

EVIDENCE SYNTHESIS BRIEFING NOTE

TOPIC: SERIAL TESTING OF ASYMPTOMATIC HEALTH CARE WORKERS FOLLOWING VACCINATION

Information finalized as of February 3, 2021.^a

This Briefing Note was completed by the Research, Analysis, and Evaluation Branch (Ministry of Health) based on information provided by members of the COVID-19 Evidence Synthesis Network. Please refer to the [Methods](#) section for further information.

Purpose: This note summarizes available recommendations from various jurisdictions for serial testing of asymptomatic health care workers (HCWs) working in health care settings with direct patient contact following COVID-19 vaccination, including evidence regarding the possible reduction of post-vaccine asymptomatic SARS-CoV-2 infection and transmission.

Key Findings:

- No identified academic or grey literature addresses recommendations on serial testing of asymptomatic HCWs following COVID-19 vaccination.
 - Transmission upon vaccination: Three top global evidence synthesis teams (i.e., [COVID-NMA](#), [Copenhagen Trial Unit](#) (CTU), [McMaster Health Forum](#)) are currently developing living evidence syntheses that address questions about COVID-19 vaccine safety and effectiveness; however, no team has yet identified studies that report the reduction of onward COVID-19 transmission upon vaccination. They are committed to reporting the data if/when they become available.
- Two public health organizations provide recommendations for addressing post-vaccination testing among health care workers who are displaying signs of COVID-19 symptoms.
 - The US Centers for Disease Control (CDC) provides recommendations for minimizing the impact of post-vaccination systemic signs and symptoms on health care staffing. These include developing a strategy to provide timely assessment of HCWs with systemic signs and symptoms post-vaccination, including providing or identifying options for SARS-CoV-2 viral testing.
 - The BC Centre for Disease Control suggests that HCWs – including those working in assisted living facilities – who experience symptoms other than local injection site reactions are advised to refer to the [BC COVID-19 Self-Assessment Tool](#). This will inform HCWs if they should get tested.

Analysis for Ontario: Overall, additional data is needed to inform an approach to serial testing of symptomatic and asymptomatic HCWs following COVID-19 vaccination.

^a This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

Supporting Evidence

[Table 1](#) summarizes findings from research and grey literature associated with testing symptomatic and asymptomatic individuals who work in health care settings and have direct patient contact (e.g., physicians, nurses, personal support workers, orderlies, etc.) following SARS-CoV-2 vaccination. For ease, these workers will be referred to as health care workers (HCWs) throughout this Evidence Synthesis Briefing Note; details of the specific professions involved in each study are presented where available.

Table 1: Testing Asymptomatic HCWs following COVID-19 Vaccination

Scientific Evidence	<ul style="list-style-type: none"> • No identified academic or grey literature addresses recommendations on serial testing of asymptomatic HCWs following COVID-19 vaccination. <ul style="list-style-type: none"> ○ Transmission upon vaccination: Three top global evidence synthesis teams (i.e., COVID-NMA,^b the Copenhagen Trial Unit (CTU),^c and McMaster Health Forum) are currently developing living evidence syntheses that address questions about COVID-19 vaccine safety and effectiveness; however, no team has yet identified studies that report the reduction of onward COVID-19 transmission upon vaccination. They are committed to reporting the data if/when they become available.¹
International Scan	<ul style="list-style-type: none"> • The US Centers for Disease Control and Prevention (CDC) provides recommendations, including viral testing, to minimize the impact of post-vaccination systemic signs and symptoms on health care staffing. These include: <ul style="list-style-type: none"> ○ Developing a strategy to provide timely assessment of HCWs with systemic signs and symptoms post-vaccination, including providing or identifying options for SARS-CoV-2 viral testing. • Suggested approaches to evaluating and managing new-onset systemic post-vaccination signs and symptoms in HCWs are provided in Table 2 in the Appendix.²
Canadian Scan	<ul style="list-style-type: none"> • The BC Centre for Disease Control (BC CDC) suggests that HCWs, including those working in assisted living facilities, who experience symptoms other than local injection site reactions^d are advised to refer to the BC COVID-19 Self-Assessment Tool. This will inform HCWs if they must get tested. If HCWs require a COVID-19 test, the BC CDC advises the worker is not to return to work until they receive a negative test result.³

^b Launched in March 2020, [COVID-NMA](#) is an international initiative working in conjunction with the World Health Organization (WHO), led by a team of researchers from Cochrane and other institutions (Université de Paris, Inserm, CNRS, Centre for Evidence-Based Medicine Odense (CEBMO), University of Southern Denmark, Odense University Hospital, Epistemonkos Foundation, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, University of Milan) ([COVID-NMA, February 2, 2021](#)).

