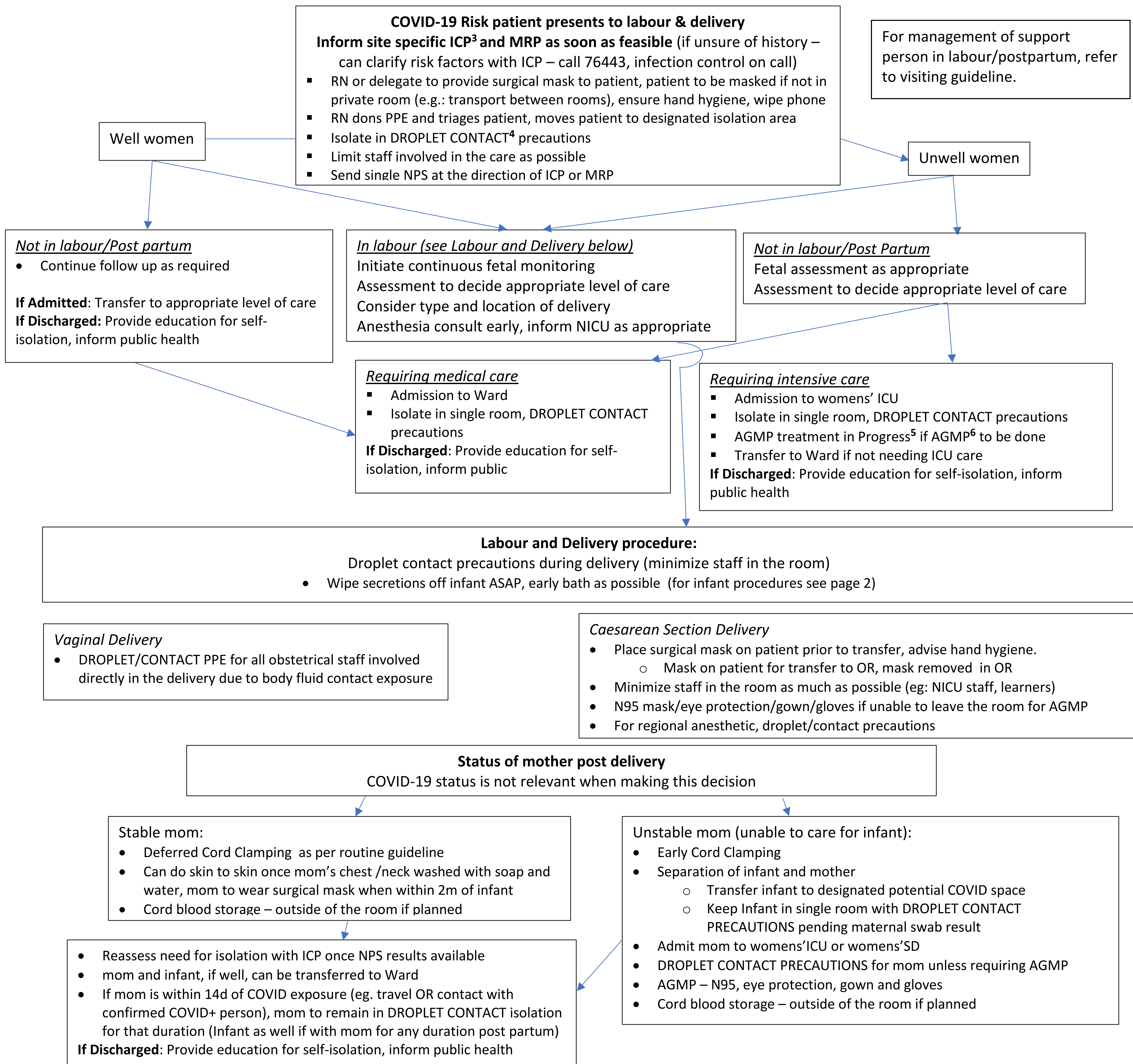
Labour and Delivery algorithm for management of COVID RISK patients

We recommend all pregnant women with COVID RISK (confirmed[1]/suspected[2] COVID) be followed by the obstetrical service, as possible.

