Delivery Room Neonatal Management for 2019 Novel Coronavirus Infection (COVID-19)

Key Messages

- There is no evidence of vertical transmission of COVID-19 from mother to fetus
- Only one support person who is not positive for COVID-19, not under self-isolation, and not symptomatic is allowed in room.
- If resuscitation team is required for the neonate(s), only essential personnel should be attending the resuscitation and no learner should participate
- Call site IPC if there are any questions.

Pregnant women with Confirmed or Suspected COVID-19
Case review among care providers (primary provider, midwives, obstetrics, neonatology) to decide on site of delivery and attendance as per existing site guideline. Neonatal resuscitation team to attend delivery as per site-specific policy.

Neonate born to Mother with Confirmed or Suspected COVID-19
- CONTACT & DROPLET PRECAUTIONS if no resuscitation/AGMP is required (procedure mask with visor or procedure mask with face shield/goggles, gown and gloves)
- CONTACT & DROPLET PRECAUTIONS with N95 mask if resuscitation/AGMP* required. (Resuscitation team to wear N95 mask, face shield/goggles, gown and gloves)

If required, resuscitation in room where mother is in labour: Delivery Room or Operating Room

Resuscitation as per Neonatal Resuscitation Program (NRP)

Transport neonate in closed isolette. When isolette not available, clear a path to the destination to minimize exposure to others.

Ongoing care see next pages

*During neonatal resuscitation, there is a high probability of neonates requiring AGMP. Since NICU staff have limited ability to appropriately prepare for and perform AGMP during resuscitation, staff shall wear PPE as described during resuscitation.

*Aerosol-Generating Medical Procedures (AGMP)

Intubation or extubation
Cardiopulmonary Resuscitation
Respiratory supportive therapies including High Flow nasal cannula, CPAP, BiPAP, Non-Invasive Mechanical Ventilation (NIMV), High Frequency Oscillatory Ventilation (HFOV) and High frequency Jet Ventilation HFJV, nebulized therapy and open airway suctioning.
NP swab or aspirate is NOT an AGMP

References:

Do not use designated resuscitation rooms
Delay skin-to-skin contact for neonate until mother is able to do hand hygiene, don mask, has abdomen/chest wash and baby has been assessed and deemed stable
Always have mother perform hand hygiene and wear a procedure mask before holding baby until mother is known to be negative for COVID-19 and other infectious causes for her symptoms
**Neonatal Management for 2019 Novel Coronavirus Infection (COVID-19)**

**ASYMPTOMATIC NEONATE & MOTHER ABLE TO CARE FOR NEONATE**

- Neonate born to Mother with Confirmed or Suspected COVID-19 due to symptoms who is able to look after neonate
  - CONTACT & DROPLET PRECAUTIONS if no resuscitation/AGMP is required (procedure mask with visor or procedure mask with face shield/goggles, gown and gloves)
  - CONTACT & DROPLET PRECAUTIONS with N95 mask if resuscitation/AGMP* required. (Resuscitation team to wear N95 mask, face shield/goggles, gown and gloves)

- Contact site IPC about delivery

- Neonate ASYMPTOMATIC will room-in with Mother who can look after neonate
  - Confirm NP swab collected from mother is only suspect COVID
  - NP swab collected from neonate

- If infant becomes SYMPTOMATIC
  - See page 4

- If still in hospital:
  - Maintain contact & Droplet Precautions
  - Mother/Family if positive for COVID-19 cannot visit NICU till infection has cleared
  - Plan for early discharge of mother and baby if well and instructions for follow-up if there is clinical change in mother or baby

- If discharged prior to test results:
  - Communicate results to family

- Mother COVID-19 negative
  - Neonate COVID-19 test expected to be negative

- Mother COVID-19 positive

- Neumate COVID-19 negative
  - Follow-up for neonate as arranged in community if discharged

- Neumate COVID-19 positive

‡ Additional emotional support for family of neonate tested positive for COVID-19. Healthcare providers handle breast milk as per routine, i.e., body fluids.

Neonatal Management for 2019 Novel Coronavirus Infection (COVID-19)

ASYMPTOMATIC NEONATE & MOTHER CANNOT LOOK AFTER NEONATE

Neonate born to Mother with Confirmed or Suspected COVID-19 due to symptoms and cannot look after Neonate

- CONTACT & DROPLET PRECAUTIONS if no resuscitation/AGMP is required (procedure mask with visor or procedure mask with face shield/goggles, gown and gloves)
- CONTACT & DROPLET PRECAUTIONS with N95 mask if resuscitation/AGMP* required. (Resuscitation team to wear N95 mask, face shield/goggles, gown and gloves)

Infant ASYMPTOMATIC and Mother cannot look after neonate

Confirm NP swab collected from mother is only suspect COVID

NP swab collected from neonate

Infant becomes SYMPTOMATIC

See page 4

- Separate baby from mother after delivery
- Maintain CONTACT & DROPLET PRECAUTIONS for both mother and neonate while in hospital
- Monitoring neonate for symptoms - Vital Signs every 4 hours
- Plan for early discharge of baby if separated from mother and baby remains well with instructions for follow-up if there is clinical change in baby

