

"What to Expect When You're Not Expecting a Pandemic"

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The International Registry of Coronavirus Exposure in Pregnancy (IRCEP)

is a collaboration between

Harvard T.H. Chan School of Public Health
and
Pregistry



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COVID-19 and Pregnancy

- Millions of women will give birth during the pandemic of Coronavirus Disease 2019 (COVID-19) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
- This virus is not known to have caused infection in humans before the cases identified in 2019 in Wuhan, China, and few exposed pregnancy outcomes have been reported since then



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COVID-19 and Pregnancy

- Therefore, the consequences of COVID-19 for pregnant women and their offspring are largely unknown
- However, these populations are considered high-risk due to their susceptibility to infections and compromised mechanical and immunological functions
 - Based on small studies of SARS-CoV (SARS) and Middle East respiratory syndrome coronavirus (MERS-CoV), pregnant women infected with coronavirus might be more vulnerable to severe respiratory problems and death
 - Infection with other respiratory viruses such as influenza H1N1 result in more severe illness and a higher mortality in pregnant women
- The lack of information leads to misinformation and anxiety among pregnant women, women who are considering getting pregnant, and their families



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Are pregnant women at greater risk?

- Pregnant women are not at increased risk of getting infected with SARS-CoV-2 compared to non-pregnant women
- There is no evidence that pregnant women with COVID-19 have more severe illnesses than infected nonpregnant women
 - In 43 patients from NYC, the disease course was mild in 37 (86%), severe in 4 (9%), and critical in 2 (5%). These percentages are similar to those of nonpregnant adults
 - Severe sequelae of maternal infection, such as need for extracorporeal membrane oxygenation, have been reported in case reviews
 - There are anecdotal reports of maternal death



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Can COVID-19 affect pregnancy outcomes?

- Women with COVID-19, especially those who develop pneumonia, appear to have an increased frequency of preterm labor, pre-labor rupture of membranes, preterm birth, preeclampsia, and cesarean delivery for abnormal fetal heart rate tracings
- An increase in the risk of miscarriage in women affected by COVID-19 cannot be ruled out at this stage, given the SARS data



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Is there vertical transmission of SARS-CoV-2?

- Mother-to-child transmission is unlikely
 - SARS-CoV-2 has not been found in samples from newborn, amniotic fluid, placenta or breastmilk
 - There were no reports of mother-to-baby transmission for other coronaviruses (MERS-CoV and SARS-CoV)
- However, after birth, a newborn can be infected after being in close contact with an infected person. A small number of babies have tested positive for the virus shortly after birth



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Benefits and risk of treatments in pregnancy?

- There is no evidence to inform the risk-benefit profile of most of the treatments currently considered, or being evaluated, for COVID-19
 - Their effectiveness is not established in general
 - There is little to none information on their safety in pregnancy
- At some hospitals, pregnant women with moderate COVID-19 are being treated with hydroxychloroquine, and those with severe COVID-19 are being offered remdesivir in a compassionate-use protocol
 - **Hydroxychloroquine** & chloroquine have been widely used by pregnant women for treatment of systemic lupus erythematosus or for prevention of malaria
 - **Remdesivir** has been used without reported fetal toxicity in some pregnant women with Ebola and Marburg virus disease
- Adequate rest, hydration, nutritional support, and water and electrolyte balance should be ensured. It is essential to monitor vital signs and oxygen saturation closely



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Does COVID-19 affect delivery?

- In COVID-19 cases, if maternal illness is not severe, a natural delivery may be indicated
- In severe cases (for example, if the mother is intubated and put on a ventilator), a cesarean section may be required
- Partners of women going into labor should probably stay at home or go to an open area, as much as possible. Some hospitals ban visits to maternity wards and restrict the number of people who can accompany a pregnant person during childbirth to one, or none



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Does COVID-19 affect delivery?

- Routine separation of SARS-CoV-2-affected mothers and newborn babies is controversial and varies by country and health care facility
 - In the UK, the approach is to keep mother and baby together and encourage bonding and breastfeeding
 - In China, US or Israel, the approach is to separate the mother from the newborn baby for at least 2 weeks as a precautionary measure
- A newborn born to a mother with SARS-CoV-2 at delivery could possibly be infected, either *in utero* or perinatally, and thus is often placed in isolation to avoid exposure to other newborns
- During this period, direct breast feeding is not recommended



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Is breastfeeding safe if I have COVID-19 ?

- In most instances, whether and how to start or continue breastfeeding is determined by the mother in coordination with her family and healthcare providers
- Based on limited available data, the virus is not found in samples of breastmilk
- During temporary separation, mothers who intend to breastfeed should be encouraged to express their breast milk to establish and maintain milk supply. If possible, a dedicated breast pump should be provided
- If expressing breast milk with a manual or electric breast pump, the mother should wash her hands before touching any pump or bottle parts and follow recommendations for proper pump cleaning after each use. In that case, if possible, this expressed breast milk should be fed to the newborn by a healthy caregiver
- If a mother and newborn do room-in and the mother wishes to feed at the breast, she should put on a facemask and practice hand hygiene before each feeding



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What should pregnant women do to reduce the risk of getting infected?

- Recommended precautions vary, but are the same as for general public:
- Wash your hands frequently with soap and water. Use natural-based hand sanitizers when water/soap not available
- Avoid touching your eyes, nose, and mouth with unwashed hands
- Clean and disinfect frequently touched surfaces like doorknobs, counters and your mobile phone
- Sneeze and cough into a tissue or inside of your elbow rather than into your hand or the air
- Avoid contact with anyone who is sick
- Wear a face mask when visiting the hospital or other high-risk area
- Social distancing: maintain remote communication but avoid hosting friends and family who do not reside at the home
- Ask delivery personnel to leave packages by the front door
- Do not leave your house except to attend your ultrasound visit, or if you are in labor
- Where practical, appointments with your health care providers should be conducted on the telephone or using videoconferencing
- If you must go out of your house, stay at least 2 to 3 meters away from other people. Do not go to a park, playground, or other public spaces



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What should pregnant women do if they get sick?

- Recommendations vary, but are similar to general population:
 - go into home isolation, avoid physical contact with your family members
 - call your health care provider immediately
- Pregnant patients who have COVID-19 should notify the obstetric unit prior to arrival so the facility can make appropriate infection control preparations before the patient's arrival
- Healthcare providers should promptly notify infection control personnel at their facility of the anticipated arrival of a patient who has COVID-19



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What should healthy pregnant women do in case they get sick?

- Have a supply of formula in case they get sick and cannot breastfeed
- Plan ahead who will look after other children when they go into labor or get sick



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It is not only the virus

- Logistics (prenatal care, social/family support, other siblings, baby shower!)
- Economic impact
- Stress, anxiety, isolation, separation from newborn, depression...



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Conclusion

- COVID-19 is a new disease, we are still learning
- The approaches are intentionally cautious until additional data become available to refine recommendations
- Data are limited and recommendations will likely change in the future
- It is urgent to obtain and communicate reliable information



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