



# Housing and Environmental Public Health Environmental Public Health Services



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**Today we will discuss:**

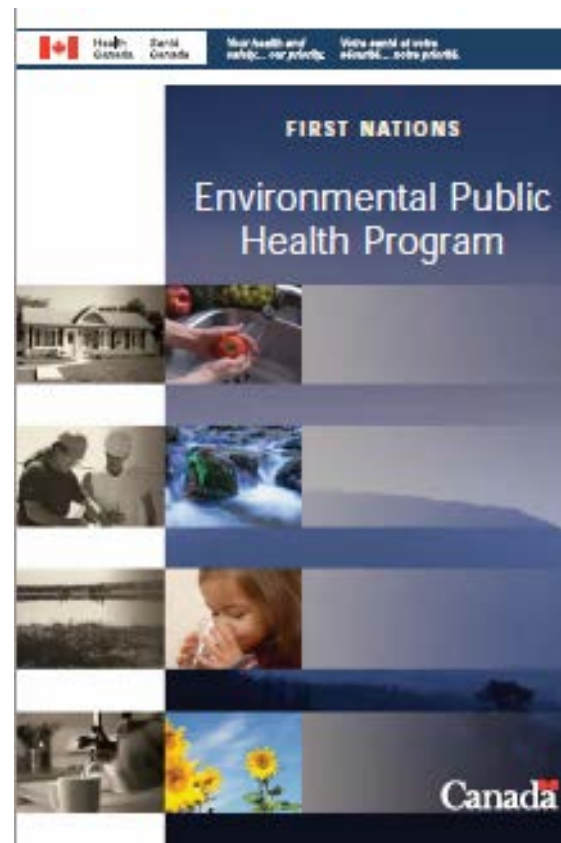
**Environmental Public Health Housing Program**

**Adapting program delivery to meet the needs of First Nations**



# Program Objective

The Environmental Public Health Program **works to identify and prevent environmental public health risks that could negatively impact the health of First Nations** community residents and to recommend corrective action to reduce these risks.





# Guiding Principles

1. **Work with First Nations communities as active partners** in the Environmental Public Health Program.
2. **Collaborate with** public health workers, provincial and local health authorities, First Nations organizations and other federal, provincial and municipal departments and agencies when delivering environmental public health programming in First Nations communities.
3. **Strive for a level of on-reserve environmental public health services** that is comparable to that available off-reserve and consistent from region to region.



# Role of Environmental Public Health Officers

- EPHOs (formerly know as EHOs) provide advice, guidance, education, public health inspections and recommendations to First Nations to help manage public health risks associated with the environment.
- Gather data to analyse what steps can be taken to promote public health in First Nation communities.
- Can be employed by Indigenous Services Canada - FNIHB or First Nation organizations.
- **All EPHOs must be certified with the Canadian Institute of Public Health Inspectors.**



# Core Programming

1. Drinking Water
2. Food Safety
3. **Health and Housing**
4. Wastewater
5. Solid Waste Disposal
6. Facilities Inspection
7. Communicable Disease Control
8. Emergency Preparedness/Response



# Environmental Public Health Services

## *EPHOs role in community Housing*

## HEALTH AND HOUSING

A healthy home means that residents have the physical and social conditions necessary for health, safety, hygiene and comfort. The Environmental Public Health Program works with First Nations communities and other agencies to help address public health issues in housing.

### Activities

#### 1) ENVIRONMENTAL PUBLIC HEALTH ASSESSMENT

- Provide public health inspections of on-reserve public/social housing upon request. Inspections may include evaluation of indoor air quality, contaminants, pest control, water supply, solid and liquid waste disposal, general safety, structural defects and overcrowding.
- Review plans from a public health perspective for new housing developments and renovations.
- Provide advice, guidance and recommendations to Chiefs, Councils, community workers and occupants related to all stages of housing: site and design, construction, occupancy and demolition.

#### 2) PUBLIC EDUCATION

- Provide public education to Chiefs, Councils, community workers and occupants about how to maintain a safe and healthy home.

#### 3) TRAINING

- Provide training sessions upon request on public health issues related to housing.





# Adapting Program Delivery

- Follow all specific community Covid requirements and restrictions for access.
  - Continue to work directly with Chief and Council and their representatives.
- COVID-19 EPHO Safety Guidance Developed Nationally
  - COVID-19-specific occupational health and safety guidance.
  - This guidance will be updated as the situation evolves and should best practices change.

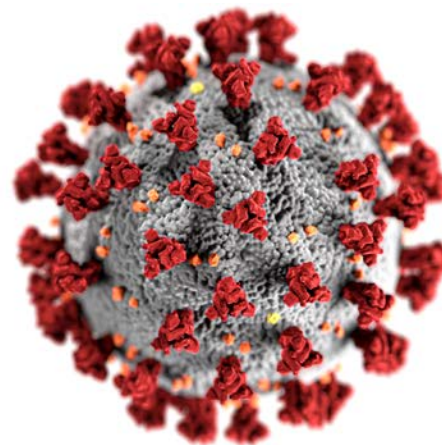






# Adapting Program Delivery

- EPHOs are responsible to ensure they support the safety of their co-workers and community members.
  - Establish a plan with the community or facility contact.
  - PPE Guidelines and training, etc.
  
