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Rapid Diagnostic Testing for COVID-19 in a fully vaccinated population

June 18, 2021

Research Objectives

To summarize the available evidence on:

- scientific evidence on the use and effectiveness of rapid diagnostic testing (RDT) for COVID-19 and its variants of concern (VOC) in a fully vaccinated population.
- the social and economic considerations for RDT for COVID-19 in a fully vaccinated population

To identify international guidance on the use and effectiveness of RDT for COVID-19 in a fully vaccinated population.

This rapid research synthesis was conducted between June 14-18, 2021.

Methods

- A comprehensive search was conducted by an information specialist on June 14-15, 2021 to retrieve studies published from Jan 1, 2020 until search date
- Databases searched: Medline, Embase, the Cochrane Library, the Web of Science Core Collection, the L-OVE Platform, COVID-END, ClinicalTrials.gov (COVID-19), and the WHO Covid-19 database
- A targeted grey literature search was also conducted and websites from 18 countries were searched

Results

- 1797 unique published articles were found
- Screening by title and abstract kept 7 articles
- Upon full review, 3 articles were retained
- No studies retained from the grey literature
- Minimal international guidance identified
- Content experts and public members provided input

Key messages

- Noting breakthrough cases and variants of concern, limited existing evidence suggests that RDT can be useful for individuals who have been vaccinated and in the context of herd immunity
- Having RDT as a testing option provides policy makers with a further tool in their public health toolbox
- We did not find guidance on this topic from other countries
- Experts in the field strongly expressed the need for continued deployment and use of RDT even when the population is fully vaccinated
- A key equity argument for First Nations and other rural/ remote contexts was put forward
- Public members held that RDT would be an important tool to have access to in time sensitive scenarios.

Implementation considerations

- While there is limited direct evidence on RDT within a fully vaccinated context, it is likely that RDT should continue to be made available even when the Canadian population reaches herd immunity
- Rationale: potential for vaccines not being effective for variants of concern and that not all individuals will be willing or eligible (i.e., <12 years old) to receive a vaccine
- A clear argument can be made for the need for continued use of RDT both from economic and equity perspectives even in the context of a fully vaccinated population
- Rationale: turnaround time can directly impact workplace productivity; in certain social and geographic contexts access to RDT can have a profound impact on decision making

Key Gaps

- Few studies were identified that explicitly addressed issues of effectiveness and use of RDT in the context of fully vaccinated populations
- No studies were identified that explicitly assessed social and economic considerations for the use of RDT in the context of fully vaccinated populations

Emerging evidence

- Based on limited evidence from the literature as well as input from both content experts and members of the public, a clear argument can be made for continued use of RDT in the context of fully vaccinated populations
- Basis for this argument is on both economic and social/ equity grounds, and speaks to the need for the use of RDT particularly in contexts where turnaround time for results is of the essence (e.g., workplaces, schools, health care facilities, travel hubs and remote locations)

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