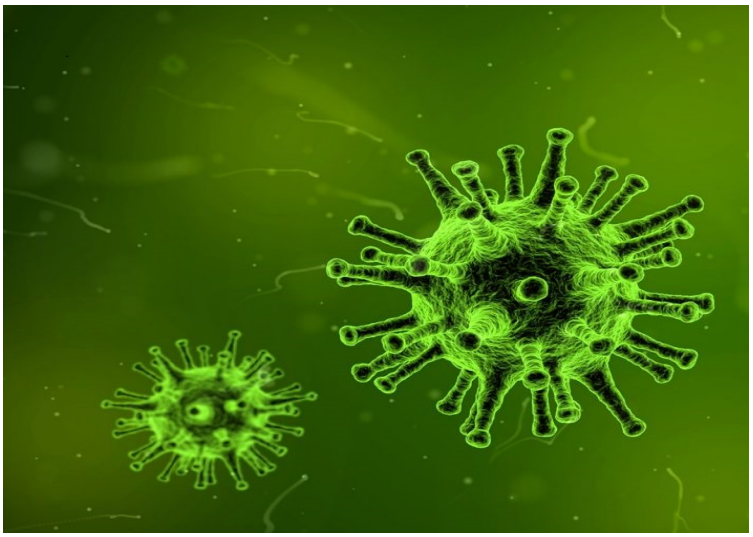

CORONAVIRUS COVID-19

A Q&A Guide for CUPE Health Care Workers in Ontario

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Coronavirus – COVID-2019

The following guide is based on the most recent information related to the coronavirus (COVID-19) that emerged from Wuhan, China in late December 2019. Information about the virus is gathered everyday. Knowledge about how the virus is transmitted has yet to be fully understood. For this reason, CUPE is recommending that health care settings adopt the precautionary principle towards infection prevention and control of COVID-19.

The precautionary principle[1] means taking action to prevent infection from potentially serious viruses without having to wait for complete scientific proof that a course of action is necessary. While there is continued uncertainty that the virus is not spread through the air, we must conduct ourselves as if it were.

This Q&A guide can be used for most health care workplaces, including acute care settings, residential facilities, home care, and paramedic services.

Disclaimer: This Q&A guide is not legal advice and is subordinate to the Occupational Health and Safety Act R.S.O. 1990 c 0.1 and the regulations. Please refer to the Ministry of Labour, CUPE National Health and Safety branch materials, the Public Health Agency of Canada, Public Health Ontario, the Ontario Ministry of Health and Ministry of Long-Term Care and the various government health agencies for further information and guidance. This guide does not address Federal occupation health and safety legislation. The incorporation of any recommendation must take into consideration the Ontario Human Rights Code as well as privacy and confidentiality legislation.

1. <u>What are coronaviruses?</u>

   Coronaviruses are a large family of viruses. They can cause diseases ranging from the common cold to more severe diseases such as **Severe Acute Respiratory Syndrome (SARS)** and **Middle East Respiratory Syndrome (MERS).** Some coronaviruses transmit easily from person to person while others do not.[2]

2. <u>What is the name of the coronavirus and the disease?</u>

   The **World Health Organization (WHO)** has named the disease caused by the coronavirus that emerged from China in 2019 as COVID-2019.[3] The **Coronavirus Study Group** (CSG) of the **International Committee on Taxonomy of** Viruses, has decided that the virus is a variant of the coronavirus that caused the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2002–03. So, it named the new pathogen Severe Acute Respiratory Syndrome-related coronavirus 2, or SARS-CoV-2.[4]

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[1] See: Ontario Health Care Health and Safety Committee Under Section 21 of the Occupational Health and Safety Act https://terraform-2018042317445374680000001.s3.amazonaws.com/attachments/cjiisgnj00040fxj7ys592r7y-approved-hazard-control-principles-pp-to-infectious-agents-eng-gn.pdf

[2] https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/frequently-asked-questions.html

[3] See: https://www.who.int/dg/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020

[4] Severe acute respiratory syndrome-related coronavirus: The species and its viruses – a statement of the Coronavirus Study Group

CUPE recommends that when discussing the current coronavirus outbreak, that members and the Joint Health and Safety Committee (JSHC) **use the term COVID-2019 instead of SARS-CoV-2 to avoid confusion** with the virus that exposed health care workers in Ontario in 2003.

3. How is the virus spread?

The prevailing consensus among health agencies including the Public Health Agency of Canada (PHAC)[5], Center for Disease Control (CDC)[6] and the WHO[7] is that the virus is spread primarily through close **contact** (within two (2) meters) with an infected person through respiratory **droplets** generated when a person, for example, coughs or sneezes, or through droplets of saliva or discharge from the nose.

There remains no consensus if COVID-19 is transmitted by small droplets suspended in the air or through procedures that generate aerosols (e.g open suctioning). As such, CUPE is recommending that workers and the JHSC treat COVID-19 as an **airborne** transmitted disease.

