Technical Taskforce of Corona in Pregnancy- Lebanon

COVID-19 Virus Infection and Pregnancy

Labor & Delivery COVID-19 GUIDELINES

April 2020

This booklet is prepared by the Technical Taskforce of Corona in Pregnancy- Lebanon as part of Guidelines related to COVID-19 infection and role of OBGYN in Labor and Delivery

الجمهورية اللبنانية
وزارة الصحة العامة

مقدمة

تعمل اللجنة الوطنية التقنية للكورونا والحمل في وزارة الصحة العامة على إعداد بروتوكولات وطنية موحدة تتعلق بمتابعة الحمل والطلق والولادة وما بعد الولادة للمصابات او المشتبه بإصابته ن بالكورونا، وذلك لتوحيد وتسهيل الأعمال الطبية للزميلات والزملاء .كما وتعمل أيضًا على إعداد مواد تدريبية لتدريب الزملاء من خلال ورش عمل عن طريق تقنيات التواصل المعلوماتية، اضافة الى مواد تثقيفية تحاكي تساؤلات الحامل وأسرتها فيما يتعلق بالحماية والمتابعة والممارسات الصحية اليومية .كما وتعمل اللجنة على رصد ومتابعة حالات الحمل المصابة بالكورونا لضمها الى السجل الوطني للإحصاء.

المعلومات حول كورونا تتجدد بشكل دوري وسريع وتتغير معها بعض الارشادات .سوف تصلكم الموارد من اللجنة تباعًا بحسب الدراسات والأدلة التي يتم تجديدها وتحديثها.

تتطلع اللجنة الى تعاونكم واقتراحاتكم في هذا المجال.

د فيصل القاق

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Table of Contents

1. Objective 4
2. Prehospital Consideration – Phone Triage 5
3. Important Considerations in Patient Care 7
   3.1. Infection prevention and control of covid-19 in inpatient obstetric setting 7
   3.2. Women presenting in labor for intrapartum care with suspected covid-19 and no or only mild symptoms 8
   3.3. Women presenting in labor for intrapartum care with confirmed covid-19 and no or only mild symptoms 9
   3.4. General advice for obstetric operating room for suspected or confirmed cases 10
   3.5. Elective cesarean delivery 10
   3.6. Planned induction of labor 10
   3.7. Additional considerations for women with suspected or confirmed covid-19 and moderate or severe symptoms 11
   3.8. Postnatal management 12
   3.8.1. Neonatal care 12
   3.8.2. Infant feeding 12
   3.9. Discontinuing Transmission-Based Precautions for hospitalized patients with COVID-19 13
   3.10. Discharge Process 13
4. General Changes to Routine Labor and Delivery Workflow 14
   4.1 Visitor Policy 14
   4.2 Inductions of Labor and Cesarean Deliveries 14
   4.3 Post-Partum Care 14
5. Appendix 15
   5.1 Appendix A 15
   5.2 Appendix B 16
6. Acknowledgement 17

1. Objective

The purpose of this document is to provide guidance to the flow of labor and delivery during the COVID- 19 pandemic. The goals are to:

1. Provide general guidance for patient care and ensure a uniform response of the nursing and medical team when a suspected or confirmed COVID-19 pregnant patient presents in labor or for a scheduled delivery.
2. Reduce risk of maternal and neonatal COVID-19 transmission through minimizing hospital contact and appropriate isolation.
3. Appropriately screen and test pregnant patients for COVID-19.
4. Help prevent the spread of COVID-19 in our healthcare facility.

No guideline can cover every scenario. Use this guidance and clinical judgment to avoid any contact as much as feasible
Please stay tuned as guidance will continue to change frequently

