PHAC Vaccine Confidence Webcast Series

New COVID-19 vaccines in Canada: An overview of Novavax Nuvaxovid™ and Medicago Covifenz®
Objectives

• Discuss the clinical evidence for the Novavax Nuvaxovid and Medicago Covifenz COVID-19 vaccines.

• Summarize the National Advisory Committee on Immunization recommendations for the use of Novavax Nuvaxovid and Medicago Covifenz COVID-19 vaccines.
Nuvaxovid and Covifenz vaccines: An overview
Novavax Nuvaxovid

**Type:**
Protein subunit (recombinant, adjuvanted)

**Date of authorization:**
February 17th, 2022

Contains a spike protein that is on the surface of SARS-CoV-2, and Matrix-M, an **adjuvant** which creates a stronger immune response.

**Indication:** 18 years and over primary series
NACI advice: Novavax Nuvaxovid not authorized as a booster but may be offered if unable or unwilling to receive an mRNA vaccine.

**Safety**
Side effects typically mild and resolved within 1 - 2 days.

They occurred more frequently after the 2\(^{nd}\) dose and more common in adults 18 to 64 years of age compared to older adults.

* Vaccine clinical trials are generally too small to detect very rare safety events.

**Efficacy**
~90% efficacious in preventing confirmed symptomatic COVID-19 disease in clinical trials.

(Trials conducted before the emergence of Delta and Omicron variants)

Recommendations on the use of Novavax Nuvaxovid COVID-19 vaccine
Medicago Covifenz

**Type:**
Virus-like particle (VLP) (recombinant, adjuvanted)

**Date of authorization:**
February 24th, 2022

The VLP mimics the natural structure of the virus and allows the immune system to recognize and generate an immune response.

**Indication:**
18 to 64 years of age primary series

Not currently authorized or recommended as a booster dose.

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**Safety**

Side effects typically mild and resolved within 1 - 3 days. No serious safety concerns identified in clinical trial.*

* Vaccine clinical trials are generally too small to detect very rare safety events.

**Efficacy**

71% efficacious in preventing confirmed symptomatic COVID-19 disease in clinical trials.

(Trials conducted before the emergence of Omicron variant)

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*Recommendations on the use of Medicago COVID-19 vaccine (Covifenz)*
## Summary of vaccine characteristics

<table>
<thead>
<tr>
<th>Product characteristics</th>
<th>Novavax Nuvaxovid</th>
<th>Medicago Covifenz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dose</strong></td>
<td>0.5 mL (5 mcg SARS-CoV-2 recombinant spike protein)</td>
<td>0.5 mL (3.75 mcg SARS-CoV-2 recombinant spike protein)</td>
</tr>
<tr>
<td><strong>Doses per vial</strong></td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>Single vial: 5 mL</td>
<td>2 vials: 2.5 mL of antigen suspension 2.5 mL adjuvant emulsion</td>
</tr>
<tr>
<td><strong>Potential allergens</strong></td>
<td>Polysorbate 80</td>
<td>• Polysorbate 80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• May contain trace amounts of polyethylene glycol [PEG], Kanamycin, Carbenicillin</td>
</tr>
<tr>
<td><strong>Adjuvant</strong></td>
<td>Matrix-M adjuvant (50 mcg)</td>
<td>AS03 oil-in-water emulsion with polysorbate 80, α-tocopherol and squalene</td>
</tr>
<tr>
<td><strong>Storage requirements</strong></td>
<td>Unopened vials to be stored at 2°C to 8°C for a maximum of 9 months. Do not freeze. Keep the vials in the original carton to protect from light.</td>
<td>Unopened vials to be stored in a refrigerator (2°C to 8°C) until expiry, protected from light and stored upright. Do not freeze.</td>
</tr>
<tr>
<td><strong>Opened vial storage</strong></td>
<td>2°C to 25°C for up to 6 hours after first needle puncture.</td>
<td>20°C to 30°C for up to 6 hours after mixing and protected from light.</td>
</tr>
</tbody>
</table>

**Recommendations on the use of Novavax Nuvaxovid COVID-19 vaccine**

**Recommendations on the use of Medicago COVID-19 vaccine (Covifenz)**
## Immunization schedule

<table>
<thead>
<tr>
<th>Vaccine product</th>
<th>Novavax</th>
<th>Medicago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunization schedule: Primary series</td>
<td>2-dose schedule</td>
<td>2-dose schedule</td>
</tr>
<tr>
<td><strong>Age indication</strong></td>
<td><strong>18 years of age and over</strong></td>
<td><strong>18-64 years of age</strong></td>
</tr>
<tr>
<td>Minimum interval</td>
<td>21 days</td>
<td>21 days</td>
</tr>
<tr>
<td>Authorized interval</td>
<td>21 days</td>
<td>21 days</td>
</tr>
<tr>
<td>NACI recommended Interval</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
</tbody>
</table>

**Recommendations on the use of Novavax Nuvaxovid COVID-19 vaccine**

**Recommendations on the use of Medicago COVID-19 vaccine (Covifenz)**
True or False?

The Medicago Covifenz vaccine may be administered to any adult 18 years and older.

**False**: Medicago Covifenz is currently only authorized in Canada for individuals who are between 18 and 64 years of age.
True or False?