In Ontario, the Ministry of Health and Ministry of Long-Term Care (MOH/MOLTC) has taken a more preventative approach than other agencies by recommending that health care settings adopt routine practices and additional precautions for contact, droplet and **airborne** infection[8].

4. What is the incubation period?

The prevailing consensus is that time between infection and the onset of clinical symptoms of the disease is 1 -12 days.[6] [7] Coronaviruses, such as MERS, have incubation periods that can last up to 14 days.[9] As such, CUPE recommends that health care setting adopt a more conservative incubation period of **greater than 14 days** without symptoms.

5. Can the virus be spread by a person with no symptoms of the disease (asymptomatic)?

There is no consensus that an asymptomatic person can not transmit the disease during the incubation period. In rare cases, transmission of the virus has occurred from an asymptomatic person.[10] [11] For this reason, CUPE is recommending that health care settings adopt the precautionary principle until it is fully understood how the virus is transmitted.

Alexander E. Gorbalenya, Susan C. Baker, Ralph S. Baric, Raoul J. de Groot, Christian Drosten, Anastasia A. Gulyaeva, Bart L. Haagmans, Chris Lauber, Andrey M Leontovich, Benjamin W. Neuman, Dmitry Penzar, Stanley Perlman, Leo L.M. Poon, Dmitry Samborskiy, Igor A. Sidorov, Isabel Sola, John Ziebuhr

[5] See: PHAC https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/frequently-asked-questions.html

[6] See: CDC https://www.cdc.gov/coronavirus/2019-ncov/about/transmission.html

[7] See: WHO https://www.who.int/news-room/q-a-detail/q-a-coronaviruses

[8] See: MOHLTC http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/2019_guidance.aspx

[9] Ontario Ministry of Health: Infectious Diseases Protocol Appendix A: Disease-Specific Chapters Chapter: Diseases caused by a novel coronavirus, including Severe Acute Respiratory Syndrome and Middle-East Respiratory Syndrome (MERS) January 2020

[10] https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200201-sitrep-12-ncov.pdf?sfvrsn=273c5d35_2

[11] The New England Journal of Medicine: Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany, January 30, 2020

This means that members of a community who have had contact from a person who has developed COVID-19 but had not shown symptoms, should be treated as if they carry the virus.

6. Which infection prevention and control (IPAC) measures and procedures for COVID-19 should be in place for health care settings?

All health care settings should have IPAC programs in place. The key components of the program include, among others:

- policies and procedures (hand hygiene, IPAC Committee, staffing, PPE)
- routine practices and additional precautions (environmental and housekeeping)
- transporting patients
- screening and surveillance
- investigations of outbreaks
- auditing and evaluation
- PPE stock and supply
- education and training for health care workers
- point of entry controls

Under the Health Care and Residential Facilities regulation, the employer must develop, establish and put into effect IPAC programs in consultation with the JHSC.[12] These programs must be reviewed at least annually or in light of current knowledge and practice to ensure that the measures and procedures put into effect continue to protect workers from exposure to infectious diseases[13].

7. What are the routine practices and additional precautions required for contact, droplet and airborne infectious diseases for acute care setting?

Public Health Ontario sets out the following airborne precautions, in addition to contact and droplet precautions.

Airborne Infection Isolation Room

- Patients with suspected or confirmed cases of airborne infection should be placed in a room that is designed, constructed and ventilated to limit the spread of airborne microorganisms from an infected occupant to the surrounding areas of the health care setting. This is also known as a negative pressure room.[14]
- If a negative pressure room is not available a single room with a portable high efficiency particulate air (HEPA) filtration unit.
    - If a room with HEPA filtration is not available, a single isolated room for contact, droplet and airborne precautions.

[12] O. Reg. 67/93, s. 8.
[13] O. Reg. 67/93, s. 9 (2), (3).
[14] Public Health Ontario : Provincial Infectious Diseases Advisory Committee (PIDAC)– Routine Practices and Additional Precautions in All Health Care Setting (3rd Edition) November 2012

In the case of suspected patients with COVID-19 assigned to a single designated room or ward without negative pressure or a HEPA filter, an anteroom should be set up before entering/exiting the area.

Information and instruction (beyond signage) must be given to workers prior to entering any isolation area.

For more on Airborne Infection Isolation Rooms see attached standards and guidelines (APPENDIX A & B) from Public Health Ontario.

Personal Protective Equipment (PPE)

CUPE is recommending that health care settings use PPE for routine practices and additional precautions to reduce risk of exposure to contact, droplet and airborne infectious diseases. Public Health Ontario sets out the following minimum precautions in the case of novel respiratory infections:

- A fit-tested, seal-checked N95 respirator covering the nose and mouth:
    - when entering the client/patient/resident's room
    - when within two meters of the client/patient/resident.
- Eye protection when within two meters of the client/patient/resident.
- Gloves and gown to enter the client/patient/resident's room.
- A mask to be worn by the client/patient/resident when outside his or her room or the care area and hand hygiene performed on exiting the room.[15]

After the health care provider has completed care in a negative pressure room, they must remove PPE in a manner that does not contaminate themselves or the environment. See attached diagram (APPENDIX C) for recommended steps for putting on and taking off PPE (don and doff) from Public Health Ontario.