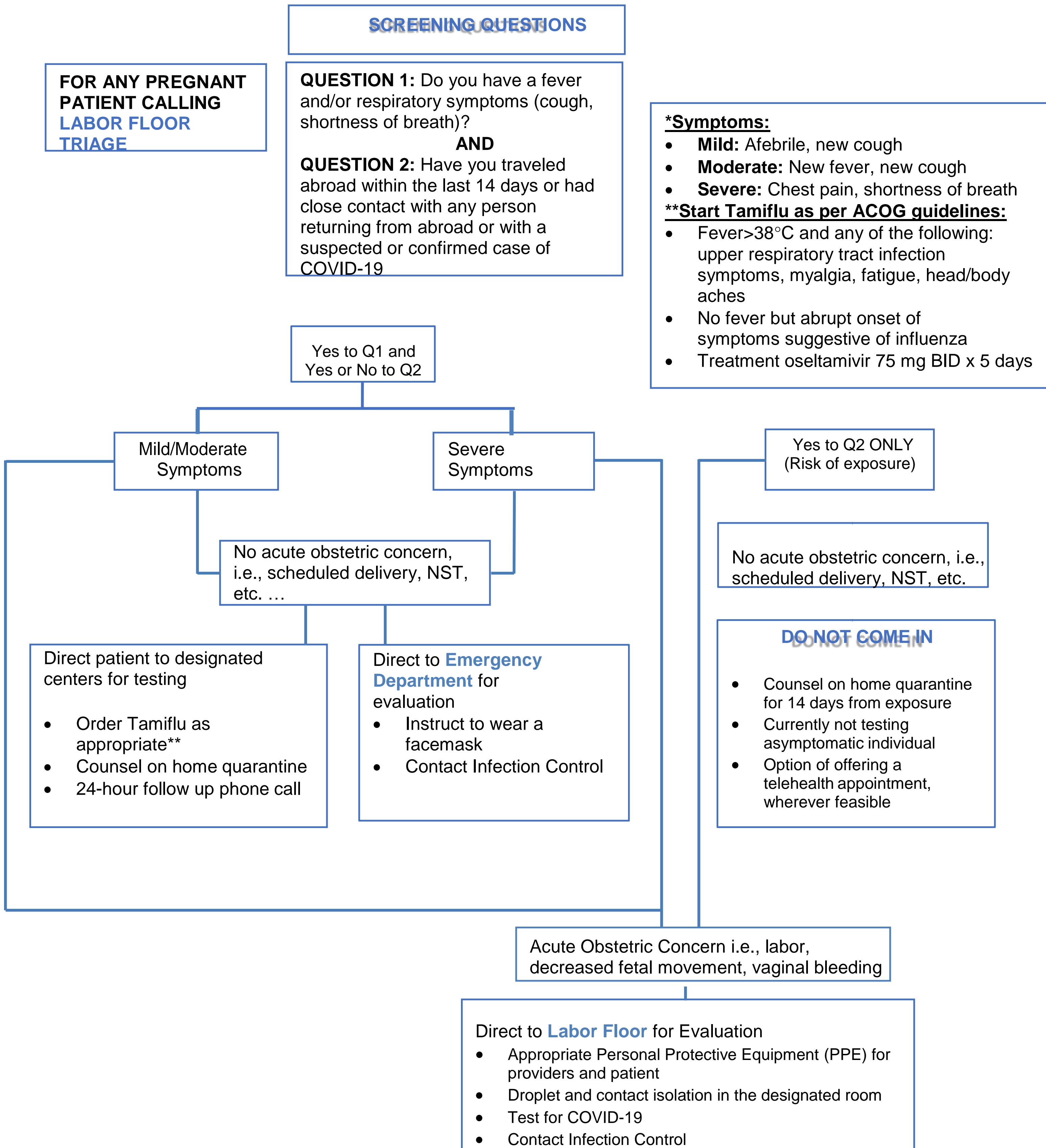
2. Prehospital Consideration – Phone Triage

2.1. It is ideal if all pregnant women are instructed to contact Labor Floor **before** they present to the premises for either a scheduled delivery or antenatal testing (NST, …) or in labor. Notifying the Labor Floor prior to arrival will allow the staff to ensure that appropriate infection control preparations have been made, and that all healthcare personnel who will be involved in the patient's care are notified before the patient's arrival.

2.2. Phone calls to Labor Floor should be triaged by the registered nurse or midwife according to the algorithm on page 4 (Figure 1). The nurse will take a full history that includes recent travel, exposure to a suspected COVID-19 positive person and any respiratory symptoms. In general, patients calling with symptoms of COVID-19 or flu with no urgent obstetrical issues will be asked to postpone their visit. The nurse/midwife will contact the obstetrician and will get back to the patient. Some patients might have to be called in or do the COVID-19 test. Patients awaiting results should be asked to self-isolate or will be admitted to a preassigned isolation room on the Labor Floor, depending on the patient's clinical presentation and chief complaint. Providers will follow up on test results and notify the team of any positive results.

