March 18, 2022

COVID-19 Vaccine Bulletin #43

Quick Updates

- Review Wellington-Dufferin-Guelph Public Health's (WDGPH) vaccination progress: COVID-19 Vaccination Report. The vaccination dashboard has recently been updated to include the 12-17 age group in calculations involving third doses (boosters).
- In January, the United Kingdom started to investigate the Omicron variant sub-lineage BA.2. Information about the BA.2 sub-lineage is evolving rapidly. Studies have shown that BA.2 has a growth advantage over the BA.1 Omicron sub-lineage, and globally the proportion of COVID-19 sequences reported as BA.2 has been increasing relative to BA.1. An up-to-date risk assessment and data regarding the prevalence of BA.2 are available from Public Health Ontario.
- The COVID-19 pandemic has demonstrated that the global community can develop safe and effective vaccines in a record time. The John Hopkins Center for Health Security, the Coalition for Epidemic Preparedness Innovations, and the German Federal Ministry of Education and Research have identified that further shortening the vaccine development timeline is essential for the future global response to emerging viral threats.
- The Coalition for Epidemic Preparedness Innovations announced the launch of a global clinical trial investigating the impact of administrating fractional COVID-19 booster doses as part of efforts to increase access to vaccines. Evidence suggests that half or quarter doses of some SARS-CoV-2 vaccines could be near as or even more efficacious than currently used doses of the same or similar vaccines. Adults who have received a primary vaccination series with either Pfizer-BioNTech, Oxford-AstraZeneca vaccines will receive either a full or fractional booster dose of either the Pfizer-BioNTech, Moderna, or Oxford-AstraZeneca vaccine.
- On February 9, the Ontario Immunization Advisory Committee (OIAC) met to review and discuss current Ontario epidemiology, vaccine effectiveness and safety, and equity considerations to inform adolescent COVID-19 vaccine booster dose recommendations in Ontario. The OIAC's recommendation is for all adolescents 12-17 years of age to be made eligible for a booster dose of COVID-19 vaccine, using the Pfizer-BioNTech (30 mcg per dose) vaccine at the NACI recommended interval of at least six months (168 days) after completing a primary COVID-19 vaccine series. This recommendation has since been incorporated into provincial guidance.
- On February 28, the Public Health Agency of Canada (PHAC) updated its recommendation about providing one additional mRNA dose for people who have started or completed a non-Health Canada approved COVID-19 vaccine. The guidance now states that Novavax Nuvaxovid or Medicago Covifenz may be used for the additional dose, for those unwilling or unable to receive an mRNA vaccine. Additionally, the guidance clarifies that this additional dose is distinct from any booster doses that may be recommended.

- On March 17, the Ontario Science Advisory Table issued an update on COVID-19 projections. Their modelling suggested that the rapid rollout of third (booster) doses this winter substantially reduced the impact of the Omicron wave. They estimate that boosters reduced peak hospital occupancy by 34% and peak ICU occupancy by 30%.

Updates to Ministry of Health Guidance

COVID-19 Vaccine Children/Youth (Age 5-17) Consent Forms (26 languages available)
COVID-19 Vaccine Administration (updated February 24, 2022)
COVID-19 Vaccine Information Sheet (age12+) (updated February 22, 2022)
COVID-19 Vaccine Information Sheet (age 5-11) (updated February 22, 2022)
COVID-19 Vaccination Third Dose Recommendations (updated February 17, 2022)
COVID-19 Vaccination Timing Guidance for Previously Infected Individuals with SARS-CoV-2 (updated February 4, 2022)

Health Canada authorizes Moderna Spikevax COVID-19 vaccine for children 6-11 years of age

On March 17, Health Canada authorized Moderna's Spikevax vaccine for children 6-11 years of age. The vaccine is authorized as a two-dose regimen of 50 mcg per dose, administered four weeks (28 days) apart.

Moderna's Spikevax vaccine is already authorized for adolescents and adults (≥ 12 years of age); however, each pediatric dose (50 mcg) is half of the dose used for the adolescent/adult primary series (100 mcg). There is no pediatric-specific formulation of this vaccine.

NACI has issued its recommendations regarding the use of Moderna's Spikevax vaccine in children. They recommend that:

- Eight weeks (56 days) remains the NACI-recommended dose interval for pediatric mRNA vaccines;
- The Pfizer-BioNTech Comirnaty vaccine (10 mcg) is generally preferred over Moderna Spikevax, due to concerns about myocarditis/pericarditis risk;
- Moderna Spikevax may be considered for immunocompromised children requiring a three-dose primary series, since indirect data from adults suggest that Spikevax (100 mcg) may be more immunogenic than Comirnaty (30 mcg).

Health Canada has published multiple documents related to its decision, for detailed information on authorized vaccines and treatments in Canada, visit the COVID-19 vaccines and treatments portal. Provincial guidance regarding this vaccine is forthcoming.

Health Canada authorizes Medicago Covifenz COVID-19 vaccine for adults 18-64 years of age

On February 24, Health Canada authorized Medicago's Covifenz COVID-19 vaccine, the first vaccine developed by a Canadian-based company and the first that uses a plant-base protein technology. Medicago's Covifenz is authorized as a two-dose regimen of 3.75 micrograms per dose, to be administered 21 days apart.

In clinical trials, the vaccine was found to be 71 percent effective against symptomatic infection and 100 percent effective against severe disease caused by COVID-19.

