



# SUMMARY OF NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION (NACI) RAPID RESPONSE OF JANUARY 28, 2022

Rapid Response: Guidance on the use of  
booster COVID-19 vaccine doses in adolescents  
12-17 years of age



## OVERVIEW

- On January 28, 2022, the Public Health Agency of Canada (PHAC) released updated advice from the National Advisory Committee on Immunization (NACI) regarding the use of booster COVID-19 vaccine doses in adolescents 12 to 17 years of age. These recommendations are based on current scientific evidence and NACI's expert opinion.
- NACI reviewed the evidence on the need for, and benefit of, a booster dose in adolescents 12 to 17 years of age.
- At this time, NACI is making an off-label recommendation for booster doses only in adolescents 12 to 17 years of age who may be at high risk of severe COVID-19 outcomes due underlying medical conditions or living conditions, or who belong to racialized or marginalized communities disproportionately affected by COVID-19.

### **NACI continues to strongly recommend that:**

- A complete primary series of an mRNA COVID-19 vaccine should be offered to adolescents 12 to 17 years of age without contraindications to the vaccine with an interval of 8 weeks between doses. The Pfizer-BioNTech vaccine (30 mcg) is preferred to start or continue the primary series to further minimize the rare risk of myocarditis and/or pericarditis following vaccination in this age group.
- Adolescents 12 to 17 years of age who are moderately to severely immunocompromised should be offered a three-dose primary series of an mRNA COVID-19 vaccine.

### **NACI now recommends a booster dose of COVID-19 vaccines in adolescents 12 to 17 years of age who may be at higher risk of severe outcomes from COVID-19 infection, as follows:**

- 1. A booster dose of an mRNA COVID-19 vaccine may be offered at least 6 months after the completion of a primary COVID-19 vaccine series to adolescents 12 to 17 years of age who:**
  - a. Have an underlying medical condition that may put them at high risk of severe illness due to COVID-19, including those who are immunocompromised and who have already received a three-dose primary series (for adolescents who are immunocompromised, a booster dose would be their fourth dose);**
  - b. Are residents of congregate living settings, including shelters, group homes, quarters for migrant workers, correctional facilities;**
  - c. Belong to racialized or marginalized communities disproportionately affected by COVID-19.**

- The use of the Pfizer-BioNTech mRNA booster dose (30 mcg) is preferred to the use of the Moderna mRNA booster dose (50 mcg dose) in adolescents to further minimize the rare risk of myocarditis and/or pericarditis following vaccination in this age group.

To see the full update, please visit [NACI rapid response: Guidance on the use of booster COVID-19 doses in adolescents 12-17 years of age.](#)

## WHAT YOU NEED TO KNOW

- Canada is currently facing another wave of the pandemic, largely driven by the highly transmissible Omicron variant.
- At this time, Health Canada has not received a submission or clinical trial data from vaccine manufacturers for authorization of a COVID-19 booster dose for people under 18 years of age. Therefore, recommendations made for the use of booster doses in adolescents are currently considered off-label.
- When assessing the benefits and risks of a booster dose in adolescents 12 to 17 years of age, NACI considered:
  - the goals of the Canadian COVID-19 Immunization Program;
  - the available evidence on the Omicron variant and the burden of COVID-19 disease in adolescents;
  - the available data on the effectiveness of a primary series and a booster dose in adolescents and adults, in the context of Omicron circulation;
  - the available data of the risks associated with a third dose of an mRNA COVID-19 vaccine for adolescents, including the rare risk of myocarditis and/or pericarditis; and
  - risk factors associated with severe COVID-19 outcomes in adolescents.
- Adolescents 12 to 17 years of age continue to remain at low risk of severe COVID-19 outcomes, including from the Omicron variant. However, the number of adolescents experiencing severe disease or requiring hospitalization is increasing due to the large number of adolescents becoming infected with SARS-CoV-2 during this wave of the pandemic.
- Data regarding the protection against infection in this age group is starting to emerge. Prior to Omicron, vaccine effectiveness appears to be high against symptomatic disease in this age group, but falls over time.
- Data on the effectiveness and safety of a booster dose in adolescents 12 to 17 years of age are currently limited. Preliminary safety data from the real-world use of boosters in adolescents showed no additional safety concerns beyond those noted from a primary series. Data on the rare risk of myocarditis and/or pericarditis following a booster dose of an mRNA vaccine in adolescents 12 to 17 years of age are still emerging.