2.3. Health care practitioners should promptly notify infection control personnel at their institution and the Health Authorities of the anticipated arrival of a pregnant patient who is a PUI with suspected infection.

Figure 1: Flow chart for triaging patients who call into Labor Floor for NON-EMERGENCY and EMERGENCY obstetric issues



3. Important Considerations in Patient Care

When the patient arrives to Labor Floor (in case she doesn't call as per protocol), the registered nurse will verbally screen for upper respiratory tract infection symptoms and travel history and exposure. This will be done before entering the Labor Floor. If the patient reports fever or coughing, she should be provided with PPE.

Important considerations in the care of patients who screen positive for risk of exposure or symptoms until COVID-19 has been ruled out:

3.1. Infection prevention and control of covid-19 in inpatient obstetric setting

3.1.1. Patients with known or suspected COVID-19 should be cared for in a single-person room with the door closed. A room on Labor Floor should be preassigned as an isolation room to admit suspected COVID-19 patients. Management of confirmed COVID-19 is detailed in section 3.3.

3.1.2. All healthcare personnel who enter the room of a patient with known or suspected COVID-19 (PUI) should adhere to Standard, Contact, and Airborne Precautions.

3.1.3. Efforts should be made to minimize the number of staff members entering the room, preferably one medical and one nursing staff. Medical students should not be allowed in.

3.1.4. Basic and refresher training for all healthcare personnel on those units to include correct adherence to infection control practices and PPE use and handling (*Appendices A & B)*; enough and appropriate PPE supplies should be positioned at all points of care. *Check the links on the appropriate donning* https://www.youtube.com/watch?v=kKz_vNGsNhc *and removal and disposal of PPE* https://www.youtube.com/watch?v=oUo5O1JmLH0

3.1.5. Practice vigilant hand hygiene. This includes use of alcohol-based hand sanitizer that contains 60% to 95% alcohol before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE, including gloves. Hand hygiene can also be performed by washing with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water before returning to alcohol-based hand sanitizer. *Check the CDC link on hand hygiene* https://youtu.be/d914EnpU4Fo

3.1.6. All health care providers should be following CDC PPE recommendations: Current CDC recommendations include a surgical mask, protective eyewear, gown, and gloves.

- N-95 masks should be used only if patient is on CPAP, on high flow nasal cannula O2, when administering nebulized medications or during aerosol generating procedures.
- Preform fit checking at every use of the N-95 mask, as shown in the link https://youtu.be/XPOzCG4DrgQ

3.1.7. Pregnant healthcare personnel (HCP) should follow risk assessment and infection control guidelines for HCP exposed to patients with suspected or confirmed COVID-19.

3.1.8. Considerations should be made to limit exposure of pregnant HCP to patients with confirmed or suspected COVID-19, especially during higher risk procedures (e.g., aerosol-generating procedures), if feasible based on staffing availability.

3.2. Women presenting in labor for intrapartum care with suspected covid-19 and no or only mild symptoms

3.2.1 All patients should be encouraged to call the Labor Floor in advance and before presenting to the hospital as detailed in sections 2.1. and 2.2.

3.2.2 Women with mild COVID-19 symptoms can be encouraged to remain at home (self- isolating) in early (latent phase) labor as per standard practice. If feasible, they should be advised to do COVID-19 testing.

3.2.3 Once a patient presents to Labor Floor, she will settle in the pre-designated room, and a full maternal and fetal assessment should be conducted to include:

3.2.3.1 Assessment of the severity of possible COVID-19 symptoms should follow a multi-disciplinary team approach including an infectious diseases and/or medical specialist and a maternal fetal medicine (MFM) specialist, when available.

3.2.3.2 Perform the COVID-19 test.

3.2.3.3 Maternal observations including temperature, respiratory rate and oxygen saturations.

3.2.3.4 Confirmation of the onset of labor, as per standard care.

3.2.3.5 Continuous electronic fetal monitoring using cardiotocograph (CTG) is recommended especially if the patient is eventually confirmed COVID-19.

