Guidelines for COVID-19 and Pregnancy Care

Dr. J. Igor Iruretagoyena, Chief UW Maternal Fetal Medicine
Dr. Laurel W. Rice, Chair UW Obstetrics and Gynecology

BACKGROUND:
On March 11, 2020 the WHO declared the coronavirus (COVID-19) outbreak a pandemic and it subsequently became a national emergency in the United States.

PURPOSE:
To provide information for the care of pregnant women during the COVID-19 pandemic

TOPICS:
1. Pregnancy and susceptibility to infection, risk for severe illness, morbidity, or mortality with COVID-19

There is limited information from published scientific reports about the susceptibility of pregnant women to COVID-19 and the severity of infection. Available data are reassuring but are limited to small case series.

Pregnant women experience immunologic and physiologic changes that make them more susceptible to viral respiratory infections, including potentially COVID-19. It is reasonable to predict that pregnant women might be at greater risk for severe illness, morbidity, or mortality compared with the general population, as is observed with other related coronavirus infections, including severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV), and other viral respiratory infections such as influenza.

Data from MERS-CoV and SARS-CoV, although limited, suggest that infection in pregnancy may be associated with severe infection and adverse neonatal outcomes, including increased risk of miscarriage, fetal growth restriction, and preterm birth (1,2). But again, data specific to COVID-19 are not yet available.

The currently published data on COVID-19 infection in pregnancy include two case series, totaling 18 women, only one of whom suffered severe respiratory morbidity requiring intensive care unit admission and mechanical ventilation (lower than the reported general population risk) (3,4). While these data are reassuring that pregnant women did not have severe outcomes, they must be interpreted with caution given the small numbers. Early data from one series of hospitalized nonpregnant patients in China found that up to 32% of individuals developed severe pneumonia, and 19% of all infected, hospitalized patients progressed to acute respiratory distress syndrome (ARDS), with mortality ranging from 1.4% to 4.3% of all cases (5,6). These data vary by region and by different testing strategies. Existing mortality rates are largely derived from areas in which testing of asymptomatic or mildly symptomatic patients is not routine and may therefore be inflated. Rates vary from as low as 0.7% in Korea to as
high as 4.9% in Italy (7). At this time, it appears that severe illness from COVID-19 occurs predominantly among the elderly and those with significant medical comorbidities.

2. Vertical transmission

A small case series from China found no evidence of COVID-19 in the amniotic fluid or cord blood of six infants of infected women (4). While this report includes only a small number of cases, the lack of vertical transmission is consistent with what is seen with other common respiratory viral illnesses in pregnancy, such as influenza.

3. Recommendations to pregnant women who are members of the health care team:
   a. You may continue to work in the clinical setting while adhering to standard contact and airborne precautions.
      i. There is not a gestational age cut off. A pregnant woman is not prohibited from working until delivery. They are mandated to wear personal protective equipment (PPE) and wash hands frequently.
      ii. It is reasonable to stop working at 37 weeks if she is a healthcare worker at risk, but not mandatory. At this point, we do not know if there is a higher risk closer to delivery.
   b. Avoid, if possible, aerosol-generating procedures such as endotracheal intubation, airway suctioning and sputum collections. If unavoidable, make certain to wear the appropriate PPE.
   c. For patients suspected or known to be infected with the coronavirus, follow recommendations as described above.
   d. Discuss with your immediate supervisor the possibility of working remotely.
   e. As previously communicated to all health care workers, self-monitor for symptoms daily and stay home from work if you develop fever, cough, sore throat, myalgias or nasal congestion/rhinorhea.
   f. If you develop shortness of breath, contact your OB provider so that you can be appropriately evaluated.

