WELCOME to the

Planning and Clinical Management of Perinatal COVID-19 cases

Session will start in less than 15 minutes
Breastfeeding & COVID-19

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Conflict of Interest Disclosure Statement

No Conflicts of Interest
Objectives

1. Overview of current breast milk feeding recommendations from health organizations
2. Review of breast milk properties
3. Discuss transition-to-home lactation support options
Health Organization Recommendations
Inconsistent Recs Worldwide

• Tongji Hospital (Wuhan, China)
  • Recommended infant isolation, no breastfeeding

• Union of European Neonatal & Perinatal Societies (UENPS); Italian Society of Neonatology; Brazilian Pediatric Society
  • Recommend not to separate mother and neonate, unless in very limited situations
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How to Clean, Sanitize, and Store Infant Feeding Items

Follow these steps for cleaning your infant’s feeding items to help prevent germs from contaminating the milk you feed your baby. If your baby is hospitalized, follow your health care provider’s instructions for cleaning infant feeding items.

What are infant feeding items?

Infant feeding items include bottles and the nipples, rings, and caps that go with them. Certain bottles also may include valves or membranes. Some infants may be fed with a syringe, medicine cup, spoon, or supplemental nursing system.

Clean Infant Feeding Items in the Dishwasher (if Dishwasher-Safe)

Clean Infant Feeding Items by Hand

For Extra Protection, Sanitize

Store Safely

Q&A

More Information

HealthyChildren.org: Sterilizing and Warmer Baby Bottles Guide

www.cdc.gov/healthywater/hygiene/healthychildcare/infantfeeding/cleansanitiz.html
**How to Keep Your Breast Pump Kit Clean**

**Before Every Use**
- Wash your hands well with soap and water for 20 seconds.
- Inspect and assemble: check pump kit. If tubing is moldy, discard and replace immediately.
- Clean pump disassembled parts and counter top with disinfectant wipes, especially if using a shared pump.

**After Every Use**
- Store milk safely: cap milk collection bottle or seek collection bag, label with date and time, and immediately place in a refrigerator, freezer, or cooler bag with ice packs.
- Clean pumping area: especially if using a shared pump. Clean the dial, power switch, and counter top with disinfectant wipes.
- Take apart breast pump tubing and separate all parts that come in contact with breast milk.
- Rinse breast pump parts that come into contact with breast milk by holding under running water to remove remaining milk. Do not place parts in water to rinse.
- Clean pump parts that come into contact with breast milk as soon as possible after pumping.
- Clean milk in a wash basin, use only for cleaning the pump kit and infant feeding items.

**Clean Pump Kit**

- **Clean by hand**
  - Place pump parts in a clean wash basin used only for infant feeding items.
  - Do not place pump parts directly in the sink.
  - Add soap and hot water to basin.
  - Scrub parts according to pump kit manufacturer's guidance. Filling a brush, use a clean one that is used only to clean infant feeding items.
  - Rinse by holding items under running water, or by submerging in fresh water in a separate basin.
  - Air-dry thoroughly: place pump parts, wash basin, and bottle brush on a clean, unused dish towel or paper towel in an area protected from dirt and dust. Do not use a dish towel to rub or pat items dry.
  - Clean wash basin and bottle brush. Rinse with warm and allow to air dry after each wash. Wash by hand or in a dishwasher at least every few days.

- **Clean pump parts in a dishwasher**
  - If in dishwasher-safe, use to place small items into a closed-top basket or mesh handbag. Add soap and, if possible, run the dishwasher using hot water and a heated drying cycle (or sanitizing setting).
  - Remove from dishwasher with clean hands. If items are not completely dry, place items on a clean, unused dish towel or paper towel to air dry thoroughly before storing. Do not use a dish towel to rub or pat items dry.