3.2.3.6 If there are no concerns regarding the condition of either the mother or baby, women who would usually be advised to return home until labor is more established, can still be advised to do so, if appropriate transport is available.

3.2.3.7 Women should be given the usual advice regarding signs and symptoms to look out for, but in addition should be told about symptoms that might suggest deterioration related to COVID-19 following consultation with the medical team (e.g. difficulty in breathing, fever greater than 38.0oC).

3.2.3.8 If labor is confirmed, then care in labor should ideally continue in the same isolation room, pending the COVID-19 results.

3.3. Women presenting in labor for intrapartum care with confirmed covid-19 and no or only mild symptoms

3.3.1. Women with confirmed COVID-19 will be admitted to the pre-assigned isolation room. Upon admission, the following members of the multi-disciplinary team should be informed: obstetrician, MFM specialist (when available), anesthetist, obstetrical nurse in charge, pediatrician or neonatologist and neonatal nurse in charge.

3.3.2. Efforts should be made to minimize the number of staff members entering the room, preferably one medical and one nursing staff. Medical students should not be allowed in.

3.3.3. If there is evidence of household clustering and household co-infection, birth partners should remain in isolation and not attend the unit, irrespective of whether symptomatic or not.

3.3.4. Maternal observations and assessment should be continued as per standard practice, with the addition of hourly oxygen saturations. Aim to keep oxygen saturation >94%, titrating oxygen therapy accordingly.

3.3.5. There is currently no evidence to favor one mode of birth over another and therefore mode of birth should be discussed with the patient, taking into consideration her preferences, how advanced in labor she is, the fetal status and any other obstetric indications for intervention. Mode of birth should not be influenced by the presence of COVID-19, unless the patient's respiratory condition demands urgent delivery.

3.3.6. There is no evidence that epidural or spinal anesthesia is contraindicated in the presence of coronaviruses. Epidural analgesia should therefore be recommended before, or early in labor, to women with suspected or confirmed COVID-19 to minimize the need for general anesthesia if urgent delivery is needed.

3.3.7. In case of deterioration in the patient's condition, an individual assessment should be made regarding the risks and benefits of continuing the labor versus proceeding to emergency cesarean birth if this is likely to assist efforts to resuscitate the mother.

3.3.8. If an emergency cesarean delivery is needed, this should be done in a negative pressure room). Donning PPE is time consuming. This may impact on the decision to delivery interval, but it must be done. Women and their families should be told about this possible delay. Minimizing change in providers is advised and the minimum number of personnel should attend preferably no more than two from the obstetrical team.

3.3.9. An individualized decision should be made regarding shortening the length of the second stage of labor with elective instrumental birth in a symptomatic patient who is becoming exhausted or hypoxic.

3.3.10. Given a lack of evidence to the contrary, delayed cord clamping following birth can still be practiced, provided there are no other contraindications. The baby can be cleaned and dried as normal, while the cord is still intact.

3.4. General advice for obstetric operating room for suspected or confirmed cases

3.4.1. Elective procedures should be scheduled at the end of the operating schedule.

3.4.2. The number of staff in the operating theatre should be kept to a minimum, all of whom must wear appropriate PPE.

3.4.3. Staff (including maternity, neonatal and anesthesia) should have been trained in the use of PPE so that 24-hour emergency operating theatre use is available and possible delays reduced.

3.5. Elective cesarean delivery

3.5.1. For women with mild symptoms suggestive of COVID-19 who have scheduled appointments for pre-operative care and elective cesarean delivery, an individual assessment should be made to determine on the possibility of delaying the appointment to minimize the risk of infectious transmission to other women, healthcare workers and, postnatally, to her infant in order to allow for the results of COVID-19 testing.

3.5.2. In cases where elective cesarean delivery cannot safely be delayed, it should be carried out as scheduled. Women should be admitted into the pre-assigned isolation room and all precautions taken pending results of COVID-19 testing. Following that the cesarean delivery can be carried in the normal OR, if result is negative or in in a negative pressure room, if result is positive.

3.6. Planned induction of labor

3.6.1. As for elective cesarean birth, an individual assessment should be made regarding the urgency of planned induction of labor for women with mild symptoms and suspected or confirmed COVID-19.

3.6.2. If induction of labor cannot safely be delayed, it should be carried out as scheduled. Women should be admitted into the preassigned isolation room and all precautions taken pending results of COVID-19 testing.