4. Pregnancy in health care personnel (HCP) caring for patients that are potentially infected with COVID-19
   a. Pregnant healthcare personnel (HCP) should follow the Centers for Disease Control risk assessment and infection control guidelines for HCP with potential exposure to patients with suspected or confirmed COVID-19.
   b. While pregnant HCP may continue to work, it is reasonable to consider limiting their exposure to patients with confirmed or suspected COVID-19, especially during higher risk procedures (e.g., aerosol-generating procedures). However, if higher burden of disease or limited staffing, this may not be feasible.
5. **Travel domestically or internationally**
   a. Pregnant women should consider avoiding all non-essential travel, **domestically or internationally**. The impact of COVID-19 in the U.S. and around the globe is evolving quickly.
   b. All patients should avoid travel to areas designated with a Level 3 or Level 2 CDC Travel warning. Patients should be aware that they may be subject to travel restrictions, disruptions, and limitations in movement affecting return to home should exposure to COVID-19 occur.

6. **Concerns for infection and need for testing in pregnant women exposed to population with symptoms in a crowded area**
   No testing is indicated in this situation. The COVID-19 tests are currently only used for patients with symptoms. Testing guidance is likely to evolve rapidly and indications for testing are likely to expand in the next two weeks. (Appendix 1-1A)

7. **Concerns about exposure in crowded areas**
   In Wisconsin, gatherings of more than 10 people are prohibited. As with all citizens, pregnant women should stay home as much as possible and avoid crowded places. For all activities outside of home, it is important to keep away from the largest concentration of people, and practice good hand hygiene, and avoid touching the face.

8. **Potential exposure to a patient with COVID-19**
   Pregnant women without PPE potentially exposed to a patient with COVID-19 are advised to call their OB provider for further management. She should stay isolated at home. She will be contacted for an appointment for testing. (Appendix 2)

9. **Pregnant women with fever and respiratory symptoms WITH/WITHOUT travel or community exposure.**
   For symptomatic patients with epidemiologic risk factors for COVID-19, please contact your OB provider. The pregnant patient will be screened to see if she needs to be seen or can safely stay home and continue to monitor. She will be contacted for an appointment for testing. (Appendix 2)

10. **Pregnant woman with fever and respiratory symptoms suspected to have COVID-19 presents to the clinic**
    Provide the patient with a surgical mask, place them in an exam room, and close the door. Place the patient on STRICT Isolation (gown + gloves, surgical mask, and face-shield or goggles). After examination and Influenza testing, decision will be made as disposition to home or hospital. If a patient is
able to go home, she will be contacted for testing appointment. If she is admitted to the hospital, testing will occur there.

11. Family/friends coming in the post-partum period  
   a. If your family/friends are over 60 or have any serious chronic medical conditions (such as heart disease, lung disease, or diabetes), they are at higher risk of serious illness from COVID-19 and should avoid air travel (8)  
   b. And remember that any travel setting increases a person's risk of exposure. So, it may be risky to have them around the baby after they have been traveling. **For the most current advice on traveling, check the CDC's COVID-19 travel page.**

12. Mother baby separation  
   a. If you don't have documented COVID-19 or fever plus respiratory symptoms at the time of delivery, the hospital will not separate you from your newborn.  
   b. If you do test positive for COVID-19 or have symptoms (fever plus respiratory symptoms) **see below in postpartum care.**

13. Birth defects or risk of miscarriage  
   a. At this time, very limited data regarding risks associated with infection in the first and second trimesters exist. There are mixed data regarding the risk of congenital malformations in the setting of maternal fever in general.  
   b. Currently, there are inadequate data on COVID-19 and the risk of miscarriage or congenital anomalies. Data from the SARS epidemic are reassuring, suggesting no increased risk of fetal loss or congenital anomalies associated with infection early in pregnancy (9).  
   c. We also don't know if the virus lives in semen or can be sexually transmitted.

14. Obstetricians getting COVID-19?  
   If the OB or midwife tests positive for COVID-19, they will need to be quarantined until they recover and are no longer at risk of transmitting the virus. In this situation, another OB or midwife will be provided.

15. Safety of UW-Meriter for delivery  
   UW-Meriter and UW Hospital are taking great precautions to keep patients and healthcare providers safe.

