Public Health Agency of Canada | Agence de la santé publique du Canada

Canada

# Vaccine Confidence InfoBulletin

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Providing credible and timely information on vaccines to health care providers, public health decision makers and public health enthusiasts to support vaccine confidence. Thank you for being a trusted source of vaccine information for individuals and communities across Canada.

## In this issue



## Trending topics

### Respiratory virus activity on the rise in Canada

Leading into the winter, respiratory virus activity in Canada has been high [1]. In addition, influenza activity has crossed and remains above the seasonal threshold of 5%, indicating the start of a seasonal influenza epidemic [1].

Vaccination against influenza remains the most effective way to prevent influenza illness and influenza-related complications, like pneumonia. The National Advisory Committee on Immunization (NACI) recommends everyone 6 months of age and older get the annual influenza vaccine,

especially people at high risk of complications from influenza, and those who can spread the virus to them, such as caregivers. For a full list of those who are particularly recommended to receive the influenza vaccine, please refer to the Canadian Immunization Guide Chapter on Influenza and Statement on Seasonal Influenza Vaccine for 2022–2023 for a list of groups for whom influenza vaccination is particularly recommended.

Receiving the influenza vaccine can reduce the chances of being co-infected with influenza, COVID-19 and respiratory syncytial virus (RSV), a situation that can lead to serious complications. Preventing influenza will also help to reduce stress on the healthcare system during the ongoing respiratory virus season.

**To access resources for health care providers on influenza, visit the following Canada.ca webpages:**

- **Respiratory virus detections in Canada**
- **FluWatch weekly influenza reports**
- **Flu (influenza) awareness resources**

## Updated recommendations on the use of the Pfizer-BioNTech Comirnaty® BA.4/5 bivalent COVID-19 vaccine booster dose in children 5 to 11 years of age

On December 9, 2022, Health Canada authorized the Pfizer-BioNTech Comirnaty® BA.4/5 Bivalent (10 mcg) COVID-19 vaccine as a booster dose in children 5 to 11 years of age. This is the only bivalent COVID-19 vaccine authorized for this age group at this time.

On December 9, 2022, the Public Health Agency of Canada (PHAC) released updated recommendations from NACI on the use of a COVID-19 vaccine booster dose in children 5 to 11 years of age and concurrent administration of COVID-19 vaccines with other recommended vaccines. This guidance is based on current evidence and NACI expert opinion.

For the full statement, including supporting evidence and the rationale, please see the NACI Statement: Updated recommendations on the use of a COVID-19 vaccine booster dose in children 5 to 11 years of age.

Go back to page 1

### Novavax Nuvaxovid™ COVID-19 vaccine Health Canada authorization for adolescents 12 to 17 years of age

On December 6, 2022, Health Canada authorized the use of the Novavax Nuvaxovid™ COVID-19 vaccine in adolescents 12 to 17 years of age. This COVID-19 vaccine is now authorized for use as a primary series in people who are 12 years of age and older.

For more information, please visit Health Canada's webpage on the Novavax Nuvaxovid™ COVID-19 vaccine.

### International cholera outbreaks

Cholera is a sudden acute diarrheal infection caused by the ingestion of food or water contaminated with the bacterium *Vibrio cholerae* [2]. Worldwide, there is a yearly estimated 1.3 to 4 million cases of cholera and between 21,000 to 143,000 deaths [2]. Cholera is endemic or epidemic to certain regions and is closely linked to inadequate access to clean water and sanitation facilities, as well as overcrowding. As such, at-risk areas can include disaster zones and camps for internally displaced persons or refugees [2].

In 2017, the global strategy *Ending Cholera: a global roadmap to 2030* was launched to reduce cholera deaths by 90% [2]. However, cholera remains a persistent threat to global health, as there are currently a record number of ongoing cholera outbreaks with 29 of them currently active worldwide [3].

In Canada, the Dukoral® vaccine is authorized for use for cholera and traveller's diarrhea, but it is not routinely recommended for travellers [4]. Travellers are routinely recommended to take preventive measures to reduce their risk while travelling. These preventative measures include checking for travel advice and advisories before travelling, practicing frequent hand washing and applying safe food and water precautions. To assess their personal risk and obtain tailored advice, travellers should consult a qualified travel health provider at least 6 weeks before their departure.

## Featured article

### Reduce health risks, travel informed

International travel is undergoing a resurgence after more than 2 years of cancelled and delayed trips due to the COVID-19 pandemic. Along with many of the great experiences that come with travel, travelling abroad can pose risks for exposure to infectious diseases.