Mother COVID-19 negative
Neonate COVID-19 test expected to be negative

- Maintain Contact & Droplet precautions till other infectious causes of mother’s symptom has been ruled out for both mother and baby while one or both are still in hospitals
- Contact IPC for plan
- Routine Newborn care & Discharge planning
If baby discharged prior to test results:
  - Communicate results to family

Mother COVID-19 positive

- Maintain Contact & Droplet Precautions for both mother and baby
- Plan for early discharge of mother and baby if well and instructions for follow up if there is clinical change in mother or baby.
- Can breastfeed as long as mother does hand and breast hygiene and wears a procedure mask during feeding
- If baby admitted to NICU for any reason, mother/family if positive for COVID-19 cannot visit until infection is cleared.
- Contact Public Health before discharge

If discharged prior to test results:
  - Communicate results to family and assess current conditions and confirm follow up instructions
  - If mother improves and can look after baby: can breastfeed as long as mother does hand & breast hygiene and wears a procedure mask during breast feeding
  - Aim for 2 meter separation when not providing direct care for baby if in same room

Neonate COVID-19 negative

Follow-up for neonate as arranged in community if discharged

Neonate COVID-19 positive

ǂ Additional emotional support for family of neonate tested positive for COVID-19. Healthcare providers handle breast milk as per routine, i.e., body fluids.

Neonatal Management for 2019 Novel Coronavirus Infection (COVID-19)

SYMPATHOMATIC NEONATE

Neonate
Born to Mother with Confirmed or Suspected COVID-19
OR
Exposed to Close Contact with confirmed COVID-19 while in nursery/NICU

CONTACT & DROPLET PRECAUTIONS with N95 mask as required for AGMP* and when caring for COVID positive intubated patient
Staff to wear Personal Protective Equipment
(N95 mask, reflective face shield, gown and gloves)

Neonate requiring NICU admission for any clinical reason

- Admit to single patient room in NICU
- Mother/Family if positive for COVID-19 cannot visit NICU till infection has cleared
- Managed in Incubator Isolette
- CONTACT & DROPLET PRECAUTIONS (with N95 mask if AGMP)
- Supportive Care as needed
- Investigations:
  - Respiratory pathogen panel (RPP) & COVID-19 PCR on respiratory specimens (NP swabs and/or endotracheal tube aspirate)
  - All other investigations as per NICU team

Mother COVID-19 negative

Infant COVID-19 negative

- Contact IPC
- Contact & Droplet Precautions based on underlying disease for mother and baby, i.e., other other infectious respiratory causes
- Routine Newborn care

Neonate COVID-19 positive ‡

- Contact IPC
- Contact & Droplet Precautions while in hospital till mother’s and baby’s infection has cleared
- Can be discharged home as per routine if well
- Contact Public Health before discharge

Mother COVID-19 positive ‡

Infant COVID-19 negative

- Contact IPC
- Contact & Droplet Precautions while in hospital till mother’s and baby’s COVID-19 status has been cleared and other infectious respiratory causes have been ruled out
- Can be discharged home as per routine if well
- Contact Public Health before discharge

‡ Additional emotional support for family of neonate tested positive for COVID-19. Healthcare providers handle breast milk as per routine, i.e., body fluids.

Feeding neonates born to Mother with Confirmed or Suspected COVID-19 Infection

- Breast milk is the BEST source of nutrition for most neonates. However, there are many unknowns about COVID-19. Therefore, families should participate in the decision to use breastmilk for infant feeding with the support of the healthcare providers.
- During temporary separation, mothers who intend to breastfeed should be encouraged to express their breast milk to establish and maintain milk supply.
- If possible, a dedicated breast pump should be provided. Prior to expressing breast milk, mothers should practice hand hygiene. After each pumping session, ALL breast pump parts should be thoroughly washed and the entire pump should be appropriately disinfected per the manufacturer’s instructions.

Well Near-Term or Term Neonates ROOMING WITH their mothers

The feeding options are:

1. Breastfeeding
   - A symptomatic mother with confirmed or suspected infection should take all possible precautions to avoid spreading the virus to her infant, including washing her hands before touching the infant AND wearing a face mask while feeding at the breast
   - If a mother and newborn room-in and the mother wishes to feed at the breast, she should put on a facemask and practice hand and breast hygiene before each feeding.

2. Feeding expressed breastmilk by bottle
   - If expressing breast milk with a manual or electric breast pump, the mother should wash her hands before touching any pump or bottle parts and follow recommendations for proper pump cleaning after each use.
   - If possible, consider having someone who is well, feed the expressed breast milk to the infant.

3. Feeding infant formula by bottle
   - For mothers to unwell to breastfeed or to express breastmilk with a breast pump and for mothers who have chosen formula to feed their infant.

Preterm Neonates, Ill or well near-term or term neonates SEPARATED FROM their mothers

The feeding options are:

1. Feeding expressed breastmilk by bottle
   - For near-term and term neonates where the mother is well enough to express breast milk with a manual or electric breast pump, the mother should wash her hands before touching any pump or bottle parts and follow recommendations for proper pump cleaning after each use.
   - If possible, consider having someone who is well feed the expressed breast milk to the infant.

2. Feeding donor breastmilk
   For neonates who qualify for donor breastmilk as per current NICU feeding guidelines.

3. Feeding infant formula
   For mothers too unwell to breastfeed or to express breastmilk with a breast pump and for mothers who have chosen formula to feed their infant.

References