N95 respirators (disposable mask or cartridge)

An N95 respirator is a personal protective device that is worn on the face and covers the nose and mouth to reduce the wearer's risk of inhaling airborne particles.[16] A NIOSH-certified N95 respirator filters particles one micron in size, has 95% filter efficiency and provides a tight facial seal with less than 10% leak.[17]

Always select a respirator for which you have been fit-tested and perform a seal-check (See APPENDIX F) each time a respirator is applied. Fit testing of respirators should occur at least every two years or when circumstances occur that would prevent the respirator from

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[15] Public Health Ontario : Provincial Infectious Diseases Advisory Committee (PIDAC) - Best Practices for Prevention, Surveillance and Infection Control Management of Novel Respiratory Infections in All Health Care Settings; First revision February 1, 2020; pg. 18

[16] CSA: CAN/CSA-Z94.4-Selection, use and care of respirators

[17] Public Health Ontario: https://www.publichealthontario.ca/-/media/documents/ipac-core-trainers-hcp-glossary.pdf?la=en

adequately protecting the worker. Employers have the right to ask workers to be shaven, for mask fitting purposes, except in the case of a religious accommodation.

Remove the respirator correctly as per the attached diagram (APPENDIX C) and perform hand hygiene after removing the respirator.

For more information about the difference between an N95 respirator and a surgical mask, see: https://cupe.ca/respiratory-protection

Health care regulations require that PPE that is to be provided, worn or used shall be in good condition and stored in a sanitary location.[18]

Guidance for routine practices and additional precautions, including airborne infectious illnesses, can be found at: https://www.publichealthontario.ca/-/media/documents/bp-rpap-healthcare-settings.pdf?la=en

8. What type of education and training related to COVID-19 is required?

Employers have a legal duty to provide workers appropriate information and instruction (training) about all occupational hazards in their work.[19] [20] Training programs related to COVID-19, at a minimum, should include:

- The characteristics of the disease, including symptoms and modes of transmission.
- The level of risk in the community and in the health care setting.
- The health care setting's plan to respond to the infection, including surveillance, screening and staffing.
- Information about appropriate protective materials, devices, and equipment.
- Routine IPAC practices and additional precautions to prevent the transmission of infection during the course of their work.
- Steps to take if a worker suspects they have been exposed to the virus.
- The care, use and limitations of PPE.

Training programs related to infection prevention and control must be developed, implemented and maintained in consultation with the JHSC. [21]

9. What type of training is required for PPE?

Health Care Regulations require that a worker who is required to wear or use any protective clothing, equipment or device shall be instructed and trained in its care, use and limitations before wearing or using it for the first time and at regular intervals thereafter.[22]

Additionally, workers should be able to perform a run-through of tasks wearing PPE to ensure the equipment is appropriately suited and fitted to the worker. Any concerns that

[18] O. Reg. 67/93, s. 10.
[19] Occupational Health and Safety Act, R.S.O. 1990, s.25 (2)(a).
[20] Occupational Health and Safety Act, R.S.O. 1990, s. 42 (1).
[21] O. Reg. 67/93, s.9 (4)
[22] O. Reg. 67/93, s.10 (1)

the PPE impairs mobility or vision, or causes discomfort should be brought to the attention of a supervisor or the employer.

10. What is the stockpile of PPE required for coronavirus?

There is no consensus as to a minimum amount of PPE that should be readily available in case of a spike in cases of COVID-19. The Ontario Health Plan for an Influenza Pandemic recommends that health care settings, in cases of viruses with low transmissibility and high severity (SARS/MERS), should have a minimum four (4) weeks supply of gowns, gloves and eye protection[23]. The stockpile of N95 respirators would be based on recommendations by the MOH:

"… determined at the time of a pandemic based on evidence, legislative requirements, **precautionary principle**, OPS values and health equity." *(emphasis added)*

"This stockpile should account for the protection of health workers, visitors and C/P/Rs, including children who may require smaller sizes of equipment. Health sector employers that implement the careful and rigorous use of PPE for seasonal influenza are able to estimate the volumes of equipment needed based on those used during a seasonal influenza response."[24]

As such, CUPE is recommending that a minimum supply of a four (4) week stockpile of gloves, gowns, eye protection, and N95 respirators at health care settings.

11. What type of screening should take place for suspected cases of COVID-19?

The MOH/MOLTC is currently recommending routine case finding/surveillance methods which include initial screening questions/questionnaires and signage.[25]

CUPE is recommending controlled single-entry points at all acute care settings until transmission of the virus is better understood. Frontline workers should be wearing appropriate PPE for contact, droplet and airborne precautions.

