Pregnant Women with COVID-19+ or PUI
General Guidelines for Admission and Hospital Treatment

Screening as per Local Site Protocol on Admission

Local Infection Control Practice
- Mask the Patient
- Single room for all Care
- Minimize number of transfers
- Minimize number of care providers

Follow care algorithm based on presenting complaint

COVID19+ or PUI Requiring Medical Admission
- not in labour – see algorithm A

COVID+ or PUI – Requiring Maternity Admission
- in labour or with urgent OB Issue – Algorithm B
Algorithm A for Pregnant Women COVID-19 + or PUI
Not in Labour

COVID-19+ or PUI requiring admission for medical condition

- Admit to Hospital as per local COVID protocol
- **DO NOT** admit to Maternity ward
- Care should be done by a multidisciplinary team including Medicine, Infectious disease, Critical Care and Obstetrics and Anesthesia.
- **Consult Local OB on Admission and notify maternity unit**
- If COVID + Consult Repro ID via Paging at BCW hospital (875-2161)

**Surveillance:**
- **COVID** as per protocol
- **Maternal** – consider an Obstetrical early warning system
- **Fetal** – based on Gestational Age and maternal condition utilizing maternity staff for monitoring

**On discharge and still pregnant**
- Follow up with OB Care Provider by phone or by virtual care to define care plan
- Consider monthly U/S for Growth/Fluid
- Continue Home isolation as directed by Public Health
Algorithm B for Pregnant Women COVID-19+ or PUI
Labour or Emergent OB Issue (i.e.: PPROM, APH, Gestational Hypertension)

Screening/Triage as per hospital Protocol

Patient to wear mask in public areas
Admit in Private Room – Negative Pressure/air isolation if possible
IPAC protocol

Symptomatic requiring high acuity unit/intensive care and in labour

- Admit to single room in HAU/ICU or as per site protocol, Negative pressure room if possible
- Consult Medicine, Infections Diseases, Critical Care, Obstetrics Team and Anesthesia

Manage labour per OB protocol
- Consider early epidural
- Recommend continuous EFM due to High rates of fetal distress
- No Entonox/Nitronox unless proper filter being used
- CS as per OB indication
- MINIMIZE patient transfer in hospital if possible

Follow Postpartum Clinical Guidance after delivery for woman and newborn
Continue droplet precautions for both mom and newborn

Symptomatic not requiring high acuity unit/intensive care and in labour

Admit to single room in maternity, Negative Pressure room if possible

If needs admission for observation or induction

COVID19+ or PUI not requiring HAU/ICU

- Antepartum issue and not in labour
- Manage in single room at all times
- If doesn’t need admission for obstetrical indication discharge home

- Follow by virtual care with OB care provider
- Consult Repro ID through BCW Paging 604 875 2161 if COVID+

If needs C/S, N95 for OR procedures (because of small risk of conversion to GA)
Recommend Anesthesia, RNs, Obstetrician and first assist as minimum for N95
Overall Principles:

- Antenatal patients not in labour and mild COVID 19+ symptoms should be kept at home in self-isolation when possible
- Do not move patient between sites if at all possible. Sites should be able to manage their own patients as per their own EOC and Covid-19 plan.
- Minimize room transfers and in hospital movement
- Only essential staff should enter patient’s room
- Visitors should be kept to a minimum (currently one support person per patient)
- Inform delivering hospital if Covid-19 positive pregnant woman in community
- Consult Reproductive Infections Disease at BC Women’s Paging 604 875 2161 with a known COVID-19+ infection
- COVID 19+ status in pregnancy alone is NOT a reason for admission to hospital. Need for higher level of care for respiratory condition or routine OB care for labour etc. are the only indications for admission. The majority of women can be managed in community.

Antenatal Patients

- Most women will only experience mild or moderate cold/flu like symptoms.
- Pregnant women should be advised NOT to come to hospital unless they are in need of urgent obstetric or medical care.
- All antenatal patients should be told that if they are concerned about symptoms or require urgent medical advice, they should contact their primary Obstetrical Provider via their office or after hour’s process depending on time of day.
- If women are advised to come to the hospital, they should be told to come by car (not to call EMS) and call the unit before entering the hospital.
- When symptoms are absent for 14 days women should be offered an ultrasound
- Any enhanced fetal surveillance for COVID 19+ cases is based on the clinical condition of the mother and should be done after consultation with the Reproductive ID Team at BC Women’s.
- Antepartum fetal surveillance of confirmed cases of COVID-19 should occur monthly and include fetal ultrasound assessment for growth and anatomy.

Admission is only necessary when women meet criteria for admission for medical reasons

- If admission for a pregnant patient they should be admitted on a medical unit unless delivery is anticipated.

