North Bay Parry Sound District
Health Unit

Bureau de santé
du district de North Bay-Parry Sound

COVID-19 VACCINATION

A Training Module

September 2021

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Introduction

On March 11, 2020, the World Health Organization declared COVID-19 a pandemic virus. The first case in the North Bay Parry Sound District Health Unit region was reported on March 26, 2020. As the pandemic evolves, variants of the virus have circulated globally as well as locally in Ontario and in the Nipissing and Parry Sound districts. Some variants, for example, the delta variant, have proven to be more easily transmissible and/or cause more severe illness than the original strain. They have required more robust public health measures, including high vaccination rates.

This educational module will provide you with accurate and reliable information to help you make an informed decision.

Overview

This module will answer the following questions:

- What is COVID-19 and how does it spread?
- What are the risks associated with COVID-19?
- What are the benefits of the COVID-19 vaccine?
- How are vaccines approved for use in Canada?
- How do vaccines work?
- Who should get the vaccine?
- What are the possible side effects?
- Is it true that ….?
- Why should I get vaccinated?
- Where can I get vaccinated?

What is COVID-19 and how does it spread?

COVID-19 is an acute respiratory illness caused by severe acute respiratory syndrome coronavirus (SARS-CoV-2).

The virus is most commonly spread from an infected person through:

- Respiratory droplets and aerosols (smaller droplets that stay in the air) created when you cough or sneeze.
- Close, prolonged personal contact, such as touching or shaking hands.
- Touching something with the virus on it, then touching your mouth, nose or eyes before washing your hands.

What are the risks associated with COVID-19?

COVID-19 can be a serious illness for many people, including those who are young and healthy. Symptoms can last for months and can include:

- Fatigue
- Shortness of breath or difficulty breathing
- Cough
- Joint or muscle pain
- Chest pain
- Memory or concentration issues
- Sleep problems
- Headache
- Fast or pounding heartbeat
- Loss of smell or taste
- Depression or anxiety
- Fever
- Dizziness when standing
- Worsened symptoms after physical or mental activities

The virus can damage the heart, brain, lungs and increase the risk of long-term health problems.

What are the risks associated with COVID-19? (Continued)

People can be contagious before they show symptoms. Some people may not have any symptoms, but can still spread infection to others.

Many people who contract COVID-19 will recover quickly, however, some people can become extremely sick, needing hospital care. In rare cases, COVID-19 may cause death. The long term health effects of COVID-19 are still unknown.

What are the benefits of the COVID-19 vaccine?

Protection for yourself against COVID-19:

Vaccination is one of the most effective ways to protect yourself. If, however, you do become infected, the vaccine can prevent or reduce symptoms, thereby reducing serious illness and possible long-term effects.

What are the benefits of the COVID-19 vaccine? (Continued)

Protection for your loved ones: By getting the COVID-19 vaccine, you decrease the chance of spreading the virus to family members, friends, or other close contacts.

Protection for those who can't get vaccinated: Getting the vaccine supports community immunity, which in turn, helps to protect those who are unable to receive the vaccine for medical reason or due to age restrictions (i.e., kids).

What are the benefits of the COVID-19 vaccine? (Continued)

High rates of effectiveness. The approved COVID-19 vaccines in Canada have been shown to be effective within two weeks of full immunization against the original strand of the COVID-19 as well as the variants.

Decreases the risk of our health care system from becoming overwhelmed: The COVID-19 vaccines decrease the chance of a person getting COVID-19. The greater the number of people vaccinated, the fewer medical visits, diagnostic tests, treatments and hospitalizations related to COVID-19 will be needed.

What are the benefits of the COVID-19 vaccine? (Continued)

Protects and supports our economy: As lockdowns are reduced or lifted, businesses can remain open and more people are able to return to work and support the production and consumption of products and services.

Increases our ability to return to a normal way of life

How are vaccines approved for use in Canada?

Drugs, including vaccines, are regulated under the *Food and Drugs Act* and regulations. They must meet the regulatory requirements for safety, efficacy and quality before they can be approved for use and distribution in Canada. Health Canada is responsible for approving vaccines.

Health Canada has one of the most rigorous scientific review systems in the world and only approve a vaccine if it is safe; it works and meets the highest manufacturing and quality standards.