- FNIHB Directive Self-Screening for COVID-19 of All Healthcare Professionals





# Adapting Program Delivery

- **Adapting** communication methods to meet the needs of our clients.
- Inspections or assessments can be conducted virtually when possible.
- Ongoing participation with community and individual water and wastewater project teams.
- Virtual training sessions and meetings
  - Individual or small group sessions
  - work with individual community needs
  - Supporting and building capacity at the community level and First Nation organizations
- Photos/videos for earlier insect identification.





# **\*New\* Resources for Indoor Ventilation in Homes**

## COVID-19: Guidance on indoor ventilation during the pandemic

– Updated: 2021-01-18

- Public Health Agency of Canada (PHAC) has developed this guide to inform Canadians
  - how indoor ventilation, in combination with other recommended public health measures, can reduce the spread of COVID-19.
  - provides practical tips on how to improve indoor air, ventilation and filtration to help reduce the spread of COVID-19.
  - This guidance is intended to be used generally across indoor environments, its application will depend on:
    - occupancy, the type of building and the type of activity undertaken in the indoor setting



# \*New\* Resources for Indoor Ventilation in Homes

## COVID-19: Guidance on indoor ventilation during the pandemic

### Key messages

- virus causing COVID-19 is spread through droplets and aerosols
- risk particularly to people who are in:
  - enclosed spaces
  - indoor situations where people are in close proximity

The most important elements in reducing the risk of COVID-19 are **preventive measures**, such as:

- ✓ minimizing the number of persons in a place at the same time
- ✓ maintaining a physical distance of at least 2 metres
- ✓ using well-constructed, well-fitting masks
- ✓ practising good hand and respiratory hygiene



# **\*New\* Resources for Indoor Ventilation in Homes**

COVID-19: Guidance on indoor ventilation during the pandemic

**Preventative Measures + Adequate Ventilation =  
....reducing the risk of COVID-19 transmission  
in indoor settings**

**\*Good indoor ventilation alone cannot protect people from exposure to the virus, particularly:**

- ✓ during close unprotected contact
- ✓ in the absence of other protective measures



# Indoor Ventilation in Homes

- Transmission of the virus depends on multiple factors.
- The following settings are particularly risky: closed spaces, crowded places, and close interactions (e.g., close-range conversations).
- Risk is higher in settings where these factors overlap and/or involve activities such as singing, shouting or heavy breathing (e.g., during exercise).

The following are considerations to reduce the risk of COVID-19 transmission:

## **Indoor gatherings.**

- Visitors from outside household increase the opportunity for the virus to be brought in.
- Maintain physical distance, keep visits short, and have visitors and household members wear a mask to protect each other.
- It is even more important to respect these measures when there is an elder or other person that is specifically vulnerable to the virus. As an alternative, meet outside whenever possible.

## **High-risk activities.**

- Certain activities create more respiratory droplets, such as singing, speaking loudly or heavy breathing that occurs when exercising. The risk of transmission increases when these activities are in closed spaces, crowded places, and involve close interactions.
- Avoid smoking indoors as exposure to indoor air pollutants can increase risks associated with respiratory infections such as COVID-19.



# Indoor Ventilation in Homes

## Crowding.

- Higher number of people in a space increases the likelihood that an infectious individual is present as well as the number of people who may get infected.
- Over-crowded and multi-generational households may also have poor ventilation. It is most important to improve ventilation in these situations, as options to reduce occupancy may not be available.

## Ventilation.

- Describes the movement of air into or out of homes and proper ventilation is a key component of good indoor air quality. Ventilation can improve indoor air quality by bringing in fresh air from outside and removing pollutants as well as small respiratory particles that may contain the virus from the home.

**\*improving ventilation alone cannot protect people from exposure to the virus, particularly when within 1-2 meters of each other or when touching contaminated surfaces\***



# Indoor Ventilation in Homes

## Ventilation continued.

- Airing indoor spaces by opening windows and doors is the simplest way to improve ventilation, when outdoor conditions permit and when there are no safety concerns (e.g., injury or security).
- Increasing outdoor air is particularly important when:
  - Visitors (when permitted by local conditions) or trades-people such as contractors are present in the house.
  - Someone from a support bubble is meeting with a household member indoors.
  - A care worker is providing assistance at the client's residence.
  - Someone in the household has or is suspected to have the COVID-19 virus.
  - Opening multiple windows promotes cross-ventilation and increases airflow.
  - When opening windows or doors, consider the impact on health such as allergens, thermal comfort and energy use.
  - Run the bathroom and kitchen exhaust fans if they vent to the outside. When running exhaust fans for extended amounts of time, open a window to prevent drawing in contaminated air from crawlspaces or combustion appliances.
  - Toilet flushing can generate droplets of faecal pathogens within plumes. Close the toilet seat lid before flushing.
  - Avoid portable or ceiling fans or single-unit air conditioners as they only circulate air and do not exchange air or improve ventilation. If these are necessary, aim the air stream away from people.
  - Use a box fan in a window, with air blowing either into the room, or to the outside. Make sure that they are not blowing air directly between people, as this can increase the risk of aerosol transmission. Use fans with care and prevent safety hazards. Use fans with shielded blades, out of reach of small children, and do not easily fall over.