For treatment

- Care should be done by a multidisciplinary team including Medicine, Infectious disease, Critical Care, Anesthesia and Obstetrics.
- For maternal surveillance, close monitoring or initiation of an obstetrical early warning system is appropriate.
- Delivery for pregnant patients should be expedited for fetal reasons or if it is felt that delivery will help maternal resuscitation
  - If delivery is required, maternal stabilization should be the priority.
- X-rays should be used as per non-pregnant patients.
- Consider empiric antibiotic therapy for superimposed bacterial pneumonia or severe respiratory disease (note: as we gather data this recommendation may change)
For labouring patients
If a patient presents in labour that has an ILI or confirmed COVID-19, and her planned delivery site can manage both her medical needs and the needs of her infant she should deliver at that hospital.

- Hospital Birth is recommended because of the increased risk of fetal distress associated with COVID-19
- Limit visitors to one support person (not including Doulas)
- N95 is only needed for intubation. OR staff consider wearing N95 during C/S in the event of a failed epidural/spinal and conversion to GA required
- If Entonox® is used then the breathing system must contain a hydrophobic filter to prevent it being contaminated with the virus (≤ 0.05µm pore size)
- Although ideally patients should be placed in a negative pressure room with ante-room, this is not required as droplet precautions are adequate
- There is no evidence that second stage of labour creates aerosols, so droplet precautions are adequate.

Care in Labour
- Intrapartum continuous electronic fetal monitoring as evidence shows fetal distress during labour
- Timing and mode of delivery governed by OB indications
- Consideration for PPE with N95 respiratory for Cesarean section (due to possible req. for intubation)
- Delayed cord clamping and skin to skin can be done

For a woman requiring ICU
- For sites with an onsite ICU, mother baby dyads will be cared at the local site assuming the onsite NICU can manage the gestational age of the infant. Do not transfer unless cannot meet both mother and neonate requirements.
- Royal Columbian, Surrey Memorial and Victoria General Hospitals can manage pregnant women with COVID 19+ who require an onsite ICU/HAU and require a NICU for a baby at <30 weeks GA
- Mothers needing escalation of care not available at their local site (postpartum) will be transferred as per PTN and COVID protocol within their health authority
- For hospitalized Covid-19 patients whose goals of care align with full critical care support, contact Critical Care outreach Team (or equivalent) if oxygen requirements reach 4LPM to maintain SpO2 >93%
- When oxygen requirements escalate beyond 6L, contact the ICU team on call immediately

Postpartum Care
- Keeping mother baby together is recommended.
- Mother to mask and utilize strict hand washing protocol for breastfeeding and skin to skin
- Test infant for COVID-19
• For mothers wishing to breastfeed, precautions should be taken to limit viral spread to baby:
  o Hand washing before touching the baby, breast pump or bottles;
  o Try and avoid coughing or sneezing on your baby while feeding at the breast
  o Consider wearing a face mask while breastfeeding
  o Follow recommendations for pump cleaning after each use
  o Consider asking someone who is well to feed expressed milk to the baby

• No isolation of infant from mother unless clinically indicated by disease severity
• Ensure COVID19+ status relayed to Public Health Nurse via liaison form
• Discharge mother and baby as soon mother is stable.
• Audiology assessment should be deferred until COVID-19 tests return on mother and baby. If COVID-19 is confirmed in either mother or baby, audiology assessment should be deferred and a follow-up plan put in place prior to discharge home

Follow-up for newborn after discharge home:
• Where appropriate, early discharge of the baby with a parent or caregiver, should be facilitated.
• Advice should be given to mother about self-isolation measures while at home until mother is completely asymptomatic
• Resources regarding virtual support groups should be provided to mother
• Follow-up by with a pediatrician or FP or MW should be arranged within 3-5 days of discharge
• Public health should be informed of babies born to COVID + mothers on discharge in order to follow-up with them in the community

If baby’s COVID-19 test is positive:
• If baby remains asymptomatic, they should self-isolate with mother or caregiver at home for 14 days or until mother is completely asymptomatic

Signs and symptoms to watch for in baby at home:
• Fever or low temperature (<36.5 or > 37.5)
• Signs of respiratory distress
  o Respiratory rate >60
  o Nasal flaring
  o Chest retractions
  o Grunting
  o Changes in baby’s skin color to blue or gray
  o Cough
• Vomiting
• Diarrhea
• Poor feeding

Readmission to hospital
• If the baby develops any of these signs and/or symptoms at home, mothers or caregivers should phone 8-1-1 and let them know they are taking the babies into the hospital.

References:

2. Royal College of Obstetrics and Gynecology of UK : Coronavirus 19 Infection in Pregnancy (published Friday March 13, 2020)

3. WHO Clinical Guidelines for the Management of COVID-19 related acute respiratory distress syndrome

4. Centers for Disease Control Guidelines: Pregnancy and Breastfeeding

5. Royal College of Obstetrics and Gynecology of Australia : COVID-19- guidance for pediatric services, last updated March 16, 2020