Medicago Covifenz product characteristics	
Date of authorization in Canada	February 24, 2022
Type of vaccine	Plant-based virus-like particle [VLP] (recombinant, adjuvanted)
Age	18 to 64 years of age
Presentation	Vials containing 2.5 mL of antigen suspension (10 doses of 0.25 mL) and vials containing 2.5 mL of AS03 adjuvant emulsion (10 doses of 0.25 mL)
Dose	0.5 mL (3.75 mcg SARS-CoV-2 recombinant spike protein)
Doses per vial following mixing	10
Potential allergens	Polysorbate 80 May contain trace amounts of polyethylene glycol [PEG], kanamycin and carbenicillin.
Storage requirements	2°C to 8°C for a maximum of 6 months protected from light and stored upright. Do not freeze.
Opened mixed vial storage	20°C to 30°C for up to 6 hours after mixing, and protected from light

NACI has issued its recommendations regarding the use of Medicago's Covifenz vaccine. NACI recommends that the Covifenz vaccine may be offered to eligible individuals who are unable or unwilling to receive an mRNA COVID-19 vaccine. NACI also recommends an eight week (56 day) dose interval, consistent with other adult COVID-19 vaccines.

Health Canada has published multiple documents related to its decision, for detailed information on authorized vaccines and treatments in Canada, visit the COVID-19 vaccines and treatments portal. Provincial guidance regarding this vaccine is forthcoming.

Summary of COVID-19 Vaccine Products Approved in Canada

Seven COVID-19 vaccine products have been approved by Health Canada since December 2020. NACI has provided some guidance to assist with selecting the preferred product for different scenarios.

Vaccine Products	NACI Recommendations
mRNA Vaccines • Pfizer-BioNTech Comirnaty (30mcg) • Pfizer-BioNTech Comirnaty (10mcg, pediatric formulation) • Moderna Spikevax	NACI **preferentially** recommends that a complete series with these vaccines **should be offered** to individuals in the authorized age group without contraindications to the vaccine.
Recombinant Protein Subunit Vaccines • Novavax Nuvaxovid Recombinant Virus-Like Particle Vaccines • Medicago Covifenz	NACI recommends that these vaccines **may be offered** to individuals in the authorized age group without contraindications to the vaccine who are **not able or willing to receive an mRNA COVID-19 vaccine**.
Viral Vector Vaccines • AstraZeneca Vaxzevria • Janssen COVID-19 vaccine	NACI recommends that these vaccines **may be offered** to individuals in the authorized age group without contraindications to the vaccine only when **all other authorized COVID-19 vaccines are contraindicated**.

Adult Population	Vaccine product which may be preferred, per NACI
For all adult populations not identified below	**Pfizer-BioNTech Comirnaty** (30 mcg) or **Moderna Spikevax** (50 mcg or 100 mcg as per recommendations for primary series or booster dose)
18-29 year olds	**Pfizer-BioNTech Comirnaty** (30 mcg)
Those with medically confirmed myocarditis (with or without pericarditis) following a dose of an mRNA vaccine	Defer subsequent COVID-19 vaccination until more information is available. For those who choose to continue with vaccination, subsequent dose should be at least 90 days after resolution of symptoms and based on clinical discretion with **Pfizer-BioNTech Comirnaty** (30 mcg)
Those with serious PEG allergy or previous serious allergic reaction to an mRNA vaccine precluding vaccination with mRNA vaccines based on consultation with an allergist or other appropriate physician	**Novavax Nuvaxovid** or **Medicago Covifenz** may be considered, based on consultation with an allergist or other appropriate physician
• ≥70 year olds • Adults living in LTC homes for seniors or other congregate living settings that provide care for seniors • Moderately to severely immunocompromised adults	Either **Moderna Spikevax** or **Pfizer-BioNTech Comirnaty** (30 mcg) may be considered for the primary series or booster dose. If Moderna Spikevax is being used as the booster product, a 100 mcg dose may be preferred for older adults. For moderately to severely immunocompromised adults, this is based on clinical discretion.

Immunization Schedule for Adult Primary Series, by COVID-19 Vaccine, per NACI					
Vaccine Product	**Age**	**Dose Schedule**	**Minimum Interval**	**Authorized Interval**	**Recommended Interval (NACI)**
Pfizer-BioNTech Comirnaty (30 mcg)	≥12 y	2 doses	19 days	21 days	8 weeks
Moderna Spikevax (100 mcg)	≥12 y	2 doses	21 days	28 days	8 weeks
AstraZeneca Vaxzevria	≥18 y	2 doses	28 days	4-12 weeks	≥8 weeks
Janssen COVID-19 vaccine	≥18 y	1 dose	N/A	N/A	N/A
Novavax Nuvaxovid	≥18 y	2 doses	21 days	21 days	8 weeks
Medicago Covifenz	18-64 y	2 doses	21 days	21 days	8 weeks

Immunization Schedule for Pediatric Primary Series, by COVID-19 Vaccine, per NACI					
Vaccine Product	**Age**	**Dose Schedule**	**Minimum Interval**	**Authorized Interval**	**Recommended Interval (NACI)**
Pfizer-BioNTech Comirnaty (10 mcg)	5-11 y	2 doses	19 days	21 days	≥8 weeks
Moderna Spikevax (50 mcg)	6-11 y	2 doses	21 days	28 days	≥8 weeks

Reliable Sources of Information on Vaccines

- WDGPH Vaccine Administration Training
- Public Health Agency of Canada
- Government of Ontario
- Ministry of Health
- Public Health Ontario
- Centre for Effective Practice (CEP)
- World Health Organization
- COVID-19 Studies from the World Health Organization Database
- Centres for Disease Control and Prevention (CDC)
- National Advisory Committee on Immunizations (NACI)

More information about how to book an appointment is available:
https://wdgpublichealth.ca/your-health/covid-19-information-public/covid-19-vaccine-information/covid-19-vaccine-children-ages