16. Capacity of UW-Meriter to handle this pandemic  
   UW and Meriter are making all possible contingency plans to handle this crisis.

17. Treatments for COVID-19?  
   Currently, no antiviral medications are approved for the treatment of COVID-19 by the US Food and Drug Administration. No vaccine currently exists for COVID-19.
18. Delivery considerations
   a. Timing of delivery, in most cases, should not be dictated by maternal COVID-19 infection. For women infected early in pregnancy who recover, no alteration to the usual timing of delivery is necessary.
   b. If COVID-19 confirmed case:
      i. Delivery after 34-week gestation may be considered if maternal condition is critical.
      ii. Consider earlier delivery at term considering that the severity of disease peaks in the second week
   c. For women infected in the third trimester who recover, it is reasonable to attempt to postpone delivery (if no other medical indications arise) either until a negative testing result is obtained or quarantine status is lifted in an attempt to avoid transmission to the neonate. In general, COVID-19 infection itself is not an indication for delivery.

Mode of delivery should be dictated by usual obstetric practice.

As you know, this pandemic is an evolving situation. As new information becomes available, additional or revised recommendations will be provided.

Department of Obstetrics and Gynecology, University of Wisconsin School of Medicine and Public Health, and UnityPoint Health - Meriter

References and Resources

Appendix 1. UW Health sites COVID-19 Testing Guideline
Appendix 2: UW OB Screening Process

- Phone screen for potential COVID-19 illness (Box 1 and 2) for EVERY patient that calls service
  - If patient reports symptom concerning for COVID-19 -> Assess for
    1. severity of respiratory illness and
    2. necessity for in person evaluation
  - Category 1: If COVID-19 Sx screen is positive and respiratory Sx appear life threatening (See Severity Assessment in Box 1):
    - Instruct patient to call 911 and go to ER/L&D
    - ER to page OB for consultation on arrival
- **Category 2:** If COVID-19 Sx screen is positive and respiratory symptoms are not life threatening AND patient needs to be seen urgently for Obstetrical Care (consider gestational age):
  - Gestational age < 20 weeks → Category 1 → To ED (as above)
  - Gestational age ≥ 20 weeks:
    - Direct patient to come to OB triage
    - Inform patient of restricted visitor policy
    - Patient to be masked upon arrival, placed in a private room, keep door closed
    - All staff interacting with the patient should don PPE (Contact + Droplet Isolation + eye protection (N95 and negative pressure room not needed unless aerosol generating procedure))
    - Determine if testing is appropriate for patient
- **Category 3:** If COVID-19 Sx screen is positive and respiratory symptoms are not life threatening AND patient does not need to be seen urgently for Obstetrical Care (consider medical co-morbidities):
  - Assess for medical co-morbidities (Box 2)
  - If POSITIVE medical co-morbidities → Category 2 (to ED or L+D as above)
  - If NEGATIVE medical co-morbidities:
    - Advise patients to stay at home, quarantine, hydrate, anti-pyretic
    - Be advised: Some patients not meeting criteria for testing may be instructed to self-isolate. If need for COVID testing the patient will be contacted and instructed where and when to go to get tested

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**Box 1: Symptom Severity Assessment: Any positive answers require emergency care**

- Does she have difficulty breathing or shortness of breath?
- Does she have difficulty completing a sentence without gasping for air or needing to stop to catch breath frequently when walking across the room?
- Does patient cough more than 1 teaspoon of blood?
- Does she have new pain or pressure in the chest other than pain with coughing?
- Is she unable to keep liquids down?
- Does she show signs of dehydration such as dizziness when standing?
- Is she less responsive than normal or does she become confused when talking to her?

Box 2: Medical Co-morbidities – recommend an in-person evaluation

- Hypertension
- Diabetes
- Asthma
- HIV
- Chronic heart disease
- Chronic liver disease
- Chronic lung disease
- Chronic kidney disease
- Blood dyscrasia
- People on immunosuppressive medications
- Inability to care for self or arrange follow-up if necessary