



For immediate release
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CMAJ headlines:

- **Social determinants of health, certain health conditions associated with testing and with testing positive for SARS-CoV-2**
- **Diagnosis and management of rare vaccine-related thrombocytopenia**

Social determinants of health, certain health conditions associated with testing and with testing positive for SARS-CoV-2

Individual and societal factors affect the likelihood of people being tested for SARS-CoV-2 as well as the risk of testing positive, and it is important to understand these factors in managing the response to the pandemic, according to research in *CMAJ (Canadian Medical Association Journal)*.

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"We found that area-level social determinants of health, including household density, essential work status, lower educational attainment and recent immigration status, were related to an increased risk of testing positive for SARS-CoV-2," says Dr. Maria Sundaram, lead author and postdoctoral fellow at ICES. "These findings held true across a variety of analytic approaches designed to mitigate selection bias due to variable access to COVID-19 resources like testing."

Researchers looked at data on 14,695,579 Ontarians between March and June 2020, among whom 758,691 were tested for SARS-CoV-2, and 25,030 tested positive. In addition to social determinants of health, older age, increased prior use of health care services and chronic health conditions, such as hypertension, diabetes, congestive heart failure, stroke, dementia and chronic kidney disease, were also risk factors for COVID-19. However, health conditions such as asthma, cancer, ischemic heart disease

and substance abuse as well as vaccination against influenza in the 2019–2020 season were associated with lower odds of testing positive for SARS-CoV-2.

"Having certain underlying health conditions, like asthma and chronic obstructive pulmonary disease, increased the likelihood of being tested for SARS-CoV-2 even though those conditions were not related to an increased risk of testing positive," says Dr. Sundaram. "This indicates the potential for selection bias in population-level epidemiological studies of COVID-19."

The authors found that higher percentages of recent immigrants in an area were associated with SARS-CoV-2 positivity, but higher percentages of visible minorities were not correlated with higher positivity rates after adjusting for individual, social and environmental factors.

"Both variables indicate residual measures of structural racism, which puts recent immigrants at increased risk of exposure to SARS-CoV-2 as well as severe disease and death," says senior author Dr. Jeff Kwong, a senior scientist at ICES and family physician at University Health Network.

The authors also found little association between most social determinants and the odds of testing, which suggests that testing resources may not be adequately prioritizing people at highest risk of contracting SARS-CoV-2.

"Our findings suggest a need to increase and redirect resources that specifically address social determinants such as household density (e.g., voluntary isolation centres and wrap-around services), occupational risk (e.g., paid sick leave, workplace testing and improved ventilation) and other mediators of structural racism (e.g., community-led outreach testing)," write the authors. "Our findings also suggest prioritizing COVID-19 vaccination strategies that reach communities and workplaces having the highest rates of cases."

"Individual and social determinants of SARS-CoV-2 testing and positivity in Ontario, Canada: a population-wide study" is published April 27, 2021.

Media contact for interviews: Deb Creatura, media relations,
ICES, deborah.creatura@ices.on.ca

Diagnosis and management of rare vaccine-related thrombocytopenia

The AstraZeneca vaccine has raised awareness, and questions, about a rare side effect — thrombotic thrombocytopenia. A Five Things to know article in *CMAJ (Canadian*

Medical Association Journal) describes the management of a similar condition, heparin-induced thrombocytopenia, with one point specifically related to the diagnosis and management of this rare vaccine-related condition.

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"Heparin-induced thrombocytopenia" is published April 27, 2021

General media contact: Kim Barnhardt, CMAJ, kim.barnhardt@cmaj.ca

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Ottawa ON, K1J 9B9, 866-971-9171