- Pregnant women with COVID RISK will be asked to call before coming to hospital where possible, so L&D can be prepared for arrival
  - All patients presenting to L&D should be screened for COVID symptoms/ exposures
  - If MRP determinespatient "COVID Risk" follow below algorithm (for antepartum/intrapartum/postpartum management)



[1] **Confirmed COVID-19**: someone who has tested positive for COVID-19 in the last 14days, or is still requiring additional precautions for COVID

[2] **Suspected COVID-19**: someone who has had direct contact with someone confirmed to have COVID-19 (COVID exposed), OR who has travelled internationally IN THE PAST 14DAYS, or has symptoms of COVID-19 and is pending testing

- If no symptoms but have the above exposures, they would be on HOME ISOLATION as per public health/ Infection Control guidelines.
- All suspected COVID-19 patients symptomatic or not should be kept in DROPLET CONTACT PRECAUTIONS for the 14DAYS from their LAST EXPOSURE TO COVID-19 or date of return from international travel)

[3] **ICP:** Infection Control Practitioner on call (24/7)

[4] **Droplet Contact precautions:** surgical mask with visor, face shield or goggles, gloves and gown (for delivery staff)

[5] **AGMP *treatment in Progress*:** *N95* respirator with face shield/goggles/visor, gown and gloves

[6] **Aerosol-Generating Medical Procedures (AGMP):** refer to guidance on AGMP and Oxygen Therapy document. For AGMP through closed incubator, no need for N95 if greater than 2m from closed incubator.

Procedures NOT considered to be AGMP: collection of a Nasopharyngeal swab

A – Management during delivery (applies to the delivery room and OR)

Imminent delivery of woman with COVID Risk

- NICU team not necessary to attend COVID deliveries due to COVID status alone, usual indications for NICU team should apply
  - if attendance required notify NICU of maternal COVID risk
- Essential NRP personnel (NICU MRP or delegate when possible) to attend delivery, wait outside of the room until necessary
- Limit number of personnel in the room to essential staff only & OB MRP or delegate whenever possible (especially during intubation/extubation of mom)
- **DROPLET CONTACT precautions for NICU staff (to be outside of room ideally, or if entering room, N95 required if in room during Intubation/Extubation of Mother)**
  - Vertical transmission to infant is extremely unlikely so infant is NOT considered a risk, regardless of COVID-19 status of mother
- Manage as per standard NRP guidelines. Intubation, CPAP, suctioning or CPR during NRP is not considered a COVID risk AGMP (as risk to staff is exceedingly minimal) in the delivery room (no need for N95)
- Doff PPE appropriately before leaving delivery area, transport patient to appropriate area.
- After delivery, wipe secretions off of infant as soon as possible (early bath if possible). Send infant NPS only if maternal NPS has returned positive.
- **Inform site specific ICP about admission as soon as feasible. (call locating 76443 – Infection Control on Call)**

Infant needing NICU or L2N care

- Transport to G pod (or designated potential COVID area) in incubator
- Manage in DROPLET CONTACT ISOLATION
- If maternal NPS positive, send infant NPS within 24-48h post delivery and at day 7

When NPS is negative infant can be transferred to NICU or L2N as is appropriate for ongoing care

- visitors in home or hospital isolation are not to visit NICU

- **If NPS is positive** for COVID19 infant to stay in isolation in an incubator in G pod until able to be with mom or d/c home
- DROPLET CONTACT ISOLATION in a designated COVID19 area
- AIRBORNE ISOLATION (HEPA FILTER if available, N95) for any COVID19 NPS POSITIVE infants with AGMP[6] (HFNC, NIV) even if in an incubator
- Visitation to be discussed with ICP

Well Infant with unwell mother

- DROPLET CONTACT isolation on designated COVID19 area on 4C nursery.
- If maternal NPS positive, send infant NPS
- If maternal NPS negative, consult ICP for direction
- Vitals q4h on infant until discharge
- If infant cannot be with mother, review with ICP re: non home isolated support person to be with with infant if possible
- If appropriate, may be discharged home

Well infant and well mother

- Keep mother and infant together in a single room
- Isolate mom and infant in DROPLET CONTACT
- If maternal NPS positive, send infant NPS
- If maternal NPS negative, contact ICP for direction
- Vitals q4h on infant until discharge
- Ensure maternal hand hygiene and surgical mask use when within 2 meters of infant, including when breastfeeding
- Place cot at least 2 meters from mother's bed in the same room
- Facilitate early discharge if possible
- Use an incubator for any movement of infant