**After Cleaning**

- **For extra protection, sanitize**
  - For extra germ removal, sanitize pump parts, wash basin, and bottle brush at least once daily after they have been cleaned. Items can be sanitized using cleaning, boiling water, or a dishwasher with a sanitize setting. Sanitizing is especially important if your baby is less than 3 months old, was born prematurely, or has a weakened immune system due to illness or medical treatment.
  - For detailed instructions on sanitizing your pump parts, visit www.cdc.gov/healthywater/hygiene/healthychildcare/information/infotechinf госродвл

**Store Safely**

- Store dry items safely until needed: store the clean pump parts, bottle brushes, and wash basins air-dried thoroughly before storing. Items must be completely dry to help prevent germs and mold from growing. Store dry items in a clean, protected area.

**Learn more about safe and healthy diapering and infant feeding habits at**
- www.cdc.gov/healthywater/hygiene/healthychildcare

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**www.cdc.gov/healthywater/pdf/hygiene/breast-pump-fact-sheet-p.pdf**
Importance of Breast Milk and Direct Breastfeeding
Breast Milk Components

• **Infant microbiome components:**
  - Immune cells (Macrophages, leukocytes, neutrophils, lymphocytes, T-cells, etc.): Kill enteropathogenic e. coli, giardia lamblia, staph aureus, candida albicans
  - Human milk oligosaccharides (HMO): protect against mucosal infections by regulating the gut epithelium, immune cells and microorganism
  - Intestinal probiotic bacteria (ie. Bifidobacterium, lactobacillus)

• **Immunoglobulins/antibodies – EnteroMammary Pathway**
  - Breast milk is full of antibodies that are directed against the microbes the mother has been exposed to and protect the infant against a wide range of microorganisms.
    - Immunoglobulins A, G, M, D, and E, with SIgA being the most abundant.

Human Milk Immune Response

• During active infection in nursing infants, the total number of white blood cells, specifically the number of macrophages, and TNFα levels increase in their mothers’ breast milk.


Nutrients **2019**, **11**(6), 1307; https://doi.org/10.3390/nu11061307
BF Challenges & Alternatives to Mom’s Own Milk
Potential BF Challenges

• Too ill
• Milk production (especially if separated)
• Milk ejection reflex/let-down
• Latch
• Appropriate hygiene
• Infant needs
  • Ill with COVID-19?
  • Additional health concerns- hypoglycemia, hyperbilirubinemia, etc.
  • Weight loss
Potential Treatment Medications

- Remdesivir (antiviral):
  - Likely safe, little data
  - Low bioavailability based on animal data
  - Half life in humans: 20hrs
- Monoclonal antibodies:
  - Very large molecules (less likely to enter milk)
  - Likely safe
- Hydroxychloroquine: compatible
- Azithromycin: compatible

- Other abx (ie. for pneumonia): generally compatible
- Contrast dye:
  - For all IV iodinated contrast and gadolinium, American College of Radiology (ACR) guidelines state that contrast administration to the mother is considered safe for both the baby and nursing mother.
Informal Milk Sharing

• Informal milk sharing has risks
• Still an option people seek out within their community during emergencies
• Academy of Breastfeeding Medicine: a position statement
Access to Safe Formula

• The AAP is warning parents:
  • **Do not** feed infants the following:
    • Homemade formula
    • Imported infant formula
    • Watered-down formula

• **WIC** can provide breastfeeding/chestfeeding support and formula
Shared Decision Making
Shared Decision Making

- Process of clinicians and patients working together to make a decision based on clinical evidence that balances risks and expected outcomes with patient preferences and values.

