps establish breastfeeding.
- Breastfeeding reduces morbidity and mortality for both mothers and their infants.
- Visual face-to-face interaction and recognition with parents are important for newborn brain development and attachment. (34)
- Mother-infant bonding is facilitated by keeping the neonate with its mother.
- The establishment of close and loving relationships and avoiding unnecessary separation of mother and baby is likely to help to protect against the anxiety, fear, and other mental health challenges resulting from the pandemic, lockdown, isolation, and other constraints. (35)
- Rooming-in promotes family-centered care and can allow for parent education about newborn care and infection prevention and control practices.

- Precautions are taken to protect the infants from maternal infectious to minimize the risk of virus transmission while feeding (25,36,37,38.39)
- During the hospitalization, the mother should maintain a reasonable distance from her infant when possible. Maintaining a physical distance of >6 feet between the mother and neonate will be appropriate
- When mother provides hands-on care to her newborn, she should: (3 Ws)
    - Wear a mask (If a fluid-resistant surgical face mask is available, this should be considered while feeding and caring for the baby. (38)
    - Wash hands with soap and water before and after contact with their baby https://www.cdc.gov/handwashing/index.html,
    - Wipe and wash surfaces around regularly with soap and water.
    - Avoid coughing or sneezing on the baby while feeding.
- Use of an incubator if possible may facilitate distancing and provide the infant an added measure of protection from respiratory droplets. placing the neonate in an incubator should be used when feasible. If using an incubator, care should be taken to properly latch doors to prevent infant falls. If the infant is kept in an incubator, it is important to educate the mother and other caregivers, including hospital personnel, on proper use (i.e., latching doors) to prevent newborn falls.
- Mothers should be enabled to remove the mask and interact visually with the baby at a safe distance ensuring that staff also remain at a safe distance - to avoid the transfer of the virus by droplets

When to separate newborn from their mothers

- Separation may be necessary for mothers who are too ill to care for their infants or who need higher levels of care.
- Separation may be necessary for neonates at higher risk for severe illness (e.g., preterm infants, infants with underlying medical conditions, infants needing higher levels of care).
- Separation to reduce the risk of transmission from a mother with suspected or confirmed SARS-CoV-2 to her neonate may not be necessary if the neonate tests positive for SARS-CoV-2.

Infant bathing

Infants born to mothers with confirmed or suspected COVID-19 should be bathed immediately after birth to remove viruses potentially present on skin surfaces. (31)

How to support breastfeeding in a health care setting

- Detailed guidelines for staff and services on infant feeding in the current emergency and COVID 19 pandemic context should be available and implemented and consistently used to optimize care and to avoid inconsistent and inaccurate information for women.
- Regardless of infant feeding method, all women need ongoing close contact with their babies, and information and support with feeding until they are confident and the infant is feeding effectively (McFadden et al., 2017) (51)
- information and support can be provided by health professionals, relative/peer supporters, and by appropriately trained voluntary services, and be by face-to-face or virtual contact.
- Appropriate postnatal contacts and referral systems should be in place for all women and infants, whether face to face or by virtual technology, and whether delivered by health visitors, to meet women's needs for information and support and address their concerns about infant feeding, until effective infant feeding is established.
- PPE should be available for staff
- It is essential to seek the views of women and staff about effective, contexts specific ways of enabling women to breastfeed, to enhance maximal the use of breast milk, and to diminish the risks of breastmilk substitutes in this current crisis. (,52,53.54)
- Information and support, psychological and practical, should be available to all women in pregnancy and from the first feed onwards to enable them to initiate and continue breastfeeding, including breastmilk expression; whether or not they or their infants and young children have suspected or confirmed COVID-19.

How to support an unwell mother to breastfeed her baby?

- When a woman is not well enough to care for her infant or where direct breastfeeding is not possible, she should be supported to express her breastmilk by hand expression or by a pump, and/or be offered access to donor breast milk.
- All feeding equipment and pumps should be appropriately cleaned and sterilized before use.
- Women should have a dedicated breast pump whenever possible.
- Methods of sterilization that use heat, as per manufacturers guidelines, should be used to avoid - where possible - the risk of feed contamination from chemical disinfection

What to do in an emergency crisis and the infant cannot be tested?

- In an emergency crisis If the infant cannot be tested, then treat the infant as if virus-positive for the 14 days of observation. The mother should still maintain precautions until she meets the criteria for non-infectivity as above.

What are needed Instructions/information are needed before discharged home?

- the parents should receive information and additional care as needed to promote attachment and breastfeeding.
- Arrange In-person /telehealth post-discharge visits are the preferred means to provide timely newborn feeding in addition to screening, bilirubin testing, and weight assessments

What about Arranging follow-up appointment?

- outpatient pediatric offices to provide, recommended newborn care, screenings, and outpatient follow-up are essential needs
- A documented follow-up can either by phone, telehealth, or in-office) through 14 days after birth.

- Use infection precautions to prevent spread from infant to healthcare staff in the outpatient office practice.

What to do If the family chooses to give Formula or the baby needs special formula feeding?

There are instances where a mother is unable to breastfeed or where she has decided not to breastfeed (52)

- Parents who choose to formula feed babies need information and support to enable them to bottle feed responsively and effectively, including pacing feeds and limiting the number of people who feed their baby.
- They should be encouraged to adhere to current guidance on washing and sterilizing equipment. The 3 Ws should be followed at all times
- Health professionals should be alert to any local problems with food security(need to be specified) for the supply of infant formula, bottles and teats, and sterilizing equipment.
- Women may need support to find appropriate suppliers. (to be identified)

Why Support working staff?

- All staff working in maternity and neonatal care need support
- The pandemic and its impact on health services and the care of women and newborn infants is stressful for staff as well as for parents ((53).
- Staff shortages, long shifts, and anxiety about COVID-19 are common (53). Staff who have been working to implement improvements in care, including family-centered care, skin-to-skin, and kangaroo care, and the Unicef UK BFI standards, and to enable and support women with breastfeeding, may experience additional stress including moral distress, as their work seems to be stopped or even reversed (54).

Any role for Role of institutional Quality office

- As the current crisis abates strategies will be needed to ensure that previous evidence-based services that have been put on hold or amended are not lost, but instead are reinstated and developed further, based on the best possible evidence.

- Interdisciplinary team working and the involvement of women and families in service re-design will be essential to continue the development of quality maternity and neonatal care (54,55)

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Important Links for posters in Arabic (WHO):

- Flyer on breastfeeding advice during the COVID-19 outbreak (Arabic) http://www.emro.who.int/images/stories/ncds/documents/ar_flyer_breastfeeding_covid_19.pdf?ua=1
- Infographic on breastfeeding during COVID-19 (Arabic) http://www.emro.who.int/images/stories/ncds/documents/ar_infographic_breastfeeding_covid_19.pdf?ua=1&ua=1
- Social cards on breastfeeding and COVID-19 (Arabic) http://www.emro.who.int/noncommunicable-diseases/campaigns/breastfeeding-advice-during-the-covid-19-outbreak.html

Video link information

- https://www.youtube.com/watch?v=e2KvnBtdE2E
- https://youtu.be/dewKMOYGnzQ