All persons entering a health care setting should be screened to determine if:

- they have symptoms of respiratory infection; and
- they have been to China or other countries experiencing breakouts[26] in the last 14 days;

or

[23] Ministry of Health and Long-Term Care: Ontario Health Plan for an Influenza Pandemic; Chapter 5: Occupational Health and Safety and Infection Prevention and Control; March 2013; pg 19

[24] ibid. pg. 20

[25] Guidance for Health Care Workers and Health Sector Employers on novel coronavirus associated with Wuhan, China (2019-nCoV) http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/2019_guidance.aspx

[26] As of February 25, 2020, South Korea, Italy, Iran: Source: WHO https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200225-sitrep-36-covid-19.pdf?sfvrsn=2791b4e0_2

- if they have come into close contact with someone in the community who has travelled to China or other countries experiencing breakouts in the last 14 days

or

- if they have come into contact with a person with an undiagnosed respiratory infection.

All suspected cases of respiratory illness should be brought to a designated room for isolation and additional screening.

Where controlled single-access points are not possible, all health care settings should be screening persons behind a physical barrier (such as plexiglass).

Any patient/resident/client brought to a health care facility with a suspected case of COVID-19 should be wearing an N95 respirator before entering the workplace.

12. <u>What are my rights to refuse where health and safety is in danger?</u>

Workers have the right to refuse work that would put them in danger. The OHSA limits a health care worker's right to refuse unsafe work only for situations that are inherent to a worker's work or a normal condition of employment or when the refusal would directly endanger the life or health and safety of another person. For clarity, the first part of the condition means everyday work in which the worker has been provided adequate training and the means, PPE, equipment and devices for carrying out the work safely.
Situations where a work refusal would be based on reasonable grounds include:

- PPE that isn't provided, not in good condition, not sanitary or does not fit.
- A worker is asked to wear PPE for which the worker has not received training.
- A worker is asked to perform a task for which the worker has not received training and the task is likely to endanger the health and safety of the worker or another worker.
- A worker is asked to perform a task alone, where the task requires at least two workers.

Although a worker who has a reason to believe that the work will endanger themselves has the right to refuse unsafe work **at any time**, it is recommended that:

- workers communicate any occupational health and safety concern with their supervisor or employer; and
- consult with a worker member of the JHSC.

13. <u>What can the JHSC do to ensure the employer is complying with occupational health and safety legislation?</u>

The JHSC has the right to identify workplace hazards and obtain information related to potential or existing hazards of materials, processes and equipment in the workplace and similar institutions[27]. Additionally, the employer must provide, upon request, any report

[27] Occupational Health and Safety Act, R.S.O. 1990, s. 9 (18)

respecting occupational health and safety[28]. Health care and residential facility JHSCs have the right to review policies and programs (measures and procedures) related to occupational health and safety[29].
The purpose of identifying hazards, receiving reports, and reviewing policies and programs is to highlight potential gaps and make recommendations to improve health and safety conditions for the workplace.

As such, CUPE is recommending that the worker co-chair of the JHSC call a special meeting of the committee to discuss the employer's plan towards COVID-19. The JHSC can make the following requests and audit the following programs to ensure that they are in place and both attainable and practicable.

Infection prevention and control of coronaviruses

- Request the employer's plan for COVID-19 (existing plan or new plan; will they be implementing airborne precautions as per MOH/MOLTC recommendations?)
- Request training records (PPE fit tests, routine practices and additional precautions, proper use of equipment)
- Back up plans if negative pressure rooms are not available
- Signage (in place, will be added) See attached diagrams (APPENDIX D & E)
- Stockpile of PPE (What is the supply level? Is the supplier capable of providing stock in case of a spike in cases on top of seasonal influenza?)
- Environmental and housekeeping (handling, cleaning and disposal of linen, daily cleaning and tear down from contact, droplet, airborne infection.
- Staffing (what are plans for staffing during an outbreak, call ins, dedicated teams?)
- Workers with breathing conditions while wearing N95 respirators or pregnant workers (will they be provided accommodation?)
- Will the employer provide daily updates? Shift reports? Effective safety huddle communication?

Screening and surveillance of COVID-19

- Request the employer's plan for screening and surveillance of COVID-19 (existing plan or new plan)
- Signage
- Will the employer limit entry points?
- Is PPE readily available at triage?
- Are EMS and dispatch services coordinating with the workplace before admitting suspected cases?
- Are patients/visitors screened for outpatient and ambulatory care?

CUPE recommends that any JHSC that is considering making recommendations based on information from government health agencies apply the precautionary principle to ensure

[28] Occupational Health and Safety Act, R.S.O. 1990, s. 25 (2) (l)
[29] O. Reg. 67/93, s.8

that any measures and procedures that are implemented provide the greatest protection from exposure from airborne infectious diseases.

14. Are there MOH/MOLTC sector specific guidance notes for health-care settings?

- Guidance for Primary Care Providers in a Community Setting
- Guidance for Acute Care
- Guidance for Home and Community Care Providers
- Guidance for Long-Term Care
- Guidance for Independent Health Facilities
- Guidance for Laboratories
- Guidance for Pharmacies

Until it has been fully determined how COVID-19 is spread, CUPE is recommending that health care settings adopt the precautionary principle towards routine practices and additional precautions for airborne infectious diseases. This includes practices and precautions when performing procedures generating aerosol.