3.7. Additional considerations for women with suspected or confirmed covid-19 and moderate or severe symptoms

The following recommendations apply in addition to those specified for women with no/mild symptoms who are admitted to hospital requiring intrapartum care with deterioration in symptoms and suspected or confirmed COVID-19 infection:

3.7.1. A multi-disciplinary discussion planning meeting ideally involving a consultant physician (infectious disease specialist), obstetrician, MFM specialist (when available), nurse-in-charge, pediatrician or neonatologist and anesthetist responsible for obstetric care should be arranged as soon as possible following admission. The discussion and its conclusions should be discussed with the patient. The following should be discussed:

3.7.1.1. Key priorities for medical care of the patient.

3.7.1.2. The priority for medical care should be to stabilize the patient's condition with standard supportive care therapies, as it is in other maternity emergencies e.g. severe pre-eclampsia.

3.7.1.3. Radiographic investigations should be performed as for the non-pregnant adult; this includes chest X-ray and CT of the chest.

3.7.1.4. The frequency and suitability of fetal heart rate monitoring should be considered on an individual basis, taking into consideration the gestational age of the fetus and the maternal condition. If urgent delivery is indicated for fetal reasons, birth should be expedited as normal, if the maternal condition is stable.

3.7.1.5. The neonatal team should be informed of plans to deliver the baby of a patient affected by moderate to severe COVID-19, as early in advance as possible.

3.7.1.6. With regards to the mode of birth, an individualized decision should also be made, with no obstetric contra-indication to any method. Cesarean delivery should be performed if indicated based on maternal and fetal condition as in normal practice.

3.7.1.7. Given the association of COVID-19 with acute respiratory distress syndrome, women with moderate-severe symptoms of COVID-19 should be monitored using hourly fluid input-output charts, and efforts targeted towards achieving neutral fluid balance in labor, in order to avoid the risk of fluid overload. Usually, total fluids given should not be exceed 100 mL/hour.

3.8. Postnatal management

3.8.1. Neonatal care

3.8.1.1 Limited data exist to guide the postnatal management of babies of mothers who tested positive for COVID-19 in the third trimester of pregnancy.

3.8.1.2 Reassuringly, there is no evidence at present of vertical transmission.

3.8.1.3 Infants born to mothers with confirmed COVID-19 should be considered PUIs. As such, these infants should be isolated according to the Infection Prevention and Control Guidance for PUIs.

3.8.1.4 Separate isolation of the infected mother and her baby is advisable until more evidence is available. Duration of at least for 14 days or until the mother's transmission-based precautions are discontinued. This can be done by putting them in separate rooms or consider using engineering controls like physical barriers (e.g., a curtain between the mother and newborn) and keeping the newborn ≥6 feet (2 meters) away from the ill mother.

3.8.1.5 All babies of women with confirmed COVID-19 need to also be tested for COVID-19.

3.8.1.6 A risks / benefits discussion with pediatricians or neonatologists and families to individualize care in babies that may be more susceptible is recommended.

3.8.2. Infant feeding

3.8.2.1 The main risk for infants of breastfeeding is the close contact with the mother, who is likely to share infective airborne droplets. In the light of the current evidence, we advise that the benefits of breastfeeding outweigh any potential risks of transmission of the virus through breast milk. Thus, breast milk provision (via pumping) is encouraged. The risks and benefits of breastfeeding, including the risk of holding the baby near the mother, should be discussed with her. This guidance may change as knowledge evolves. The CDC recommends that during temporary separation, women who intend to breastfeed should be encouraged to express their breast milk to establish and maintain milk supply. For women wishing to breastfeed, if mother is not separated from the newborn, precautions should be taken to limit viral spread to the baby:

3.8.2.1.1 Hand washing before touching the baby, breast pump or bottles

3.8.2.1.2 Try and avoid coughing or sneezing on your baby while feeding at the breast

3.8.2.1.3 A face mask should be worn while breastfeeding

3.8.2.1.4 If expressing breast milk with a manual or electric breast pump, the mother should follow recommendations for proper pump cleaning after each use and a dedicated breast pump should be used

3.8.2.1.5 Consider asking someone who is well to feed expressed milk to the baby

3.8.2.2 For women bottle feeding with formula or expressed milk, strict adherence to sterilization guidelines is recommended.