^c The Copenhagen Trial Unit (CTU) is a non-specialty oriented clinical intervention research unit. They offer flexible collaboration at all stages of clinical research as well as education in clinical trials. The CTU is collaborating with the international Cochrane Collaboration in preparing, maintaining, and disseminating systematic reviews of the effects of health care ([CTU, February 3, 2021](#)).

^d Common expected side effects within a day or two after getting the vaccine include the following: 1) pain or swelling where the vaccine was given; and, 2) other symptoms may include tiredness, headache, fever, chills, muscle or joint soreness, nausea and vomiting ([BC CDC, January 22, 2021](#)).

Methods

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. The following member of the Network provided an evidence synthesis product that was used to develop this Evidence Synthesis Briefing Note:

- COVID-End in Canada

For more information, please contact the [Research, Analysis and Evaluation Branch \(Ministry of Health\)](#).

APPENDIX

Table 2: Managing New-onset Systemic Post-vaccination Signs and Symptoms in HCWs⁴

HCW Signs and Symptoms	Suggested Approach	Additional Notes
<ul style="list-style-type: none"> • Signs and symptoms <i>unlikely</i> to be from COVID-19 vaccination: <ul style="list-style-type: none"> ○ Presence of <u>any</u> systemic signs and symptoms consistent with SARS-CoV-2 infection (e.g., cough, shortness of breath, rhinorrhea, sore throat, loss of taste or smell) or another infectious etiology (e.g., influenza) that are not typical for post-vaccination signs and symptoms. 	<ul style="list-style-type: none"> • Exclude from work pending evaluation for possible etiologies, including SARS-CoV-2 infection, as appropriate. • Criteria for return to work depends on the suspected or confirmed diagnosis. Information on return to work for health care personnel with SARS-CoV-2 infection is available here. 	<ul style="list-style-type: none"> • If performed, a negative SARS-CoV-2 antigen test in HCWs who have signs and symptoms that are not typical for post-vaccination signs and symptoms should be confirmed by SARS-CoV-2 nucleic acid amplification test (NAAT). Further information on testing is available here.
<ul style="list-style-type: none"> • Signs and symptoms <i>that may be</i> from either COVID-19 vaccination, SARS-CoV-2 infection, or another infection: <ul style="list-style-type: none"> ○ Presence of <u>any</u> systemic signs and symptoms (e.g., fever, fatigue, headache, chills, myalgia, arthralgia) that are consistent with post-vaccination signs and symptoms, SARS-CoV-2 infection or another infectious etiology (e.g., influenza). ○ Fever in health care settings is defined as a measured temperature of 100.0°F (37.8°C) or higher. 	<ul style="list-style-type: none"> • Evaluate the HCW; HCWs who meet the following criteria may be considered for return to work without viral testing for SARS-CoV-2: <ul style="list-style-type: none"> ○ Feel well enough and are willing to work; <u>and</u> ○ Are afebrile^e; <u>and</u> ○ Have systemic signs and symptoms limited only to those observed following COVID-19 vaccination (i.e., do not have other signs and symptoms of COVID-19 including cough, shortness of breath, sore throat, or change in smell or taste). • If symptomatic HCWs return to work, they should be advised to contact occupational health services (or another designated individual) if symptoms are not improving or persist for more than two days. Pending further evaluation, they should be excluded from work and viral testing should be considered. If feasible, viral testing could be considered for symptomatic HCWs earlier to increase confidence in the cause of their symptoms. • In facilities where critical staffing shortages are anticipated or occurring, HCWs with fever and systemic signs and symptoms limited <i>only</i> to those observed following vaccination could be considered for work if they feel well enough and are willing. These HCWs should be re-evaluated, and viral testing for SARS-CoV-2 considered, if fever does not resolve within two days. 	<ul style="list-style-type: none"> • If performed, a negative SARS-CoV-2 antigen test in HCWs who have symptoms that are limited only to those observed following COVID-19 vaccination (i.e., do not have cough, shortness of breath, sore throat, or change in smell or taste) may not require confirmatory SARS-CoV-2 NAAT testing. Additional information is available here.

^e HCWs with fever should, ideally, be excluded from work pending further evaluation, including consideration for SARS-CoV-2 testing. If an infectious etiology is not suspected or confirmed as the source of their fever, they may return to work when they feel well enough ([CDC, December 13, 2020](#)).

REFERENCES

- ¹ COVID-END (January 29, 2021). COVID-END in Canada – Evidence Synthesis Response. COVID-END. McMaster Health Forum.
- ² US Centers for Disease Control and Prevention. (December 13, 2020). [Post Vaccine Considerations for Healthcare Personnel](#). US CDC.
- ³ BC Centre for Disease Control. (January 22, 2021). [COVID-19 Vaccine After Care Sheet \(COVID-19 mRNA vaccine\)](#). Government of British Columbia. Provincial Health Services Authority.
- ⁴ US Centers for Disease Control and Prevention. (December 13, 2020). [Post Vaccine Considerations for Healthcare Personnel](#). US CDC.