15. Are there guidance notes for Paramedic Services?

Paramedics should follow routine practices and additional precautions for contact, droplet and airborne when responding to patients with respiratory illness. Dispatchers should be screening suspected cases to ensure that paramedics are properly protected before coming into close contact with patients.

Additionally, CUPE recommends that paramedics apply the precautionary principle than an asymptomatic patient who has travelled to China or has come into contact with a person in the community who has since developed COVID-19 should be treated as if they carry the virus. When conducting point of care risk assessments, paramedics should consider that transmission of COVID-19 can occur through direct or indirect contact, droplet airborne and when performing procedures generating aerosol.

The MOH/MOLTC has developed the following guidance notes for Paramedic services. http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_paramedics_guidance.pdf.

The CDC has also developed resources and guidance for Paramedic/EMS workers to prevent exposure to COVID-19.
https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html

16. What are the case definitions of COVID-19?

These are the case definitions that the MOHLTC[30] /MOLTC has adapted from PHAC[31] for surveillance purposes as of February 7, 2020.

Person under Investigation for 2019-nCoV

A person with fever and/or onset of cough or difficulty breathing,

AND any of the following:

- Travel to mainland China in the 14 days before onset of illness

OR

- Close contact with a confirmed or probable case of 2019-nCoV

OR

- Close contact with a person with acute respiratory illness who has been to mainland China within 14 days prior to their illness onset

Probable Case for 2019-nCoV

A person:

- with fever (over 38 degrees Celsius) and/or new onset of (or exacerbation of chronic) cough or breathing difficulty

  AND any of the following:

  - Travel to mainland China in the 14 days before onset of illness

  OR

  - Close contact with a confirmed or probable case of 2019-nCoV

  OR

  - Close contact with a person with acute respiratory illness who has been to mainland China within 14 days prior to their illness onset

  AND

- in whom laboratory diagnosis of 2019-nCoV is not available, inconclusive, or negative (if specimen quality or timing is suspect)

Presumptive Confirmed Case for 2019-nCoV

A person in whom the laboratory screening test for 2019-nCoV was positive from the Public Health Ontario Laboratory but not yet confirmed by the National Microbiology Laboratory (NML).

Confirmed Case for 2019-nCoV

A person with laboratory confirmation of infection with 2019-nCoV which consists of positive real-time PCR on at least two specific genomic targets or a single positive target with sequencing AND confirmed by NML by nucleic acid testing.

Case Definition Footnotes

1. The incubation period of 2019-nCoV is unknown. SARS-CoV demonstrated a prolonged incubation period (median 4-5 days; range 2-10 days) compared to other human coronavirus infections (average 2 days; typical range 12 hours to 5 days). The incubation period for MERS-CoV is approximately 5 days (range 2-14 days). Allowing for variability and recall error and to establish consistency with the World Health Organization's 2019-nCoV case definition, exposure history based on the prior 14 days is recommended at this time.

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[30] Guidance for Health Care Workers and Health Sector Employers on novel coronavirus associated with Wuhan, China (2019-nCoV) http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/2019_guidance.aspx

[31] Public Health Agency of Canada: Interim national case definition: Coronavirus Disease (COVID-19) https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/national-case-definition.html

2. A close contact is defined as a person who provided care for the patient, including healthcare workers, family members or other caregivers, or who had other similar close physical contact OR who lived with or otherwise had close prolonged contact with a probable or confirmed case while the case was ill.
3. Other exposure scenarios not specifically mentioned here may arise and may be considered at jurisdictional discretion (*e.g.* history of being a patient in the same ward or facility during a nosocomial outbreak of 2019-nCoV).
4. There is limited evidence on the likelihood of 2019-nCoV presenting as a co-infection with other pathogens. At this time, the identification of one causative agent should not exclude 2019-nCoV where the index of suspicion may be high.
5. Laboratory confirmation may not be available due to no possibility of acquiring samples for laboratory testing of 2019-nCoV.
6. Inconclusive is defined as a positive test on a single real-time PCR target or a positive test with an assay that has limited performance data available.
7. Laboratory tests are evolving for this emerging pathogen, and laboratory testing recommendations will change accordingly as new assays are developed and validated.

After PHO has identified a presumptive confirmed case, the sample will be sent to the NML for confirmation. In Canada, laboratory confirmation of infection with 2019-nCoV virus is done by the NML. Laboratory confirmation of infection with 2019-nCoV consists of positive real-time PCR on at least two specific genomic targets or a single positive target with sequencing AND confirmed by NML by nucleic acid testing.