How are vaccines approved for use in Canada? (Continued)

Before approving a vaccine, they look carefully at the:
Scientific and clinical evidence — including results of clinical trials — to determine if a vaccine product is safe, effective and manufactured to the highest quality.

Safety and efficacy of the vaccine to determine that there are no concerns; the vaccine can trigger a strong enough immune response to protect against disease; the benefits outweigh the risks.

Manufacturing process to make sure the manufacturer can carry out the necessary quality controls for the vaccine.

How are vaccines approved for use in Canada? (Continued)

Health Canada's approval process for the COVID-19 vaccine was the same as all other vaccines that you have already gotten (like measles & tetanus).

How could it have been approved in such a short amount of time?
The process to make and approve COVID-19 vaccines took less time because scientists know how the immune system works, had previous experiences with a coronavirus (e.g., SARS), and have been studying forms of mRNA since before the 1990s. Additionally, very large amounts of resources and money were available as the whole world was focused on this shared goal.

How are vaccines approved for use in Canada? (Continued)

In Canada, when a vaccine manufacturer was ready to submit a potential vaccine, an “expedited review process” took place. This means the manufacturer submitted data and information to Health Canada as it became available. Health Canada simultaneously reviewed this information.

It is similar to this: A writer writing a book gives each chapter to their editor once it is written rather than waiting until the whole book is finished to submit it.

How are vaccines approved for use in Canada? (Continued)

If there is not enough evidence to support the manufacturer's safety, effectiveness or quality claims, Health Canada will not authorize the vaccine and the product cannot be sold in Canada.

Even after approval, Health Canada and the Public Health Agency of Canada will continuously monitor the vaccines over time to ensure the benefits of the vaccine outweigh the risks.

Find out more about Health Canada's:

- Vaccine approval process
- Review of COVID-19 vaccines

How do vaccines work?

Thanks to vaccines, infectious diseases now represents less than 5% of all deaths in Canada. Vaccines have functionally eradicated and lowered infection rates for many disease such as:

- Smallpox
- Polio
- Measles
- Rubella

The COVID-19 vaccine will help your body fight COVID-19 and the variants.

How do vaccines work? (Continued)

The COVID-19 vaccine goes into the muscle at the top of the arm, like the flu vaccine and other vaccines. You need two doses for the best protection.

A vaccine is a medicine that gets your immune system to produce antibodies. Antibodies are proteins trained to recognize the virus and protect your immune system against it. In other words, the COVID-19 vaccine helps your body develop some immunity to the virus.

Most types of medicines treat or cure a disease. Vaccines are different. They keep you from getting sick in the first place.

How do vaccines work? (Continued)

Health Canada has approved four COVID-19 vaccines for use in Canada:

mRNA vaccines
- Pfizer-BioNTech
- Moderna

Viral vector vaccines
- AstraZeneca
- Janssen (Johnson & Johnson)

Note, it takes time for your body to build your immune response. This process takes about two weeks. This means that your body will be able to fight the virus about two weeks after both doses (or just one if receiving Janssen).

How do mRNA vaccines work?

The Pfizer and Moderna vaccines have instructions in the form of mRNA that tell your body how to make a small piece of the virus (the spike protein seen on the coronavirus). The mRNA from the vaccine never comes in contact with the DNA of the cell, and the mRNA is destroyed once the spike protein has been formed based on the mRNA instructions.

Once your immune system has identified the spike protein, it starts its defense to clear your body of the spike protein. This is called an immune response.

The vaccine serves as a practice run and teaches your immune system what to do if it encounters COVID-19.

How do viral vector vaccines work?

Viral vector vaccines, like AstraZeneca and Johnson & Johnson, use genetically modified viruses (called vectors) that are harmless to humans. The vector only carries the instructions to make a specific protein from the COVID-19 virus. Similar to the mRNA virus, once the body creates that protein, it produces an immune response, which will recognize and fight future infections.

Viral vector-based vaccines have been used to develop many vaccines for animals and a vaccine for Ebola.

These vaccines introduce instructions from the virus that cause COVID-19 using a non-COVID-19 virus, which has been modified to be inactive and harmless. This is known as a vector.

Who should get the vaccine?