3.9. Discontinuing Transmission-Based Precautions for hospitalized patients with COVID-19

3.9.1. The decision to discontinue precautions should be made on a case-by-case basis in consultation with clinicians and Infection Control team. This decision should consider disease severity, illness signs and symptoms, and results of laboratory testing for COVID-19 in respiratory specimens. Considerations to discontinue Transmission-Based Precautions include all the following:

3.9.1.1 Resolution of fever, without use of antipyretic medications.

3.9.1.2 Improvement in illness signs and symptoms.

3.9.1.3 Negative results of COVID-19 assay from specimens collected ≥24 hours apart (ideally a total of four negative specimens—two nasopharyngeal and two throat).

3.10. Discharge Process

3.10.1. Patients can be discharged from the healthcare facility whenever clinically indicated.

3.10.2. Isolation should be maintained at home if the patient returns home before the decision is made to discontinue Transmission-Based Precautions.

3.10.3. The decision to send the patient home should be made in consultation with the patient's clinical care team and Infection Control team and should include considerations of the home's suitability for and patient's ability to adhere to home isolation recommendations, and potential risk of secondary transmission to household members with immunocompromising conditions.

4. General Changes to Routine Labor and Delivery Workflow

This section describes general changes to Labor Floor regardless of patient COVID-19 status.

4.1 Visitor Policy

Given the significant risk of COVID-19 transmission between patient/family/healthcare providers, there have been strict restrictions on our visitor policy.

- Labor Floor – Visitation will be limited to one support person, if desired. The support person will be screened for history and symptoms and temperature will be taken before entering Labor Floor. If any is positive, he/she **cannot** be admitted to the Unit and should be advised to home quarantine and seek medical advice. **Switching of visitors will not be permitted.**
- Antepartum and postpartum – One support person, if desired.
- No children permitted at any time.

Visitation may be further restricted at the discretion of the unit leadership

4.2 Inductions of Labor and Cesarean Deliveries

Inductions of labor and elective cesarean deliveries for apparently healthy pregnant women should **NOT** be postponed or rescheduled.

4.3 Post-Partum Care

All efforts should be made to discharge healthy patients home in an expedited fashion. Patients should be notified that in order to limit their personal risk we are expediting post-partum discharge.

- Expedited Discharge Planning:
  - All vaginal deliveries should have a goal of being discharged post-partum day 1.
  - All cesarean deliveries should have a goal of being discharged post-partum day 2, and even post-partum day 1 if meeting milestones and feeling well.
  - **Discuss with pediatrics/neonatology regarding discharge planning for mother to see if infant will be ready for discharge at that time.**
- Home care with supplies for blood pressure follow up will be critical to expediting discharge of patients with a hypertensive disorder.

All post-partum visits should be arranged for at a later stage with possibility of postponing the visit depending on the situation.

5. Appendix

5.1 Appendix A

COVID-19

Public Health England

Putting on (donning) personal protective equipment (PPE)

Use safe work practices to protect yourself and limit the spread of infection

- keep hands away from face and PPE being worn
- change gloves when torn or heavily contaminated
- limit surfaces touched in the patient environment
- regularly perform hand hygiene
- always clean hands after removing gloves

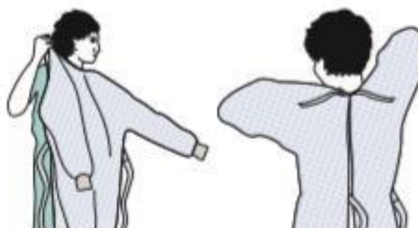
Pre-donning instructions

- ensure healthcare worker hydrated
- tie hair back
- remove jewellery
- check PPE in the correct size is available

Putting on personal protective equipment (PPE). The order for putting on is gown, respirator, eye protection and gloves. This is undertaken outside the patient's room.

Perform hand hygiene before putting on PPE

1. **Put on the long-sleeved fluid repellent disposable gown** - fasten neck ties and waist ties.