Resources

- Canadian Union of Public Employees
  - https://cupe.ca/coronavirus
  - Respiratory Protection
  - Novel coronavirus (COVID-19) and Flight Attendants
- Centers for Disease Control and Prevention (CDC):
  - Evaluating and Reporting Persons Under Investigation (PUI)
  - Healthcare Infection Control Guidance
  - Clinical Care Guidance
  - Home Care Guidance
  - Guidance for EMS
  - Healthcare Personnel with Potential Exposure Guidance
  - Inpatient Obstetric Healthcare Guidance
- Ministry of Health and Long-Term Care
  - Guidance for Health Care Workers and Health Sector Employers on novel coronavirus associated with Wuhan, China (2019-nCoV)
- Ministry of Labour, Training and Skills Development
  - Occupational Health and Safety Act R.SO. 1990 c.0.1
  - Health Care and Residential Facilities Ont. Reg. 67/93
- Ontario Health Care Health and Safety Committee Under Section 21 Guidance Notes:
  - Application of Hazard Control Principles, including the Precautionary Principle to Infectious Agents
  - Effective Communication Processes for Occupational Health and Safety
  - Occupational Health and Safety (OHS) Education and Training

- Right to Refuse

- Public Health Agency of Canada
  - Infection prevention and control for novel coronavirus (2019-nCoV): Interim guidance for acute healthcare settings
  - Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings

- Public Health Ontario: Provincial Infectious Disease Advisory Committee (PIDAC)
  - Routine Practices and Additional Precautions in All Health Care Settings, 3rd Edition
  - Annex B: Best Practices for Prevention of Transmission of Acute Respiratory Infection In All Health Care Settings
  - Best Practices for Prevention, Surveillance and Infection Control Management of Novel Respiratory Infections in All Health Care Settings
  - Best Practices for Infection Prevention and Control Programs in Ontario In All Health Care Settings, 3rd edition
  - Best Practices for Environmental Cleaning for Prevention and Control of Infections
  - Tools for Preparedness: Triage, screening and patient management for Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infections in acute care settings

- World Health Organization
  - https://www.who.int/emergencies/diseases/novel-coronavirus-2019
  - https://www.who.int/news-room/q-a-detail/q-a-coronaviruses

APPENDIX A

BOX 11: Standards for Ventilation in Airborne Infection Isolation Rooms

Requirements for airborne infection isolation rooms are:

- ventilation creating inward directional airflow from adjacent spaces to the room (*negative pressure*):
    - monitor room on initiation of use
    - monitor at least daily when in-use
    - monitor monthly between uses
- an alarm indicating that the pressure relationship is not being maintained, provided just outside the room and at the nurse's station or point of supervision
- directional airflow within the room such that clean supply air flows first to parts of the room where staff or visitors are likely to be present, and then flows across the bed area to the exhaust
- nonaspirating diffusers
- low-level exhaust near the head of the bed
- air exhausted to the outdoors via dedicated exhaust:
    - washroom exhausted using the same exhaust system as the room
    - exhaust fan supplied by emergency power
- HEPA filtration of exhaust in cases where exhaust air is not discharged clear of building openings or where a risk of recirculation exists
- minimum 12 air changes per hour (new facilities)
- minimum 3 outdoor air changes per hour
- frequent monitoring of supply and exhaust system function by staff trained in appropriate assessment of the airflow; direction of air flow should be tested with smoke tubes at all four corners of the door

Source: Canadian Standards Association, CAN/CSA Z317.2 *Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities*

APPENDIX B

BOX 12: Guidelines for Use of Airborne infection isolation Rooms

- In acute and long-term care settings the client/patient/resident is to be placed in an airborne infection isolation room that meets the criteria set out by the Canadian Standards Association (see Box 11).
- Room should have toilet, hand washing sink and bathing facilities. If air is exhausted from the bathroom, leave bathroom door open when not in use.
- Door must be kept closed whether or not client/patient/resident is in the room.
- Windows must remain closed at all times; opening the window may cause reversal of air flow, an effect that can vary according to wind direction and indoor/outdoor temperature differentials.
- Room door must remain closed and negative airflow maintained after client/patient/resident discharge until all air in the room has been replaced; this will vary based on the number of room air changes per hour; consult facility plant engineers to determine the air changes per hour for each airborne infection isolation room (refer to Appendix D, *Time Required for Airborne Infection Isolation Room to Clear M. tuberculosis*).
- A preventative maintenance program must be in place.
- If a **long-term care setting** does not have the appropriate facilities for airborne precautions, the resident is to be transferred to a health care facility equipped to manage airborne infections; if the transfer is delayed or not possible, place the resident in a single room with the door and window closed.
- In **ambulatory settings**, clients with suspected airborne infection should not wait in a common area but be placed directly into an examining room. Preferably this should be a negative pressure room with exhaust vented to the outside or filtered through a high efficiency filter if recirculated. If a well ventilated room is not available, a single room should be used and the client examined and discharged as quickly as possible. The door must be closed.
- In **aerosol-generating procedure rooms** where patients with airborne infections are expected to be seen (e.g., bronchoscopy suite, autopsy suite, rooms used for sputum inductions):
  - there is to be a **minimum** of 12 air changes per hour in new facilities and a minimum of six air changes per hour in existing facilities;
  - the room must have inward directional air flow;
  - the air is to be exhausted directly outside the building and away from intake ducts or through a high efficiency particulate air (HEPA) filter, if recycled; and
  - the Canadian Tuberculosis Standards recommend a minimum of 15 air changes per hour for these rooms.