Infant Discharge Follow Up

- If infant's community MRP unwilling to see patient 24-48h post-discharge, 4C will arrange for end of day appointment in NAP clinic and assessment to be completed by 4C Charge Nurse with update to on-call 4C Family Physician
- If infant requires COVID19 swabbing and is well with symptoms, infant to return to NAP Clinic at end of day – if infant unwell, 4C on-call FP to call PEDS

- Discuss mother and infant test results with Infection Control team to reassess ongoing infection control measures required
- If discharged home, provide home quarantine information if mom or infant is COVID + (PH to advise when can come out of home isolation)
- Any followup visits with mom or infant should be in DROPLET CONTACT precaution until out of home isolation (minimum 14d from last exposure eg. return from travel or known exposure to COVID19, for those who have swabbed positive
- Contact ICP for direction on removal from isolation

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B – Further management principles related to infection control

1. Feeding
   a. Breast-feeding should be supported if possible for all infant who are well and rooming with mom as specified above (on 4B or 4C). Mothers should perform hand hygiene and don surgical mask during any feeds (at the breast or if bottle feeding). Due to visitation restrictions breastfeeding or bottle feeding by mom or any quarantined family member will not be possible in the NICU, though EBM can be delivered.
   b. Formula or expressed feeds provided to infant admitted to NICU or L2N from outside (home or maternal ward) should be brought to the unit by a non-quarantined member/staff member as appropriate to the logistics.
   c. If mother is expressing milk she must use her designated pump in a designated area.
   d. There are no Infection Control related contraindications to provision of donor milk if required.

2. Delivery suite care
   a. Follow obstetrics guidelines for delivery of confirmed/suspected women.
   b. Immediately following delivery, delay skin-to-skin contact for infant until mother is able to perform hand hygiene, don surgical mask and has had neck /chest wash.
   c. No Infection Control contraindications for delayed cord clamping.

3. When would the infant be at risk for COVID-19
   a. Available data indicates there is no risk of vertical transmission to the infant (in COVID, SARS, MERS), and that this infection is spread through droplet contact spread, therefore the initial resuscitation of the infant wouldn't be considered a risk of COVID19, and not requiring airborne isolation (even for intubation, deep airway suctioning).
   b. Analyses of amniotic fluid, serum, placenta, and breastmilk from pregnant women positive for SARS or COVID-19 have found no detectable viral DNA further supporting that vertical transmission is highly unlikely. We advise testing the asymptomatic infant at birth.
   c. If the infant has exposures to COVID-19 through contact with mom, droplet contact isolation for the infant should be implemented.
   d. Subsequent respiratory changes or fever in the infant after birth (with a confirmed COVID positive mother) which will likely be due to more prevalent causes including TTN, MAS, BPD may be considered as potential for signs of COVID-19, and testing can be repeated (one NPS to be sent). Pending the results of the NPS infants should be maintained in DROPLET CONTACT precautions, and if AGMPs are required, airborne isolation will be initiated.

4. Call public health prior to discharge for any patients that may require home isolation
5. Home isolation instructions from public health are available on the HHS Hub

C - References

DEVELOPED IN CONSULTATION WITH ST. JOSEPH'S HAMILTON HOSPITAL PARTNERS

1. Adapted from and in consultation with SJH MBU and SCN COVID Algorithm
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3. Wang L et al. Chinese expert consensus on the perinatal and neonatal management for the prevention and control of the 2019 novel coronavirus infection (First edition). Ann Transl Med 2020 | http://dx.doi.org/10.21037/atm.2020.02.20
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5. Updated SOGC Committee Opinion – COVID19 in pregnancy: https://sogc.org/en/content/featured-news/Updated-SOGC-Committee-Opinion%E2%80%93%20COVID-19-in-Pregnancy.aspx
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9. Provincial Council for Maternal & Child Health (2020, Oct 22). *Maternal-Neonatal COVID-19 General Guideline.* Retrieved 2021-01-12 from https://www.pcmch.on.ca/wp-content/uploads/2020/10/MatNeo-COVID-19-Guide_OCT222020.pdf