

SOGC Statement on Pregnant Workers during the COVID-19 Pandemic

November 19, 2020 – The COVID-19 pandemic has affected all Canadian jurisdictions, and community spread of the virus is now common. Physical distancing, hand hygiene and engineering controls remain the most effective measures for prevention of infection. All workers^[a] are strongly recommended to adhere to personal protective equipment (PPE) guidelines to avoid infection, however PPE continues to be the lowest intervention on the hierarchy of controls. In particular, when working in healthcare, it is critical that safe donning and doffing of PPE is taught and practiced. This document is intended to provide prenatal care providers with guidance about additional considerations for the pregnant workforce.

Available evidence on the impact of COVID-19 infection during pregnancy is growing. We now have evidence available from large datasets and systematic reviews on which to guide practice.¹⁻³ These now report on over 20,000 people diagnosed as having suspected or confirmed COVID-19 during pregnancy. The available evidence continues to demonstrate that the majority of pregnant individuals infected with COVID-19 will experience mild to moderate illness. Compared to non-pregnant individuals with COVID-19, pregnant individuals appear to be at increased risk of admission to the intensive care unit (OR 1.62, 95% CI 1.33 to 1.96) and invasive ventilation (OR 1.88, 95% 1.32 to 2.60), but the absolute risks remain low, 4% and 3% among pregnant individuals with COVID-19 in the same study.² Importantly, risk of severe morbidity from COVID-19 in pregnant people appears to be strongly associated with risk factors including: age \geq 35 years old, asthma, obesity, preexisting diabetes, preexisting hypertension and heart disease.^{1,2}

In published international data, mortality from COVID-19 does not appear to be higher for pregnant individuals with COVID-19 infection, compared to those not pregnant (OR 0.81, 95% CI 0.49 to 1.33).² Maternal mortality is multifactorial and highly variable, both within and between countries across the globe. Disparities in maternal mortality can be explained by differences in baseline health, access to healthcare services, and socioeconomic inequalities. Similarly, mortality rates from COVID-19 during pregnancy are being influenced by these same factors across the globe, and we are likely to see significant inequities emerge for COVID-19 mortality rates among pregnant people, both within and between countries.

The data available on pregnancy outcomes has been largely reassuring with most infants from COVID-19 affected pregnancies born healthy and full term. Preterm birth (PTB) appears to be the most commonly reported adverse perinatal outcome among pregnant patients with COVID-19 infection. As the body of data continues to grow, it has revealed that the true rate of PTB among those infected with COVID-19 during the second and third trimester is lower than estimated at the outset of the pandemic, with recent estimates from 6-15%.^{2,4} Other adverse pregnancy outcomes reported in the literature appear to be proportional to the degree of respiratory illness in the pregnant individual with COVID-19.

Consistent with our experience with other respiratory viruses such as SARS, MERS and influenza, there is no consistent evidence of vertical transmission of COVID-19 to babies or teratogenic effects.⁵⁻¹⁹ Data related to vertical transmission is limited and continues to be monitored and evaluated.

Summary of Evidence

1. Current data suggest that most healthy pregnant individuals will experience a mild to moderate course of disease when infected with COVID-19.
2. In pregnancy, there is an increased risk of need for intensive care or invasive ventilation, but the absolute risk remains low.
3. Current data indicate that the majority of infants from pregnancies affected by COVID-19 are born healthy and at term, with risk for preterm birth generally under 15%.
4. Comorbidities during pregnancy, such as preexisting diabetes, preexisting hypertension, asthma, age \geq 35 years, and obesity are all independent risk factors for sepsis and should be considered as risk factors for severe COVID-19 infection in pregnancy.

While the data about infection with COVID-19 during pregnancy provide reassurance that the risk of adverse maternal and fetal outcomes is low, it is preferable for a pregnant person, as it is for all people, to avoid infection. As such, for the duration of the pandemic, discussions about strategies to minimize risk of infection with COVID-19 should be incorporated into prenatal care. For pregnant workers, the workplace will be relevant to this discussion. It is worth noting that overall, the majority of cases of COVID-19 in Canada presently are acquired through community exposure rather than workplace exposure. As such, risk mitigation strategies should focus on both risk of infection in the community and in the workplace.