Source: Health Canada's *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care*, 1999 [under revision] and the Public Health Agency of Canada's *Canadian Tuberculosis Standards*, 2007

APPENDIX C RECOMMENDED STEPS FOR PUTTING ON AND TAKING OFF PERSONAL PROTECTIVE EQUIPMENT (PPE)

[Images developed by Kevin Rostant.
Some images adapted from Northwestern Ontario Infection Control Network – NWOICN]

PUTTING ON PPE

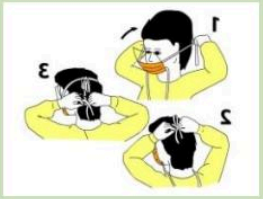
1. Perform Hand Hygiene

2. Put on Gown

- Tie neck and waist ties securely

3. Put on Mask/N95 Respirator

- Place mask over nose and under chin
- Secure ties, loops or straps
- Mould metal piece to your nose bridge
- For respirators, perform a seal-check



4. Put on Protective Eyewear

- Put on eye protection and adjust to fit
- Face shield should fit over brow

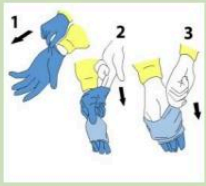
5. Put on Gloves

- Put on gloves, taking care not to tear or puncture glove
- If a gown is worn, the glove fits over the gown's cuff

TAKING OFF PPE

1. Remove Gloves

- Remove gloves using a glove-to-glove/skin-to-skin technique
- Grasp outside edge near the wrist and peel away, rolling the glove inside-out
- Reach under the second glove and peel away
- Discard immediately into waste receptacle



2. Remove Gown

- Remove gown in a manner that prevents contamination of clothing or skin
- Starting at the neck ties, the outer, 'contaminated', side of the gown is pulled forward and turned inward, rolled off the arms into a bundle, then discarded immediately in a manner that minimizes air disturbance

3. Perform Hand Hygiene

4. Remove Eye Protection

- Arms of goggles and headband of face shields are considered to be 'clean' and may be touched with the hands
- The front of goggles/face shield is considered to be contaminated
- Remove eye protection by handling ear loops, sides or back only
- Discard into waste receptacle or into appropriate container to be sent for reprocessing
- Personally-owned eyewear may be cleaned by the individual after each use

5. Remove Mask/N95 Respirator

- Ties/ear loops/straps are considered 'clean' and may be touched with hands
- The front of the mask/respirator is considered to be contaminated
- Untie bottom tie then top tie, or grasp straps or ear loops
- Pull forward off the head, bending forward to allow mask/respirator to fall away from the face
- Discard immediately into waste receptacle

6. Perform Hand Hygiene

APPENDIX D

SAMPLE SIGNAGE FOR ENTRANCE TO ROOM OF A PATIENT REQUIRING DROPLET AND CONTACT PRECAUTIONS IN ACUTE CARE FACILITIES

DROPLET + CONTACT PRECAUTIONS – Acute Care Facilities

Hand Hygiene as per Routine Practices

Hand hygiene is performed:

- ✓ Before and after each patient contact
- ✓ Before performing invasive procedures
- ✓ Before preparing, handling, serving or eating food
- ✓ After care involving body fluids and before moving to another activity
- ✓ Before putting on and after taking off gloves and other PPE
- ✓ After personal body functions (e.g., blowing one's nose)
- ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids
- ✓ After contact with items in the patient's environment
- ✓ Whenever there is doubt about the necessity for doing so

Patient Placement

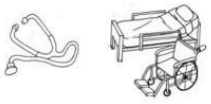
- ✓ Single room with own toileting facilities if available, or maintain a spatial separation of at least 2 metres between the patient and others in the room, with privacy curtain drawn
- ✓ Door may remain open
- ✓ Perform hand hygiene on leaving the room

Mask and Eye Protection or Face Shield

- ✓ Wear within 2 metres of the patient
- ✓ Remove and perform hand hygiene on leaving the room

Gown [based on risk assessment] and Gloves

- ✓ Wear gloves when entering the patient's room or bed space
- ✓ Wearing gloves is NOT a substitute for hand hygiene.
- ✓ Remove gloves on leaving the room or bed space and perform hand hygiene
- ✓ Wear a long-sleeved gown when entering the patient's room or bed space if skin or clothing will come into direct contact with the patient or the patient's environment



Environment and Equipment

- ✓ Dedicate routine equipment to the patient (e.g., stethoscope, thermometer)
- ✓ Disinfect all equipment that comes out of the room
- ✓ All high-touch surfaces in the patient's room must be cleaned at least daily

Patient Transport

- ✓ Patient to wear a mask during transport

Visitors

- ✓ Non-household visitors wear a mask and eye protection within 2 metres of the patient
- ✓ Visitors must wear gloves and a long-sleeved gown if they will be in contact with other patients or will be providing direct care*
- ✓ Visitors must perform hand hygiene before entry and on leaving the room

* Direct Care: Providing hands-on care, such as bathing, washing, turning the patient, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.