- LOVE Technique (Motivational Interviewing)
  1. “Listen” to the families
  2. Ask “Open-ended” questions
  3. “Validate” their feelings
  4. Provide targeted “Education” that addresses families’ concerns
Information Exchange

- Info Gathering
  - Tell me how you’re feeling right now, physically and emotionally.
  - What are your feeding goals?
  - What have you heard about COVID-19 & breastfeeding?
  - How are you feeling about rooming-in or being separated?
Information Exchange

- Information Sharing:
  - Risks of direct breastfeeding/benefits of separation: no empirical evidence yet.
  - Theoretically higher risk of transmission of infectious respiratory droplets to infant. Precautions that can be made are... (mask, hand hygiene, etc.)
- Benefits of direct breastfeeding:
  - Skin-to-skin contact (regulation of heart rate, respiration rates, glucose levels, body temp, colonization of infant’s microbiome with maternal microbes, less interference of skin and gut flora that may influence symbiosis and dysbiosis)
  - Learning to latch (less disruption to the learning process, likely to have latch difficulties later)
  - Less physiological and emotional stress for infant and mother
Hospital Support of Lactating Patients and their Newborns During Covid-19 Response

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Inpatient Lactating patients and newborns

• Shared decision-making conversation between the patient and their provider with the most current information available, currently counseling to separate from the infant. PUI or confirmed Covid-19 positive patients then choose to be separated from their infant, or to room in.

• Additional choices: directly breastfeed their well newborn, or provide expressed breast milk, or “pump and dump” (to sustain milk supply in cases when temporary medications are contraindicated: refer to LactMed website, Infant Risk Center or Dr. Hale’s Medications and Mother’s Milk before discarding any milk).
Workflows created for process

• All Patients are instructed in washing all reusable infant feeding supplies (pump kit, nipple shield, bottles etc.) after each use and sanitizing once daily per CDC guidelines and manufacturer instructions. Patients are given the supplies and equipment to follow these recommendations during hospital stay.

• PUI and confirmed Covid-19 positive patients who choose to room-in and/or provide breastmilk are instructed in hand-washing, breast hygiene, mask prior to touching baby and/or breasts.

• If infant and lactating parent are separated, and breastmilk is being provided, milk containers are wiped clean with germicidal wipes and transported by staff in a sealed plastic bag from parent’s location to infant’s location. Milk container is wiped again in infant’s room before storage. Before feeding, milk is transferred into a clean feeding device or wiped with soap/water prior to feeding to remove chemical residue from germicidal wipes.
Outpatient support

- Covid positive patients are discharged home with an infant scale
- Telehealth and in-person Pediatrics appointments for all patients
- Telehealth Lactation appointments offered
- Offsite in-person Lactation outpatient appointments if off precautions
- Breastfeeding advice warmline
- Weekly breastfeeding support group offered remotely
- Weekly Mothering Circle support group offered remotely
References

- World Health Organization:

- Centers for Disease Control:
  - https://www.cdc.gov/healthywater/hygiene/healthychildcare/infantfeeding/breastpump.html
  - https://www.cdc.gov/healthywater/hygiene/healthychildcare/infantfeeding/cleansanitize.html
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• American Academy of Pediatrics (AAP)
  • https://www.healthychildren.org/English/ages-stages/baby/breastfeeding/Pages/Breastfeeding-During-COVID-19.aspx
  • https://healthychildren.org/English/ages-stages/baby/crying-colic/Pages/Tips-for-Coping-with-a-New-Baby.aspx

• Academy of Obstetricians and Gynecologists (ACOG)
References

• American Academy of Family Physicians (AAFP)

• Academy of Breastfeeding Medicine (ABM)
  • https://www.bfmed.org/abm-statement-coronavirus (3/10/20)

• Human Milk Banking Association of North America (HMBANA)

• United States Breastfeeding Committee (USBC)
  • http://www.usbreastfeeding.org/p/cm/ld/fid=33? (4/10/20)
  • https://usbreastfeeding.salsalabs.org/covidstories/index.html
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• Anderson, P. Breastfeeding and Respiratory Antivirals: Coronavirus and Influenza.


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• Skin to Skin: Moore ER. Early skin-to-skin contact for mothers and their healthy newborn infants. Cochrane Database Syst Rev. 2016;11


Resources

• Shared Decision Making: https://www.bcmj.org/bccdc/shared-decision-making-and-breastfeeding-supporting-families-informed-choices
Questions?

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