Recommendations

1. Strategies to minimize the risk of infection with COVID-19 should be incorporated into guidance discussions during prenatal care for all pregnant patients, with education about the risk of community transmission of the virus.
2. Physical distancing of 2 meters, careful hand hygiene, and engineering controls (such as physical barriers when physical distancing cannot be applied), while seemingly simplistic, are the most impactful risk reducing strategies to decrease infection for all patients.

Each pregnant person's workplace circumstances are different and should be considered individually while respecting their autonomy to make informed decisions about their health. Decisions about continuing to work during the pandemic should take into consideration (a) local epidemiology, (b) work-related exposure, PPE access, and risk for infection, (c) an individual's personal risk for COVID-related

morbidity based on their health status and relevant comorbidities, and (d) an individual's ability to advocate for risk reduction strategies, especially for higher risk encounters, without risking lost income or employment.

Recommendations

3. Pregnant individuals and their prenatal care providers should discuss an individualized plan related to working during the COVID-19 pandemic. That discussion should consider local epidemiology, work-related risk of infection, individual risk for COVID-related morbidity, and an individual's ability to advocate for safer work conditions or accommodations, without risking lost income or employment. The discussion might also consider a patient's mental health and anxiety related to workplace exposure and infection with COVID-19 during pregnancy.
4. In situations where work-related exposure is substantive and not able to be modified with a safe work plan or an individual's risk for severe COVID-related morbidity is high, it may be appropriate to advocate for accommodations or excused absence from work for pregnant workers. In these situations, a pregnant person's autonomy to make informed decisions about their health, balanced with their other priorities, should be respected.

Physical distancing, engineering controls and handwashing continue to be the most effective method at reducing spread of COVID 19.

No additional PPE measures are recommended for pregnant workers beyond those that are advised for non-pregnant workers. However, it should be recognized that PPE is not infallible and certain work-related encounters are inherently higher risk for exposure to COVID-19. These include situations where appropriate PPE is substandard; situations where physical distancing cannot be achieved and situations with repeated exposure to persons with COVID-19 (e.g. COVID-positive wards in the healthcare setting). Importantly, it should be recognized that changes in local epidemiology can modify work-related risk dramatically, and decisions should be reassessed if there is significant change in local epidemiology (e.g. an outbreak in the workplace).

Recommendations:

5. Pregnant workers identified to be at increased risk for severe illness should have reasonable workplace accommodations made to reduce exposures from the public and/or from those with active COVID-19 infection.
6. It is incumbent on employers to provide adequate physical distancing and PPE. A pregnant worker (or indeed any employee) with exposure risk from potentially infected members of the public, should be excused from work if appropriate PPE or physical distancing cannot be ensured in the workplace.
7. A pregnant healthcare worker who is required to wear an N95 respirator, and who has experienced significant weight changes during pregnancy, must ensure that their N95 respirator fit-test is up to date.

The Society of Obstetricians and Gynaecologists of Canada commits to reviewing the available literature on a regular basis and will alter recommendations if appropriate as the body of medical knowledge grows throughout the COVID-19 pandemic.

