

SOGC Statement on the COVID-19 vaccines and rare adverse outcomes of thrombosis associated with low platelets

On behalf of the Infectious Diseases Committee of the SOGC

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*The information contained in this document has been reaffirmed for scientific validity. While this document is no longer identified to be clinically useful for the Canadian health care provider, it may be relevant to providers abroad.

Many healthcare jurisdictions in Canada are facing a third wave of COVID-19 pandemic activity, with some centres rapidly exceeding peak daily case counts, hospital and ICU admissions compared to previous waves of the virus.^{1, 2} The current Canadian epidemiological trends are, at least in part, driven by low rates of vaccine coverage and circulation of new variants of concern (VOC) of COVID-19 that have been demonstrated to be more transmissible and severe compared to the wild-type virus which predominated previously.^{3, 4}

Pregnancy is a known risk factor for COVID-associated morbidity with data clearly and consistently illustrating that pregnant individuals are at increased risk for hospitalization, ICU admission, mechanical ventilation and death compared to non-pregnant individuals. As a result of these factors, many Canadian centres are facing increased numbers of pregnant individuals infected with COVID-19 being admitted to the hospital and ICU.⁵ For many pregnant individuals in Canada, the risk of being unvaccinated and susceptible to COVID-19 is substantial.

The SOGC supports the use of *all* available COVID-19 vaccines approved in Canada in any trimester of pregnancy and during breastfeeding in accordance with regional eligibility

The four COVID-19 vaccines approved for use in Canada have been demonstrated to be safe and highly effective for preventing serious disease from COVID-19.^{6, 7} Passive surveillance has been ongoing on a global scale and has not detected adverse pregnancy outcomes related to any COVID-19 vaccinations and emerging evidence shows passive antibody transfer to infants. Given that pregnancy is a demonstrable risk factor for severe COVID-19 disease, and that emerging reports from major Canadian centres have identified an increased burden of disease affecting pregnant individuals, the SOGC recommends that all pregnant people should be eligible to receive a COVID-19 vaccine.

While international reports have emerged documenting extremely rare events of arterial and venous thrombosis associated with low platelets following the adenovirus vector COVID-19 vaccines (AstraZeneca, COVISHIELD, Janssen COVID-19 vaccines), these events occur in as few as 1 in every 125,000 to 1 in 1 million people.^{8, 9, 10, 11} Most cases have occurred in women <55 years of age, however, this may reflect a workforce gender bias due to the decision to prioritize front-line health care workers, most of whom identify as female. There is no known association between this syndrome and pregnancy and no physiologic basis to increase this risk in pregnancy.

Rare adverse outcomes observed following vaccination with viral vector COVID-19 vaccines should be discussed in context of the disease they are designed to prevent. Specifically, approximately 1 in 10 pregnant individuals will require hospital admission and 1 in 100 pregnant individuals will require intensive care following infection with COVID-19. For some individuals with additional risk factors such as advanced maternal age, obesity and pre-existing medical conditions, the risk of morbidity will be substantially higher. Preventing COVID-19 disease among pregnant individuals must be considered a priority and vaccination is a central tool to protect individuals from severe COVID-19 infection.

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