Ministry of Health

COVID-19 Vaccine Third Dose Recommendations

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This guidance provides basic information only. This document is not intended to provide or take the place of medical advice, diagnosis or treatment, or legal advice.

- Please check the Ministry of Health (MOH) COVID-19 website regularly for updates to this document, mental health resources, and other information.

Background

The Ministry of Health is closely monitoring the prevalence of the Delta variant of concern globally and within Ontario given its increased transmissibility and disease severity compared to previous COVID-19 virus strains.

A complete two-dose COVID-19 vaccine series provides strong protection against COVID-19 infection and severe outcomes, including against the Delta variant of concern, in the general population. Achieving high first and second dose coverage remain the focus of the Ontario's COVID-19 vaccination program. However, for some populations, a third dose may be required as two doses may not provide sufficient protection. The Vaccine Clinical Advisory Group, made up of clinical and public health physician experts, provided a recommendation to the Ministry of Health on the select populations which may be considered for third doses based on sub-optimal or waning immune response to vaccines and increased risk of COVID-19 infection, which was included in the MOH COVID-19 Recommendations for Special Populations on August 18th 2021. The National Advisory Committee on Immunization (NACI) released guidance for Additional dose of COVID-19 vaccine in immunocompromised individuals following 1- or 2- dose primary series on September 10th 2021.

A risk/benefit analysis for individual patients is at the center of the collaborative clinician/patient decision-making process. Informed consent for additional doses of COVID-19 vaccine should clearly communicate what is known and unknown about the risks and benefits of a third dose. This should include a discussion of the potential for increased risk of myocarditis and pericarditis following receipt of an mRNA COVID-19 vaccine, which is currently reported more commonly after second doses compared to first doses (NACI, 2021). As a precautionary measure, the additional dose of mRNA vaccine should be deferred in individuals who have experienced myocarditis or pericarditis following any preceding dose of an mRNA COVID-19 vaccine until more information is available (NACI, 2021).

The Ministry of Health and NACI are closely following the research on the safety and effectiveness of a third dose. Recommendations will be re-examined on an ongoing basis as new data emerges, including for other immunocompromised groups. Recommendations will be issued as part of Ontario's ongoing COVID-19 vaccination program as further evidence becomes available. Serological testing is not recommended before or after COVID-19 vaccination (NACI, 2021).

For third doses related to out of province vaccination, see the MOH COVID-19 Guidance for Individuals Vaccinated outside of Ontario/Canada.

Recommendations

The individuals outlined below should receive a third dose of an mRNA COVID-19 vaccine (Pfizer-BioNTech or Moderna), and the same vaccine product as their second dose if readily available (i.e. easily available at the time of vaccination without delay or vaccine wastage). Individuals that received AstraZeneca/COVISHIELD COVID-19 vaccine for their first and second dose are recommended to receive an mRNA vaccine for their third dose unless contraindicated. Individuals who are unable to receive an mRNA vaccine due to contraindications may be offered a viral vector vaccine. Informed consent for an additional dose of viral vector vaccine should include discussion about the lack of evidence on the use of an additional dose of viral vector COVID-19 vaccine in immunocompromised populations and the increased risk of Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT), Capillary Leak Syndrome (CLS), and Guillain-Barre syndrome (GBS) following viral vector COVID-19 vaccines (NACI, 2021).

1. Moderately to Severely Immunocompromised

Certain populations are at increased risk of severe outcomes from COVID-19, and have demonstrated a sub-optimal immune response to a complete two-dose COVID-19 vaccine series due to their underlying condition. See NACI's statement for more information.

There is emerging evidence on safety and immunogenicity following a third dose of a COVID-19 vaccine for those that had not seroconverted following their second dose in select immunocompromised populations. Certain moderately and severely immunocompromised populations may benefit from a third dose to complete an extended primary COVID-19 vaccines series.

Recommendations:

At this time third doses of the COVID-19 vaccines will be offered for the following populations eligible for vaccination with the vaccine product authorized for their age group, to complete an extended primary COVID-19 vaccine series.