Go back to page 1

Major increases in air travel in the past decades and emergence of novel or less common zoonotic infectious diseases can pose a serious threat to global health, as illustrated by the COVID-19 pandemic [5] [6]. Many countries are also experiencing a decrease in routine vaccination coverage linked with the disruption of vaccination campaigns due to the COVID-19 pandemic, the presence of humanitarian conflicts, or challenges with vaccine supply. Unfortunately, this decrease in vaccine coverage has contributed to the re-emergence or surges in vaccine-preventable diseases such as measles and polio, jeopardizing long-term efforts to eradicate those diseases. For more information, see the travel health notices on polio and measles [7] [8].

Remember that falling ill while travelling not only poses the risk of upending a carefully planned and anticipated vacation or experiencing delays in returning home to Canada. It may also mean navigating unfamiliar healthcare systems, potentially in a language not spoken by the traveller, with variable healthcare infrastructure and resources to provide adequate care for acute illness.

Travel health risks vary depending on travel plans. For example, those who travel with the intention of visiting friends and relatives, and those who engage in activities that may not typically be part of tourist or business itineraries (e.g., humanitarian relief workers, backcountry trekkers) tend to be at an increased risk of travel-related infections compared to other travellers due to possible travel-related characteristics such as:

- travelling for longer periods, which can increase exposure time
- travelling to rural areas
- travelling to destinations with higher risk for tropical diseases where travellers may not have access to treated water and where they may be exposed to vector-borne diseases [9]

It is therefore important for all travellers to ensure they are well informed about the risks posed by their travel destination and the specifics of their travel plans to ensure they can take steps to be optimally protected, including being up to date with vaccinations.

### Travel vaccination

In addition to planning itineraries, learning about regional customs and language, and making a packing list that includes a travel health kit [10], travel planning should include a consultation with a qualified travel health provider or a travel health clinic.

Pre-travel consultations provide an opportunity for health care providers to review travel plans and to discuss health risks and preventive measures for travel-related illnesses. They are also opportunities to assess the overall immunization status of travellers [11]. There are three categories of immunizations related to travel:

- routine - part of recommended primary series of immunizations or routine booster doses (e.g., polio, DTaP)
- required by international law (e.g., yellow fever, COVID-19)
- recommended for maintenance of health while travelling (e.g., typhoid fever)

Pre-travel consultations are best done 6 weeks before any planned travel. This allows sufficient time for multiple vaccines or multiple doses to be administered if needed, and for immunity to build. Accelerating immunization schedules may be possible in the exceptional case of unplanned travel.

For more information, including the minimal interval between vaccine doses to achieve maximum protection before travel, see Timing of vaccine administration and vaccine-specific chapters in the Immunization of travellers section of the Canadian Immunization Guide.

**To access resources for health care providers on travel vaccination, visit the following Canada.ca webpages:**

- **Travel advice and advisories by destination**
- **Committee to Advise on Tropical Medicine and Travel (CATMAT) statements and recommendations**
- **Centers for Disease and Control and Prevention (CDC) Yellow Book 2020**

### Adherence barriers in pre-travel health advice and hesitancy regarding travel vaccines

Raising awareness of vaccine recommendations for travel is important, however some travellers may be hesitant or refuse vaccinations that are recommended to them. Travellers' knowledge, attitudes and beliefs regarding travel vaccines and vaccine-preventable diseases have an impact on their decisions whether or not to receive recommended vaccines [12]. Common reasons cited for not being vaccinated for travel are:

- perceiving that the risk of contracting the vaccine-preventable disease or being seriously ill from it, is low [13] [14] [15]
- fear of side effects of vaccination, mistrust of vaccine efficacy, fear of the pain of injection [12] [13] [14] [16]
- perceiving they're already up to date with vaccines [15] [16]
- vaccine cost and lack of time [15] [16]
- accessibility [15]

Go back to page 1

Health care providers play a critical role in shaping their patients' vaccination decisions [17]. In order to help travellers make informed choices about pre-travel health advice, health care providers can:

- cultivate a “safe space” for discussions about vaccinations and engage in active listening to learn about patient’s questions, values and experiences related to vaccinations [17]
- be transparent about the risks and benefits of the recommended vaccines [9] [17] [14]
- share relevant and credible information using plain language, in a culturally sensitive and age-appropriate way
- discuss the health risks, the disease epidemiology for the region, the severity of the disease(s) endemic or epidemic to the region, and up to date information on the recommended vaccines [9] [14]

It is important for health care providers to note that, according to CATMAT, those who travel with the intention of visiting friends and relatives have been identified as having an increased risk of travel-related morbidity. These travellers are less likely to seek pre-travel health consultation, and are more likely to seek advice closer to departure and to decline a recommended vaccine. These differences have been associated with low perception of personal disease risk, but may also reflect language, cultural, and/or financial barriers preventing uptake. The pre-travel consultation for these travellers is an opportunity for health promotion, identification of pre-existing conditions, and risk reduction. The importance of adherence and addressing potential challenges to achieving adherence to travel advice should be discussed [9]. For more information consult the CATMAT Statement on international travellers who intend to visit friends and relatives.