Anyone born in 2009 and earlier (without contraindications)
The World health organization endorses youth vaccinations and Health Canada has approved the Pfizer vaccines for youth.

Previously tested positive for COVID-19 or were a close contact
If you had COVID-19, it is recommended that you get the vaccine as natural immunity from COVID-19 may not last long. If you were exposed to a confirmed case and believe you were an asymptomatic "carrier," vaccination is strongly recommended.

Individuals who are immunocompromised (without contraindications)
It is recommended, but not required, that these individuals talk with their health care provider beforehand.

Who should get the vaccine? (Continued)

Individuals who are pregnant

The National Advisory Committee on Immunizations recommends that pregnant individuals receive a full COVID-19 vaccine series (preferably mRNA). The Government of Ontario recommends vaccination as soon as possible at any stage in pregnancy. It is recommended, but not required, that these individuals speak with their health care provider beforehand.

Individuals who are breastfeeding

Based on available data, mRNA vaccines do not transfer into breast milk. In addition, recent research has shown that the antibodies produced by the breastfeeding person have been shown to transfer through the milk and provide protection to the infant.

Who should get the vaccine? (Continued)

Important to note: After receiving your second dose of the COVID-19 vaccine, you should not receive any other vaccines for 28 days. If for some reason you need another vaccine within 28 days, discuss this with your doctor or health care provider.

Third doses: The Government of Ontario has recommended that a third dose of a COVID-19 vaccine be offered to select vulnerable populations. A third dose will help to provide individuals in these groups with an improved immune response. Click here for more information about who is eligible for a third dose.

Who should not get the vaccine?

In some cases, vaccines are medically contraindicated, which means a person should not be vaccinated. This includes:

- Individuals who have have allergies to any component of the vaccine or its container. Health Canada has published the ingredients of the vaccine. Talk to your health care provider if you're unsure.
- Individuals who had an allergic reaction to a previous dose of a COVID-19 vaccine or any component of the COVID-19 vaccine, confirmed by their allergist/immunologist.
- Individuals with a history of myocarditis or pericarditis should talk to their health care provider and seek medical advice before getting the vaccine.

You should wait to get the vaccine if you are sick, have COVID-19 or got a different vaccine in the past two weeks.

What are the possible side effects?

Like any other vaccine or medication, the COVID-19 vaccine has potential side effects, although not everyone experiences them. Side effects can be a sign that your body is working to develop your immunity.

Most individuals who experience side effects have reported them as being mild and only lasting for the first two days after vaccination. Common side effects include:

- Pain at the injection site
- Tiredness
- Headache
- Muscle or joint pain
- Chills
- Mild fever

If you experience mild side effects after your first dose, it is important to receive the second dose. You may or may not experience the same side effects with your second dose.

What are the possible side effects? (Continued)

With ongoing monitoring of the safety and effectiveness of the COVID-19 vaccines, serious side effects found are extremely rare. Individuals who experienced these rare side effects appear to be mild and respond well to conservative treatment (e.g., non-steroidal anti-inflammatory drugs) and rest.

If you experience side effects that worry you or that don't go away after a few days, seek immediate medical attention. Examples of serious side effects include:

- Hives
- Swelling of the face or mouth
- Trouble breathing
- Chest pain
- Irregular hearth rate
- Serious drowsiness
- High fever (over 40°C)
- Convulsions or seizures
- Other serious symptoms (e.g., "Pins and needles" or numbness)

What are the possible side effects? (Continued)