- Individuals receiving active[1] treatment (e.g., chemotherapy, targeted therapies, immunotherapy) for solid tumour or hematologic malignancies.
- Recipients of solid-organ transplant and taking immunosuppressive therapy
- Recipients of chimeric antigen receptor (CAR)-T-cell therapy or hematopoietic stem cell transplant (within 2 years of transplantation or taking immunosuppression therapy).
- Individuals with moderate to severe primary immunodeficiency (e.g., DiGeorge syndrome, Wiskott-Aldrich syndrome).
- Individuals with stage 3 or advanced untreated HIV infection and those with acquired immunodeficiency syndrome.
- Individuals receiving active treatment with the following categories of immunosuppressive therapies: anti-B cell therapies[2] (monoclonal antibodies targeting CD19, CD20 and CD22), high-dose systemic corticosteroids (refer to the CIG for suggested definition of high dose steroids), alkylating agents, antimetabolites, or tumor-necrosis factor (TNF) inhibitors and other biologic agents that are significantly immunosuppressive.

[1] Active treatment includes patients who have completed treatment within 3 months

[2] Active treatment for patients receiving B-cell depleting therapy includes patients who have completed treatment within 12 months

For individuals with one of the above immune compromising conditions who have not initiated a COVID-19 vaccine series, individuals in the authorized age group should be immunized with a primary series of three doses of an authorized mRNA vaccine (NACI, 2021).

The Ontario recommended interval between the last dose of the initial primary series and the third dose is at least two months (8 weeks). As per NACI, the minimum interval should be 28 days; however, an interval longer than the minimum 28 days between doses is likely to result in a better immune response. Exact timing should be decided with the treating provider in order to optimize the immune response from the vaccine series and minimize delays in management of their underlying condition. Additionally, the interval should consider risk factors for exposure (including local epidemiology and circulation of variants of concern) and risk of severe disease from COVID-19 infection. Some immunocompromised individuals may still be susceptible after the 1 or 2-dose primary series, so their period of susceptibility until receipt of the additional dose will also increase if the interval between doses is increased.

For guidance on the timing of vaccination for transplant recipients and those requiring immunosuppressive therapies, for a more fulsome list of conditions leading to primary immunodeficiency, and for further information on immunosuppressive therapies, refer to Immunization of Immunocompromised Persons in the Canadian Immunization Guide (CIG), Part 3 – Vaccination of Specific Populations.

To protect those who are immunocompromised, it also is strongly recommended that all people that come into close contact (e.g. healthcare workers and other support staff, family, friends, caregivers) with these individuals complete a full two-dose vaccine series (i.e. "ring vaccination"). Immunocompromised individuals and those that come into close contact with them should also continue to follow recommended public health measures for prevention and control of SARS-CoV-2 infection and transmission.

2. Vulnerable Elderly in High-Risk Congregate Settings

The potential impact of the risk of transmission of the Delta variant of concern in vulnerable elderly populations who live in high risk settings (i.e. congregate living with other vulnerable, high-risk adults) has been assessed, particularly in the context of emerging literature on the reduced immune response and the more rapid waning of antibody responses in this population. Vaccines have been effective against COVID-19 in Long Term Care Homes in the 3-4 months after vaccination, but outbreaks are still occurring. In these outbreaks, fully vaccinated residents are being infected, and some have died. As community disease rates increase, outbreaks will become more common, and the differential rate of disease and harm in high-risk congregate living settings as compared to the community will once again increase.

Recommendation:

At this time third doses of the COVID-19 vaccines will be offered for the following groups to boost the primary COVID-19 vaccine series:

- Residents of Long-Term Care Homes (LTCH), High-Risk Retirement Homes (RH) and Elder Care Lodges

The recommended interval for residents of LTCH, High-Risk RH and Elder Care Lodges is at least 5 months (20 weeks) after the second dose. This is consistent with the schedule of other vaccines that similarly utilize a third dose to boost the immune response to a primary series.

To protect the vulnerable elderly in high-risk congregate care settings, it is strongly recommended that all people that come into close contact (e.g.. healthcare workers and other support staff, family, friends, caregivers) with them complete a full two-dose vaccine series (i.e. “ring vaccination”) and also continue to follow recommended public health measures for prevention and control of SARS-CoV-2 infection and transmission.