## Key takeaways

- Vaccine coverage for many diseases has dropped worldwide, posing an increased risk for travellers.
- Travellers may be exposed to a variety of health risks, including infectious diseases.
- It is important for individuals planning travel to be up to date on routine vaccinations and to identify if they need additional vaccines before they travel.
- Travellers should meet with a qualified travel health provider preferably 6 weeks in advance of their travel to discuss their planned activities, and to identify vaccine recommendations and other health and safety precautions.
- Health care providers play a critical role in shaping their patients' decisions regarding vaccination.

Go back to page 1

# In the clinic

Providing current recommendations, resources and vaccination best practices for immunizers.

## Travel vaccine spotlight: yellow fever

Yellow fever is an acute hemorrhagic disease caused by yellow fever virus of the genus *Flavivirus,* which is transmitted via the bite of an infected mosquito [18]. It is endemic and intermittently epidemic in sub-Saharan Africa and tropical South America [18]. It is believed to cause 200,000 cases of illness and 30,000 deaths each year [18] [19]. Yellow fever gets its name from the yellowing of the skin and eyes of those infected due to the damage it causes to the liver [20]. The incubation period is 3 to 6 days and those infected are contagious shortly before the onset of fever and for 3 to 5 days afterwards [18].

Symptoms of yellow fever typically include an acute onset of fever, chills, headaches, nausea, vomiting, weakness and dehydration [18]. About 85% of people will recover from this acute phase [18]. In the remaining cases, yellow fever may progress in severity, which can lead to shock, jaundice, internal bleeding, and organ failure [18] [20]. About half of severe cases will die [20].

There is no specific treatment for yellow fever and care consists of symptom management and supportive measures [18]. The primary modes of disease prevention are through vaccination and vector control, such as the use of larvicides in standing water where mosquitos breed, targeted use of insecticides and use of insecticide treated mosquito nets [21].

The risk for most travellers acquiring yellow fever is low but is greater for those in endemic areas who are visiting rural or jungle areas, staying for longer periods of time, participating in outdoor activities, and who are not using personal protection measures against mosquito bites [18].

### The yellow fever vaccine

The yellow fever vaccine is a live attenuated single dose vaccine and is recommended for healthy individuals between 9 months of age to those less than 60 years of age [18]. The yellow fever vaccine may be considered in infants 6 to 8 months and persons aged 60 years and over travelling to areas where risk of yellow fever is highest (i.e., endemic or transitional regions) [18]. Effectiveness of the vaccine has been estimated to be about 85% [18]. In Canada, only specific vaccination centres can administer the yellow fever vaccine. These centres can also supply travellers with the International Certificate of Vaccination.

**For yellow fever vaccination centre locations, visit the following Canada.ca page: Yellow Fever Vaccination Centres in Canada**

Go back to page 1

### Yellow fever vaccine requirements and recommendations

Some countries require proof of vaccination against yellow fever for entry, documented by an International Certificate of Vaccination [22]. The International Certificate of Vaccination for yellow fever becomes valid 10 days after vaccination, the point at which studies demonstrate that 80% of persons immunized will have developed neutralizing antibodies [18], [19]. Prior to 2016, the International Certificate of Vaccination for yellow fever had a validity period of 10 years [22]. The yellow fever vaccine is now considered protective for life and a lifetime validity now applies for this certificate. Travellers with certificates received prior to 2016 may consider carrying a copy of the World Health Organization's amendment, which reflects these updated guidelines [22].

While vaccine induced immunity to yellow fever is now understood to be lifelong, a booster dose may be recommended for specific groups of travellers that are at increased risk. For more information on specific groups that may be advised to receive a booster dose consult the CATMAT Statement on the Use of Booster Doses of Yellow Fever Vaccine.

Some countries do not require yellow fever vaccination, but it may be recommended in locations where yellow fever is endemic, depending on the traveller's planned activities. As such, travellers should consult a qualified travel health provider at least 6 weeks before travelling to evaluate the yellow fever risks, vaccine recommendations and requirements for the country they intend to travel to, and to receive additional advice on personal precautions [22].

## Community spotlight

Putting the spotlight on innovative projects and best practices from communities across Canada.