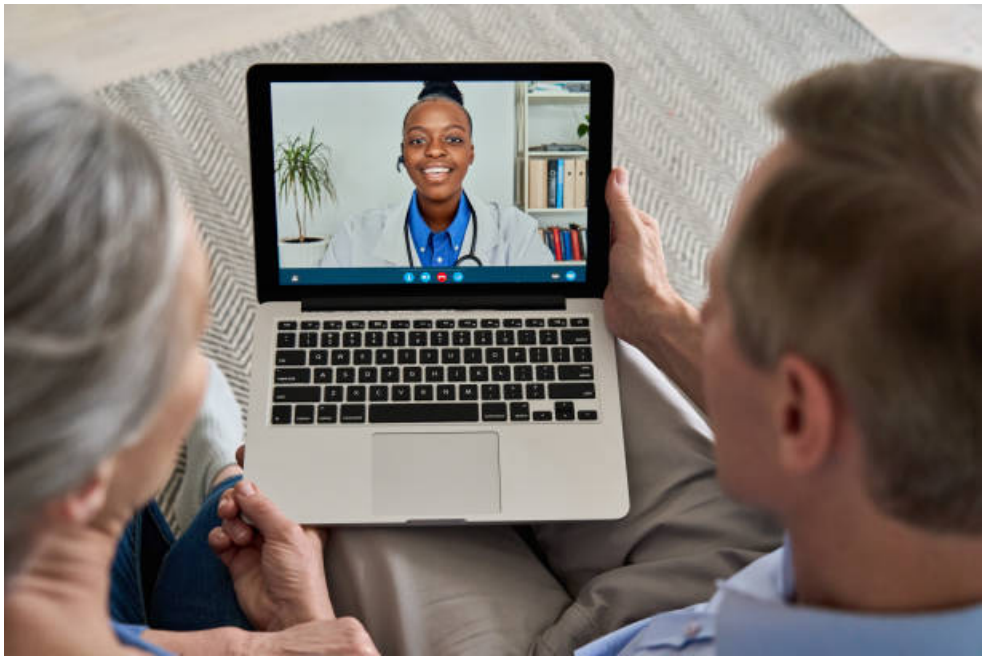
Myocarditis/pericarditis is a very rare side effect, mostly experienced by young males under age 30 after their second dose. Reported cases experienced mild illness, responded well to treatment and symptoms, and recovered quickly. If you experienced chest pain, trouble breathing, or irregular heart beat in the days after vaccination, seek medical attention.

As a precautionary measure, the second dose in the mRNA COVID-19 vaccination series should be deferred in individuals who experience myocarditis or pericarditis following the first dose of an mRNA COVID-19 vaccine until more information is available. Individuals with a history of myocarditis or pericarditis should talk to their health care provider and seek medical advice before getting vaccinated.

What are the possible side effects? (Continued)

Speak with your health care provider if you experienced any symptoms or adverse events after vaccination.

All adverse reactions will be documented in real time and reported to public health for follow-up.



Is it true that ...?

Is it true that I can get COVID-19 from the vaccine? No. The vaccine for COVID-19 will not cause a COVID-19 infection, but it will help your body fight off the virus more easily if you get infected after receiving the vaccine.

Is it true that the vaccine has a microchip that will track me? No. The vaccine does not contain a microchip or other device for tracking or monitoring purposes.

Is it true that I may spread the virus to others after vaccination (shedding)? No. The vaccine does not contain live virus and so viral shedding cannot occur. Viral shedding is something that can happen when a live vaccine is used, which is not the case with the COVID-19 vaccines.

Is it true that ...? (Continued)

Is it true that the vaccine can affect fertility? There is no evidence or data to suggest that the vaccine affects fertility.

Is it true that second doses aren't really necessary? Unless you receive the Janessen vaccine, which only requires one dose, a second dose of a COVID-19 vaccine will give your body stronger and longer protection against COVID-19 and the variants. We recommend completing your vaccine series as soon as you are eligible.

Is it true that ...? (Continued)

Is it true that the vaccine causes long-term harm? No, the vaccine is not expected to cause any long-term harm.

Is it true that someone with food or seasonal allergies shouldn't receive the vaccine? No. People with a history of allergic reactions and/or anaphylaxis to any food, drug, venom, latex or other allergens not related to the COVID-19 vaccine can receive the COVID-19 vaccine followed by observation for a minimum of 15 minutes.

Individuals with allergy issues like allergic rhinitis, asthma and eczema can receive the vaccine followed by observation for a minimum of 15 minutes.

Is it true that ...? (Continued)

Is it true that the vaccine can change a person's DNA? No. The vaccine never comes into contact with DNA. It does not cause mutations or disrupt the DNA.

Is it true that people who are vaccinated don't need to follow public health measures (such as wearing a mask/face covering and physical distancing)? While the vaccine is an added layer of protection, getting fully vaccinated against COVID-19 does not replace the need for following effective and proven COVID-19 public health measures.