References

1. Zambrano LD, Ellington S, Strid P, Galang RR, Oduyebo T, Tong VT, et al. Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status - United States, January 22-October 3, 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69:1641-7. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/33151921>.
2. Allotey J, Stallings E, Bonet M, Yap M, Chatterjee S, Kew T, et al. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. *BMJ.* 2020;370:m3320. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32873575>.
3. Pan American Health Organization, World Health Organization. Epidemiological Update: COVID-19 in pregnant women. 13 August 2020. Washington, DC: PAHO/WHO. 2020. Available from: <https://www.paho.org/en/documents/epidemiological-alert-covid-19-during-pregnancy-13-august-2020>.
4. Elshafeey F, Magdi R, Hindi N, Elshebiny M, Farrag N, Mahdy S, et al. A systematic scoping review of COVID-19 during pregnancy and childbirth. *Int J Gynaecol Obstet.* 2020;150:47-52. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32330287>.
5. Alzamora MC, Paredes T, Caceres D, Webb CM, Valdez LM, La Rosa M. Severe COVID-19 during Pregnancy and Possible Vertical Transmission. *Am J Perinatol.* 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32305046>.
6. Chen L, Li Q, Zheng D, Jiang H, Wei Y, Zou L, et al. Clinical Characteristics of Pregnant Women with Covid-19 in Wuhan, China. *N Engl J Med.* 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32302077>.
7. Amorim MMR, Soligo Takemoto ML, Fonseca EBD. Maternal deaths with coronavirus disease 2019: a different outcome from low- to middle-resource countries? *Am J Obstet Gynecol.* 2020;223:298-9. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32348744>.
8. Asadi L, Tabatabaei R, Nejad H, Mohammadi M. New Corona Virus (COVID-19) Management in Pregnancy and Childbirth. *Archives of Clinical Infectious Diseases.* 2020;In Press.
9. Ashokka B, Loh MH, Tan CH, Su LL, Young BE, Lye DC, et al. Care of the Pregnant Woman with COVID-19 in Labor and Delivery: Anesthesia, Emergency cesarean delivery, Differential diagnosis in the acutely ill parturient, Care of the newborn, and Protection of the healthcare personnel. *Am J Obstet Gynecol.* 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32283073>.

10. Baud D, Greub G, Favre G, Gengler C, Jatton K, Dubruc E, et al. Second-Trimester Miscarriage in a Pregnant Woman With SARS-CoV-2 Infection. *JAMA*. 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32352491>.
11. Breslin N, Baptiste C, Gyamfi-Bannerman C, Miller R, Martinez R, Bernstein K, et al. COVID-19 infection among asymptomatic and symptomatic pregnant women: Two weeks of confirmed presentations to an affiliated pair of New York City hospitals. *Am J Obstet Gynecol MFM*. 2020:100118. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32292903>.
12. Breslin N, Baptiste C, Miller R, Fuchs K, Goffman D, Gyamfi-Bannerman C, et al. COVID-19 in pregnancy: early lessons. *American Journal of Obstetrics & Gynecology MFM*. 2020:100111. Available from: <http://www.sciencedirect.com/science/article/pii/S2589933320300410>.
13. Chen S, Huang B, Luo DJ, Li X, Yang F, Zhao Y, et al. [Pregnant women with new coronavirus infection: a clinical characteristics and placental pathological analysis of three cases]. *Zhonghua Bing Li Xue Za Zhi*. 2020;49:E005. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32114744>.
14. Chen S, Liao E, Cao D, Gao Y, Sun G, Shao Y. Clinical analysis of pregnant women with 2019 novel coronavirus pneumonia. *J Med Virol*. 2020.
15. Chen Y, Peng H, Wang L, Zhao Y, Zeng L, Gao H, et al. Infants Born to Mothers With a New Coronavirus (COVID-19). *Front Pediatr*. 2020;8:104. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32266184>.
16. Diaz CA, Maestro ML, Pumarega MTM, Anton BF, Alonso CP. First case of neonatal infection due to COVID 19 in Spain. *An Pediatr (Engl Ed)*. 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32363217>.
17. Docherty AB, Harrison EM, Green CA, Hardwick HE, Pius R, Norman L, et al. Features of 16,749 hospitalised UK patients with COVID-19 using the ISARIC WHO Clinical Characterisation Protocol. 2020. Available from: <https://www.medrxiv.org/content/10.1101/2020.04.23.20076042v1>.
18. Fan C, Lei D, Fang C, Li C, Wang M, Liu Y, et al. Perinatal Transmission of COVID-19 Associated SARS-CoV-2: Should We Worry? *Clin Infect Dis*. 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32182347>.
19. Ferrazzi E, Frigerio L, Savasi V, Vergani P, Prefumo F, Barresi S, et al. Vaginal delivery in SARS-CoV-2 infected pregnant women in Northern Italy: a retrospective analysis. *BJOG*. 2020. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32339382>.

[\[a\]](#) Defined as staff required to interact directly with the public during pandemic lock-down public health orders