

Labor and Delivery Recommendations from SMFM in the setting of a COVID-19 Pandemic

The following are recommendations from the Society of Maternal Fetal Medicine regarding Labor and Delivery care during a COVID-19 pandemic

We have implemented many of the recommendations already at UNMH regarding isolation, use of masks and using droplet/contact precautions. To see these please refer to the full articles. (1,2) There are some recommendations that are unique to pregnant women on labor and delivery units. These include the following -

For all Patients (even without symptoms) the following is recommended

- Vaginal deliveries are not considered an aerosolizing procedure so a surgical mask is acceptable.
- C/S under regional anesthesia are not considered an aerosolizing procedure
- Intubation is aerosolizing and so N-95 masks should be worn by individuals participating in the procedure.
- High flow oxygen is an aerosolizing activity so it should not be used for intrauterine fetal resuscitation
- Nitrous oxide use is concerning for aerosolizing and will not be offered at this time
- Antenatal Corticosteroids for lung maturity can theoretically increase a women's vulnerability to the virus and should be used with caution and thoughtfulness.
- Indocin is currently controversial. For this reason avoid its use for preterm labor unless other approaches do not work
- Magnesium can depress respiratory drive so it should be used with caution for neuroprotection and only for women with pre-Eclampsia with severe features.
- Consider early epidurals especially for women who have a risk of requiring c-section
- Actively manage labor to minimize need for "crash" c-sections

For Patients who test positive or have symptoms for COVID-19

- Patient should wear a surgical mask at all times
- Restrict all visitors to see patient. Exception might be made for active laboring women.
- Placed in an isolation room with droplets and contact precautions with negative pressure if possible.
- Providers should wear N-95 masks, gowns and eye protection at all times
- When scheduling delivery in patient with symptoms and/or positive test, consider that often patients are sickest the second week of the infection.

Why are the above recommendations made -

Many health care decisions are made from a risk-benefit perspective. This is true in obstetric care. Many of our procedures and policies have limited data regarding benefit but the perceived risk is seen as so small that they have become routine. However in the setting of a pandemic, these ratios can be altered. That is the situation with COVID-19.

“Policies ... should increase protection of the mothers we care for, their infants and the obstetric care team. There is currently no easy way to clinically predict COVID-19 infection in asymptomatic people. “ (3) Without consistent use of policies that protect care providers, our L&D unit can lose a large number of health care staff to infection or quarantine. In a case series by Dr. N. Breslin in New York City over 25 staff members were exposed to 2 asymptomatic COVID-19 patients during uncomplicated labor. This required all of them to be quarantined for 14 days. (4) This results in major staffing issues for future patients and remaining staff.

Since we cannot tell which patients/family members may be an asymptomatic carrier we need to have some universal precautions and modification in procedures. Although many of these changes are understandable, some may not feel right. The following tries to explain why these are being encouraged.

Screening is being done by history and vital signs but as demonstrated in the literature there are asymptomatic carriers that may not be identified. **Hence the following recommendations have been made for all patients even though they are not consistent with our pre-COVID-19 management policies.**

1. Use of maternal oxygen for intrauterine fetal resuscitation –

This is a practice “supported” by older research (1980-90’s) that are small in numbers and show minimal clinical impact. In these studies the benefit noted was primarily improvement in the fetal tracing. The concern was that cord blood pHs were not changed or in some cases appeared worse. There is also the risk of oxygen radicals being produced when a woman is given high rates of oxygen which may, in turn, have risks to the infant. Since the risks of free radicals were unclear and appeared minimal, and the “improvement” in the tracing made the patient and providers more comfortable, the use of high flow oxygen in the setting of variables and decelerations in fetal tracings became routine and is often one of the first maneuvers done for intrauterine resuscitation. (5)

Now with COVID-19 the risk of spread of the virus by asymptomatic patients being markedly increased by aerosolization of respiratory tract secretions, the risk-benefit balance has changed. Given the minor impact, if any, of increase maternal oxygenation compared to the real risk of infectious consequence, the L&D protocol in the setting of a concerning tracing has changed.

The first maneuvers for intrauterine resuscitation should include changing maternal position, increasing fluids, and stopping/minimizing contractions. Only after these are done without results should consideration be given for oxygen therapy versus expediting delivery. For this

reason supplemental maternal oxygen should only be used for fetal indications after an attending specifies the order.

2. Although vaginal deliveries are not considered an aerosolizing activity the use of surgical drapes can minimize exposure to Covid-19 if present. The provider should also use a gown, face mask and eye protection during second stage and delivery. At this time there are no restrictions to use of internal monitors, amniotomy or operative vaginal delivery.
3. Antenatal Corticosteroids can improve lung maturation for preterm infants if given within 7 days of delivery. These guidelines over the past few years have been expanded to include any preterm delivery and repeat dosing. However high dose steroids have been associated with worsening SARS-CoV2 outcomes. Although ANCS are a lower doses there is still a concern that this may harm the mother. Until evidence is available, protocols should be adjusted to not use ANCS after 34 weeks or if patient unlikely to deliver within the week or repeated courses.
4. It has been suggested by some to avoid NSAIDs use in CoVID-19 patients. This is still controversial. However one should consider use of Nifedipine prior to Indocin for preterm labor.
5. Magnesium Sulfate is a very commonly used drug in a labor and delivery unit. However it can impair maternal respiratory drive. For this reason during the CoVID-19 pandemic, providers need to be thoughtful about using it. Clearly it should be used for patients with pre-eclampsia with severe features. However dosing may need to be reconsidered – especially in COVID-19 positive patients or with symptoms. Renal function and magnesium levels should be checked. The same considerations should be made when used for neuroprotection in infants under 32 weeks.
6. Timing of delivery is multifactorial. There is no evidence at this time that decompressing the uterus improves maternal status. How this potential benefit balances against the known operative risks is unclear. Many of the individuals who get sicker and require respiratory support experience this decompensation in the second week of the infection. For this reason, in stable but symptomatic term patients a delivery might be indicated prior to 39 weeks. Fetal considerations in the symptomatic patient with prolonged maternal hypoxemia might prompt delivery. Consultation with NICU and MFM might be helpful.
7. Separation of COVID-19 positive or symptomatic mother and newborn is strongly advised. Mothers should be counselled on breast feeding using pumped milk as a safer option for the infant. If mothers refuse separation she should wear a mask at all times.

References

1. Society for Maternal-Fetal Medicine and Society for Obstetric and Anesthesia and Perinatology. Labor and Delivery COVID-19 Considerations Posted on web March 27, 2020.

[https://s3.amazonaws.com/cdn.smfm.org/media/2277/SMFM-SOAP_COVID_LD_Considerations_3-27-20_\(final\)_PDF.pdf](https://s3.amazonaws.com/cdn.smfm.org/media/2277/SMFM-SOAP_COVID_LD_Considerations_3-27-20_(final)_PDF.pdf)

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4. Breslin N, et al. Covid-19 in pregnancy: early lessons. <https://www.sciencedirect.com/science/article/pii/S2589933320300410>
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