APPENDIX E **SAMPLE SIGNAGE FOR ENTRANCE TO ROOM OF A RESIDENT REQUIRING DROPLET AND CONTACT PRECAUTIONS IN NON-ACUTE CARE FACILITIES**

DROPLET + CONTACT PRECAUTIONS – Non-acute Care Facilities

Hand Hygiene as per Routine Practices

Hand hygiene is performed:

- ✓ Before and after each resident contact
- ✓ Before performing invasive procedures
- ✓ Before preparing, handling, serving or eating food
- ✓ After care involving body fluids and before moving to another activity
- ✓ Before putting on and after taking off gloves and other PPE
- ✓ After personal body functions (e.g., blowing one's nose)
- ✓ Whenever hands come into contact with secretions, excretions, blood and body fluids
- ✓ After contact with items in the resident's environment
- ✓ Whenever there is doubt about the necessity for doing so

Resident Placement

- ✓ Single room with own toileting facilities if resident hygiene is poor and if available, or maintain a spatial separation of at least 2 metres between the resident and others in the room, with privacy curtain drawn
- ✓ Door may remain open
- ✓ Perform hand hygiene on leaving the room

Mask and Eye Protection or Face Shield

- ✓ Wear within 2 metres of the resident
- ✓ Remove and perform hand hygiene on leaving the room

Gown and Gloves [based on risk assessment]

- ✓ Wear a long-sleeved gown for direct care* when skin or clothing may become contaminated
- ✓ Wear gloves for direct care*
- ✓ Wearing gloves is NOT a substitute for hand hygiene.
- ✓ Remove gloves on leaving the room or bed space and perform hand hygiene

Environment and Equipment

- ✓ Dedicate routine equipment to the resident if possible (e.g., stethoscope, thermometer)
- ✓ Disinfect all equipment before it is used for another resident
- ✓ All high-touch surfaces in the patient's room must be cleaned at least daily

Resident Transport

- ✓ Resident to wear a mask during transport

Visitors

- ✓ Non-household visitors wear a mask and eye protection within 2 metres of the resident
- ✓ Visitors must wear gloves and a long-sleeved gown if they will be in contact with other residents or will be providing direct care*
- ✓ Visitors must perform hand hygiene before entry and on leaving the room

* Direct Care: Providing hands-on care, such as bathing, washing, turning the patient, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.

SOURCE: CCOHS

APPENDIX F

How do I perform seal checks to make sure the mask is adjusted correctly?

Each time and every time a respirator is worn, you must check that the respirator is sealing properly to the face. Not all respirators will allow the wearer to temporarily block the inlet openings or valves, but these checks should be done whenever possible. Do not wear a respirator that does not seal properly.

Negative pressure seal check: Negative-pressure checks can be done on air-purifying respirators and other respirators with a tight fitting facepiece.

- Put on the respirator.
- Close or block the inlet opening(s) of the respirator so that when you inhale (breath in), no air enters the facepiece.
- Gently inhale, and hold your breath for at least 5 seconds.
- The facepiece should collapse ("squish in") slightly on your face.
- If the facepiece remains collapsed while you hold your breath, the seal check is successful.
- If the facepiece does not remain collapsed, check that nothing is obstructing (blocking) the sealing surface, adjust the facepiece and harness, and repeat the user seal check.

Figure 3: Negative pressure fit check

Positive pressure seal check: Positive-pressure seal checks can be done with respirators equipped with tight-fitting facepieces that have both inhalation and exhalation valves.

- Put on the respirator.
- Close or block the exhalation valve or breathing tube, or both.
- Exhale (breath out) gently.
- The respirator should expand ("puff out") slightly.
- If a slight positive pressure can be maintained inside the facepiece without noticing any air leaking for 5 seconds, the seal check is successful.
- If a slight positive pressure does not occur, check that nothing is obstructing (blocking) the sealing surface, adjust the facepiece and harness, and repeat the user seal check.

Figure 4: Positive pressure fit check

Seal checks for disposable respirators: A seal check can be done by placing both hands over the respirator itself, or by using a device provided by the manufacturer.

- Put on the respirator.
- Place both hands over the respirator. If there is a valve, block the valve with your hand.
- Breathe in and out.
- If you have a good seal, the facepiece should collapse slightly when you inhale.
- As you exhale, you should not feel air leaking out.
- If you have air leaks, check that nothing is obstructing (blocking) the sealing surface, adjust the noise piece or straps, and repeat the user seal check.

Again, do not wear a respirator that cannot pass the seal checks successfully.

Figure 5: Seal check with a disposable respirator