### The Multicultural Council of Windsor and Essex County (MCWEC) – Vaccine for All

MULTICULTURAL COUNCIL OF WINDSOR AND ESSEX COUNTY
Investing in People

The MCWEC is a not-for-profit organization dedicated to creating a welcoming community for all in the Windsor-Essex County (Ontario) through education, community engagement and the promotion of diversity and equality. With support from the PHAC Immunization Partnership Fund (IPF), MCWEC is leading the "Vaccine for All" project, which aims to increase COVID-19 vaccine knowledge and uptake among newcomer populations in Windsor-Essex County.

Key initiatives of the "Vaccine for All" project include creating multilingual educational materials, providing educational sessions in culturally safe environments, facilitating discussions that empower individuals to make informed decisions, offering support throughout the vaccination process, and running pop-up vaccination clinics.

Go back to page 1

To effectively connect with newcomer populations in Windsor-Essex County, MCWEC has employed a "train the trainer" model, whereby champions in the community are recruited and trained to provide linguistic and culturally appropriate information, workshops, and outreach. The MCWEC has also created the "A World of Reasons" initiative, which features a series of videos of prominent and diverse community members explaining their reason for getting vaccinated against COVID-19. These videos are available in English, French and 16 additional languages.

To learn more about how the MCWEC is increasing COVID-19 vaccine knowledge and uptake among newcomer populations in Windsor-Essex County, visit the MCWEC web page.

## PHAC Vaccine "ConfidenceCast"

A public health podcast brought to you by PHAC in association with the Canadian Vaccination Evidence Resource and Exchange Centre (CANVax). This podcast for health care providers and public health enthusiasts brings the experts to your ears to discuss important issues related to vaccine confidence in Canada, such as behavioral science, vaccine science, immunology, routine vaccination, and other emerging issues.

**Episode 1 – Waning immunity, variants and COVID-19 boosters** (canvax.ca, Spotify, or iTunes)


**Dr. Samriti Birdi** explains how vaccine-induced immunity to SARS-CoV-2 has changed since first doses were administered, how variants are impacting vaccine effectiveness, and the role of bivalent vaccines in providing improved protection against the virus.


**For more podcast episodes discussing vaccine confidence in Canada check out the CANVax Emerging Topics podcast on canvax.ca, Spotify or iTunes.**

Emerging Topics is a public health podcast that engages experts from across Canada to better understand emerging issues in immunization and the initiatives that aim to combat them to improve vaccine acceptance and uptake.

Go back to page 1

# PHAC webinars and webcasts for health care providers

PHAC, in collaboration with CANVax and the National Collaborating Centre for Infectious Diseases (NCCID), offers expert-led webinars and webcasts focused on providing health care providers with clinical guidance and information related to key vaccine topics.

**Webcasts** are video resources.

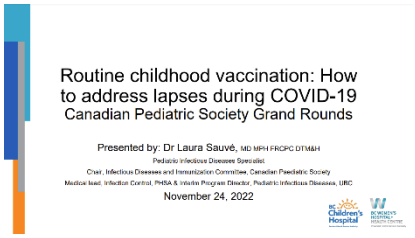
**Webinars** are live events, with an audience and question & answer period. These live events are recorded and later posted for viewing.

## Webinar and webcast watch list

Webinar - Seasonal Influenza Immunization 2022-2023 (65 mins)


**Dr. Jesse Papenburg and Dr. Robyn Harrison** discuss the NACI recommendations on seasonal influenza vaccine use for the 2022-2023 season. The webinar addresses the role of health care providers in vaccine uptake and includes an overview of antiviral treatment of influenza.

Webinar – Routine childhood vaccination: How to address lapses during COVID-19 (60 mins)




**Dr. Laura Sauvé** discusses routine childhood vaccination and how to address lapses during COVID-19. The webinar addresses barriers to vaccination that can be addressed by pediatricians and pediatric subspecialists, health system actions that can address barriers to increase vaccine uptake, and an approach to increasing vaccine confidence and addressing vaccine hesitancy.

Webcast – Implementing the CARD system to support vaccination in community pharmacies (30 mins)


**James Morrison** provides health care professionals with strategies and approaches for implementing CARD in their practice by sharing practical examples of how CARD has been implemented in pharmacies.

Go back to page 1

A companion webcast titled Needle fear, pain and vaccines: Introduction to the CARD system as a framework for vaccination delivery was recorded in the Spring of 2022. We recommend viewing this webcast first to learn about the contributors to stress-related reactions during vaccination and evidence-based strategies to improve the vaccine experience for people receiving vaccines and those who support them.

## Contact Vaccine Confidence

Subscribe to receive the PHAC Vaccine Confidence InfoBulletin directly in your inbox. To explore past issues, see archived issues on canvax.ca.

Have questions or feedback to share? Email us: vaccination@phac-aspc.gc.ca

Please note that any medical questions should be directed to your local health care provider and any urgent medical questions should be directed to 911 or your local emergency department.

Go back to page 1

# Annex

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