Why should I get vaccinated?

1. The vaccine will help to protect you from serious illness associated with COVID-19
2. High vaccination rates will help us return to a more normal life and will allow the lifting of certain public health measures and ensure we don't have another wave of COVID-19.
3. By getting vaccinated, you are also protecting your loved ones and ensure you can see them without risking their health.
4. Ensure businesses remain open and individuals can continue to work.
5. By getting vaccinated, you help create a "ring of protection" around those who cannot be well protected by vaccine.

Why should I get vaccinated? (Continued)

When examining the risk versus benefits of the vaccine, for most people, the possible short-term side effects are less than the risk and potential long-term health damages caused by the COVID-19 virus.

Where can I get vaccinated?

Getting your vaccine is easier than ever with many options to choose from:

- Visit a walk-in clinic
- Pop-up clinic
- Mobile clinic
- Some pharmacy and primary health care providers

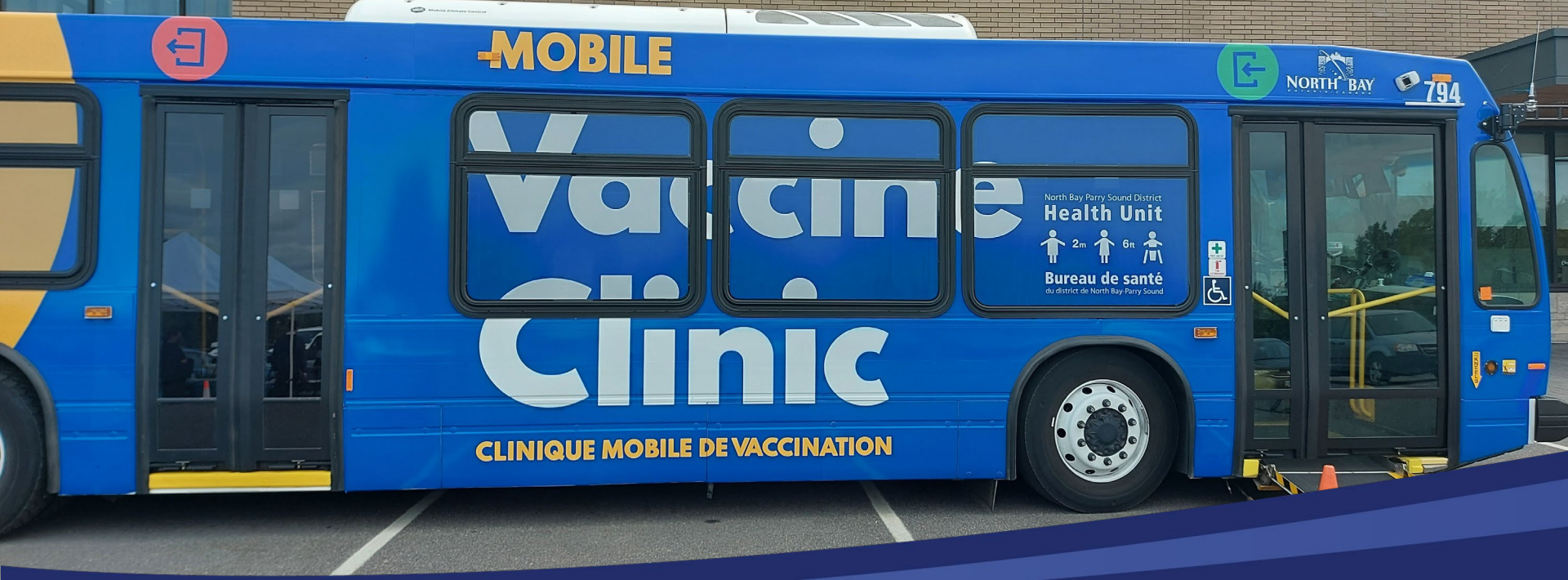
[For more information visit our website.]

Congratulations! You completed the COVID-19 vaccination training module.

Should you have additional questions, please contact the North Bay Parry Sound District Health Unit by calling 1-800-563-2808 (toll-free).

For more information:

- North Bay Parry Sound District Health Unit and follow us on Facebook or Twitter
- Health Canada
- Government of Ontario
- Public Health Ontario



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