2. **Respirator.**

Note: this must be the respirator that you have been fit tested to use. Where goggles or safety spectacles are to be worn with the respirator, these must be worn during the fit test to ensure compatibility

Position the upper straps on the crown of your head, above the ears and the lower strap at the nape of the neck. Ensure that the respirator is flat against your cheeks. With both hands mould the nose piece from the bridge of the nose firmly pressing down both sides of the nose with your fingers until you have a good facial fit. If a good fit cannot be achieved **DO NOT PROCEED**

Perform a fit check. The technique for this will differ between different makes of respirator. Instructions for the correct technique are provided by manufacturers and should be followed for fit checking

3. **Eye protection** - Place over face and eyes and adjust the headband to fit

4. **Gloves** - select according to hand size. Ensure cuff of gown covered is covered by the cuff of the glove.

https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for- aerosol-generating-procedures

5.2 Appendix B

COVID-19

Public Health England

Removal of (doffing) personal protective equipment (PPE)

PPE should be removed in an order that minimises the potential for cross contamination. Unless there is a dedicated isolation room with ante room, PPE is to be removed in as systematic way before leaving the patient's room i.e. gloves, then gown and then eye protection.

The FFP3 respirator must always be removed outside the patient's room.

Where possible (dedicated isolation room with ante room) the process should be supervised by a buddy at a distance of 2 metres to reduce the risk of the healthcare worker removing PPE and inadvertently contaminating themselves while doffing.

The FFP3 respirator should be removed in the anteroom/lobby. In the absence of an anteroom/lobby, remove FFP3 respirator in a safe area (e.g., outside the isolation room).

All PPE must be disposed of as healthcare (including clinical) waste.

The order of removal of PPE is as follows:

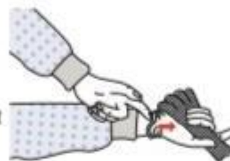
1 Gloves – the outsides of the gloves are contaminated

Firstly:

- grasp the outside of the glove with the opposite gloved hand; peel off
- hold the removed glove in gloved hand

Then:

- slide the fingers of the un-gloved hand under the remaining glove at the wrist
- peel the remaining glove off over the first glove and discard



Clean hands with alcohol gel

2 Gown – the front of the gown and sleeves will be contaminated

Unfasten neck then waist ties

Pull gown away from the neck and shoulders, touching the inside of the gown only using a peeling motion as the outside of the gown will be contaminated

Turn the gown inside out, fold or roll into a bundle and discard into a lined waste bin

3 Eye protection (preferably a full-face visor) - the outside will be contaminated

To remove, use both hands to handle the retraining straps by pulling away from behind and discard.

4 Respirator – In the absence of an anteroom/lobby remove FFP3 respirators in a safe area (e.g., outside the isolation room). Clean hands with alcohol hand rub.

Do not touch the front of the respirator as it will be contaminated

- lean forward slightly
- reach to the back of the head with both hands to find the bottom retaining strap and bring it up to the top strap
- lift straps over the top of the head
- let the respirator fall away from your face and place in bin

5 Wash hands with soap and water

https://www.gov.uk/government/publications/covid-19-personal-protective-equipment-use-for- aerosol-generating-procedures

References and Additional Resources:

WHO - World Health Organization Resources

WHO: Q&A on COVID-19, pregnancy, childbirth and breastfeeding

Centers for Disease Control and Prevention (CDC) COVID-19 Resources

Interim Considerations for Infection Prevention and Control of Coronavirus Disease 2019 (COVID-19) in Inpatient Obstetric Healthcare Settings
Information for Healthcare Providers: COVID-19 and Pregnant Women CDC: Pregnancy & Breastfeeding (Patient Info)
Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease (COVID-19)

COVID-19 | SMFM.org - The Society for Maternal-Fetal Medicine

COVID-19 in Pregnancy: Preparing your Obstetrical Units: https://youtu.be/fT5h4oMUOFk

American College of Obstetricians and Gynecologists

Novel Coronavirus 2019 (COVID-19): Practice Advisory

Royal College of Obstetricians and Gynaecologists

Coronavirus (COVID-19) Infection in Pregnancy

GOV.UK resources

COVID-19: Guidance for infection prevention and control in healthcare settings

6. Acknowledgement

Faysal El Kak	Development and Editing
Anwar Nassar	Revision and Editing
Eli Attieh	Revision
Rabih Chahin	Revision
Saad Itani	Revision
Rana Skaf	Revision
Toni Zreik	Revision