- Some populations are at increased risk of exposure to the virus and/or increased risk of severe COVID-19 outcomes due to underlying health conditions and social factors. Overlapping or intersecting factors, as well as varying access to health care services, can increase overall risk and have disproportionate consequences for specific populations.
- NACI assessed existing evidence identifying risk factors for exposure to SARS-CoV-2 and severe COVID-19 disease and the applicability of risk factors for adolescents 12 to 17 years of age in the context of Omicron circulation.
- Adolescents 12 to 17 years of age who may be at high risk of severe illness due to COVID-19 include those with one or more of the following underlying health conditions, based on expert opinion and evolving evidence:
  - Cancer – active treatment
  - Chronic kidney disease
  - Chronic lung diseases, including uncontrolled asthma
  - Cystic fibrosis
  - Neurodevelopmental and other chronic neurological conditions including epilepsy and cerebrovascular disease
  - Diabetes (type 1 & 2)
  - Down syndrome
  - Congenital heart disease or other chronic heart diseases, including pulmonary hypertension
  - Chronic liver disease
  - Obesity (BMI  $\geq 30$ )
  - Pregnancy
  - Sickle cell disease or thalassemia
  - Substance use disorders
  - Immunocompromised state, including immune deficiency, solid organ or haematopoietic stem cell transplant, HIV infection, or immunosuppressive therapy
  - Medically fragile/having medically complex needs.
- In addition to these medical risk factors, NACI is also recommending that a booster dose may be offered to those 12 to 17 years of age who are residents of congregate living settings or who belong to racialized or marginalized communities disproportionately affected by COVID-19.
- NACI recommends an interval of at least 6 months between the final dose of a primary series and a booster dose as evidence in adults suggests that longer intervals result in a stronger immune response that is expected to be longer lasting and may be associated with a lower risk of myocarditis and/or pericarditis in adolescents and young adults.

- Informed consent should include discussion about what is known and unknown about the risks and benefits of providing a booster dose in adolescents, including the off-label status of NACI's recommendation.
- A booster dose for adolescents 12 to 17 years of age without the above noted medical or social risk factors is not recommended at this time due to the generally low risk of severe COVID-19 outcomes in adolescents who have received a complete primary series.
- It is recommended that close contacts of adolescents with conditions that place them at risk for severe outcomes, including household members and healthcare workers providing care, be vaccinated against COVID-19 and use public health measures in order to help protect the adolescent at high risk.
- NACI continues to monitor the evolving evidence on the use of booster doses in adolescents and will update guidance as needed. Advice on recommended timing of booster doses following SARS-CoV-2 infection will be forthcoming.

To see the full update, please visit [NACI rapid response: Guidance on the use of booster COVID-19 doses in adolescents 12-17 years of age.](#)

For more information on risk factors in adolescents 12 to 17 years of age, please refer to [Recommendation on the use of mRNA COVID-19 vaccines in adolescents 12 to 17 years of age](#)

## QUOTES

“With the Omicron variant circulating rapidly through Canada, it’s good news that adolescents continue to be at low risk of experiencing severe illness and hospitalization due to COVID-19. After reviewing the evidence that shows adolescents continue to be well protected against severe illness from a primary COVID-19 vaccines series, and considering the unclear magnitude of effect a booster would have in preventing transmission in this age group, NACI is making an off-label recommendation for booster doses in adolescents who are at high risk of severe COVID-19 outcomes due to underlying health conditions or their living situations. This recommendation will help protect vulnerable adolescents across Canada. As always, the Committee continues to monitor the evolving and emerging evidence related to the use of COVID-19 vaccines in all populations, including adolescents, and we will update our guidance if needed.”

- Dr. Shelley Deeks, NACI Chair

“Even though adolescents remain at lower risk of developing severe illness from COVID-19 compared to older age groups, the number of hospitalizations is increasing as more adolescents become infected with the Omicron variant. We know that people with underlying health conditions are at increased risk of experiencing severe outcomes from COVID-19 and that the pandemic has had disproportionate impacts on racialized and marginalized communities. I welcome NACI’s advice on the use of booster doses in adolescents 12 to 17 years of age who may be at high risk of severe outcomes from COVID-19 due to both biological and social risk factors.”

- Dr. Theresa Tam, Chief Public Health Officer