Although the minimum authorized interval is of 21 days for the Novavax and Medicago COVID-19 vaccines, NACI recommends an interval of at least 8 weeks between doses.

**True**: NACI recommends an interval of at least 8 weeks as emerging evidence suggests that a longer interval results in more robust and durable immune response and higher vaccine effectiveness.
National Advisory Committee on Immunization recommendations on the Nuvaxovid and Covifenz COVID-19 vaccines
Recommendations for COVID-19 vaccine primary series and booster

Primary series

1. NACI preferentially recommends a complete series with an mRNA COVID-19 vaccine if there are no contraindications.

2. NACI recommends that an authorized recombinant protein subunit COVID-19 vaccine (Novavax Nuvaxovid) or recombinant VLP COVID-19 vaccine (Medicago Covifenz) may be offered to individuals who are not able or willing to receive an mRNA COVID-19 vaccine.

3. NACI recommends that a viral vector COVID-19 vaccine may be offered only when all other authorized COVID-19 vaccines are contraindicated.

Booster

4. NACI preferentially recommends that a booster dose of an mRNA COVID-19 vaccine be offered ≥6 months after completion of a primary COVID-19 vaccine series to those without contraindications.

5. NACI recommends that a booster dose of a recombinant protein subunit COVID-19 vaccine (Novavax Nuvaxovid) may be offered ≥6 months after completion of a primary COVID-19 vaccine series to adults without contraindications to the vaccine who are not able or willing to receive an mRNA COVID-19 vaccine.

Recommendations on the use of Novavax Nuvaxovid COVID-19 vaccine

See also: Updated guidance on a first booster dose of COVID-19 vaccines in Canada
Simultaneous administration with other vaccines

NACI recommends that mRNA, viral vector, recombinant protein subunit (Novavax Nuvaxovid) or recombinant VLP (Medicago Covifenz) COVID-19 vaccines may be given simultaneously with (i.e., same day), or at any time before or after, non-COVID-19 vaccines (including live and non-live vaccines).

(Discretionary NACI recommendation)
Key takeaways

- mRNA COVID-19 vaccines are preferred for primary series and boosters when there are no contraindications.

- Some individuals cited COVID-19 vaccines safety concern and therefore are hesitant to receive mRNA or viral vector vaccines.

- In adult populations, should mRNA not be an option:
  - for primary series, you may consider
    - Novavax Nuvaxovid (18 years and over)
    - Medicago Covifenz (18-64 years)
  - for booster, you may consider
    - Novavax Nuvaxovid (18 years and over)
Case scenario
Scenario: Melanie

• 28 years old
• Front line service provider
• Received one dose of Pfizer Bio-N-Tech Comirnaty 4 months ago
• Concerned with the safety of mRNA vaccines
• She felt that she had to take whatever vaccine was available at that time but is now hesitant to receive another dose of it
• She held off on receiving her second dose but is interested in receiving one of the newly approved vaccines now that there are alternate options available

1. Could Melanie receive the Medicago Covifenz or Novavax Nuvaxovid vaccine for the second dose of her primary series?
2. How could you respond to her request?
Clinical considerations

What we know:

• The Medicago Covifenz vaccine is indicated for use in primary series of COVID-19 vaccines for adults who are 18-64 years.

• The Novavax Nuvaxovid vaccine is indicated for use in primary series of COVID-19 vaccines for adults 18 years and over.

• NACI [preferentially] recommends that a complete series with an mRNA COVID-19 vaccine should be offered to individuals in the authorized age group without contraindications to the vaccine. (Strong NACI Recommendation)

• NACI recommends that an authorized recombinant protein subunit COVID-19 vaccine (Novavax Nuvaxovid) or recombinant VLP COVID-19 vaccine (Medicago Covifenz) may be offered to individuals who are not able or willing to receive an mRNA COVID-19 vaccine. (Discretionary NACI Recommendation)
Scenario Answer (continued)

Vaccine confidence considerations

• Solicit information respectfully and listen actively
  - Tell me about why you are considering the Medicago and Novavax vaccine options.
  - What makes you feel more confident in the safety of these vaccines?

• Identify and acknowledge her concerns
  - I'm hearing that you have concerns about the mRNA vaccines? Does that sound right?
  - Tell me about your concerns about mRNA vaccines.

• Integrate personal context with any facts and statistics, and address misinformation/misconceptions
  - What do you think about your personal risks for COVID-19?
  - Can I share what I know about the risks and benefits of mRNA vaccines and why they are preferred?

• Use culturally appropriate approach, acknowledging the patient's unique context, values and beliefs

• Use plain language, avoid scientific jargon

• Support them in making the choice to be vaccinated against COVID-19

(NIH, 2020; Lewandowsky et al., 2021, PHAC, 2021, Gagneur, A., 2020)
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(NIH, 2020; Lewandowsky et al., 2021, PHAC, 2021, Gagneur, A., 2020)
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National Collaborating Centre for Infectious diseases  
nccid.ca/phac-webinars-on-covid-19-vaccines

Canadian Vaccination Evidence Resource and Exchange Centre  
www.canvax.ca/canvax-webinar-series
THANK YOU FOR JOINING US!

Copies of the presentation and video will be made available on canvax.ca
References