# Indoor Ventilation in Homes

## Mechanical Ventilation (HVAC Systems)

- For houses with a heating, ventilation, and air conditioning (HVAC) system, such as forced-air (furnace) or heat recovery ventilation (HRV), ensure that the system is properly maintained and operated.
  - Review the operational manual and consult an HVAC professional or your local housing authority (if applicable) to verify effective operations.
- Ventilation systems must be regularly maintained to operate effectively.
  - Ensure that filters are routinely cleaned and/or changed, according to manufacturer's instructions.
  - Wear gloves and mask when changing or cleaning the filter.
  - Review the operational manual for detailed instructions on cleaning/changing filters or consult with your local housing authority.
- An HVAC professional can assist to determine the highest efficiency filter your system can accommodate without impeding airflow (e.g., as indicated by the MERV rating).
  - Increase air exchanges by operating the system more frequently and for longer periods.
- Keep areas near system inlets and outlets clear.
- Arrange furniture away from air vents and high airflow areas.
- If your HVAC system has an energy-efficient air-to-air heat exchanger, heat recovery ventilator (HRV) or energy-recovery ventilator (ERV) **use it, as they increase ventilation.**



# Indoor Ventilation in Homes

## Portable Air Cleaners/Air Purifiers

Air cleaning devices can generally improve indoor air quality especially in areas with no air circulation, **however currently there is no evidence to support that portable air cleaners/air purifiers on their own are effective in reducing the spread of COVID-19.**

When considering the use of air cleaning devices to supplement existing ventilation the following should be considered:

- Air cleaners that use high-efficiency particulate air (HEPA) filters remove particles from the air, including particles of the size carrying the virus however they do not prevent transmission associated with close contact interactions, the primary route of COVID-19 transmission.
- Ensure air cleaning devices are appropriately sized; select a unit that has a Clean Air Delivery Rate (CADR) large enough for the room where it will be used.
- Depending on the intended use and claims associated with a device and/or product(s), it may be subject to oversight as a COVID-19 medical device or as a pest control product. Check to see if products and devices have been approved and for what uses.
- Follow the manufacturer's recommendations for operating, maintaining and cleaning the unit. Replace filters as per manufacturer's instructions.
- If using a portable air cleaner, it should be run continuously, and placed in the middle of the room (away from walls) to allow unimpeded airflow. Position the air cleaner to minimize blowing directly from one person to another.
- Avoid ozone producing air cleaners, such as ozone generators, or electrostatic precipitators which create ozone as a by-product.

**Is this an approved device?**



# Authorized medical devices for uses related to COVID-19: Overview

<https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/medical-devices/authorized/other.html>

The screenshot shows the top navigation bar of the Government of Canada website. It includes the Canadian flag, the text "Government of Canada" and "Gouvernement du Canada", a search bar with the text "Search Canada.ca" and a magnifying glass icon, and a "MENU" dropdown button. Below the navigation bar is a breadcrumb trail: "Canada.ca > Coronavirus disease (COVID-19) > COVID-19 health product industry > COVID-19 medical devices". The main heading is "Authorized medical devices for uses related to COVID-19: Overview". Below the heading is a grid of six buttons: "Overview" (highlighted in dark blue), "List of authorized testing devices", "List of authorized medical devices other than testing", "List of medical devices for expanded use", "List of medical devices for exceptional import and sale", and "List of products no longer authorized under IO".



# Hard-surface disinfectants and hand sanitizers (COVID-19): List of disinfectants with evidence for use against COVID-19

<https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>

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# Indoor Ventilation in Homes

## Humidity

- Maintain humidity between 40-60% relative humidity (RH).
- Low humidity can cause droplets to shrink allowing them to stay suspended in air for longer. Low humidity can also dry our airways, potentially reducing our natural defenses against respiratory infections.
- Avoid high humidity as this can lead to condensation and result in mould growth. Use the kitchen hood fan when cooking foods that generate a lot of steam, such as boiling and canning.



# **\*New\* Resources for Indoor Ventilation in Homes**

FNIHB has a draft document:

## Ventilation in Homes during COVID-19 – Guidance for First Nations

- draft document January 2021
- once released it will be shared with FNs



I would like to dedicate my presentation to my dear friend and former colleague Dr. Thomas Dignan.





**Thank you.**

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