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COVID-19 CAEP Town Hall

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Is COVID-19 Airborne?



- Jan 2020: precautionary principle
- Normal clinical circumstances:
 - Transmission = **droplet or contact w/droplets**
- Caveat: aerosol-generating medical procedures (AGMP)

AGMP = airborne precautions



Aerosol Generating Medical Procedures

Procedures Generating Droplets/Aerosols

- Endotracheal intubation, including during cardio-pulmonary resuscitation¹
- Cardio-pulmonary resuscitation
- Open airway suctioning
- Bronchoscopy (Diagnostic or Therapeutic)
- Surgery and autopsy
- Sputum induction (Diagnostic or Therapeutic)
- Non-invasive positive pressure ventilation for acute respiratory failure (CPAP, BiPAP3-5)
- High flow oxygen therapy

Source: Adapted from Routine Practices and Additional Precautions in Ontario In All Health Care Settings, 3rd edition, Provincial Infectious Diseases Advisory Committee (PIDAC). Available at: <https://www.publichealthontario.ca/en/health-topics/infection-prevention-control/routine-practices-additional-precautions>

(Note: would add nebulizer therapy to list)

Setting	Individual	Activity	Type of PPE or procedure
Healthcare Facilities - Inpatient facilities			
Patient room	Healthcare workers	Providing direct care to patients with suspect or confirmed COVID-19, including nasopharyngeal and oropharyngeal swab collection	Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
		Aerosol-generating medical procedures performed on suspect or confirmed COVID-19 patients	Airborne, Droplet and Contact precautions, including: <ul style="list-style-type: none"> • N95 respirator (fit-tested, seal-checked) • Isolation gown • Gloves • Eye protection (goggles or face shield) • Negative pressure room, if available

Symptoms + COVID-19



- Evidence is rapidly emerging

- A sample:

- 1) Yang, W., et al., *Clinical characteristics and imaging manifestations of the 2019 novel coronavirus disease (COVID-19):A multi-center study in Wenzhou city, Zhejiang, China.* **Journal of Infection**, 2020.
- 2) Huang, C., et al., *Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China.* **Lancet**, 2020.
- 3) Tian, S., et al., *Characteristics of COVID-19 infection in Beijing.* **Journal of Infection**, 2020.
- 4) Wang, D. et al. *Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China.* **JAMA**, 2020.

Symptoms + COVID-19



Study	N	Fever, %	Cough, %	SOB, %	Diarrhea, %	Vomiting, %
Yang <i>et al</i>	149	76	58	2	7	1
Wang <i>et al</i>	138	99	59	31	10	4
Huang <i>et al</i>	41	98	76	55	3	NR
Tian <i>et al</i>	262	82	46	7	NR	NR

- GI symptoms are being reported but not prominent based on available data thus far

Any Respiratory Symptoms?

(but no specific risk factors e.g. travel)



- Important to refer to your local public health agency / institution
- Testing recommendations will continue to evolve
 - Based on regional transmission + capacity to test

Example:



(last update: March 20, 2020)



Which patients should be tested?

OPH recommends testing individuals who have new or worsening symptoms compatible with COVID-19 (fever, new cough, or difficulty breathing) AND they meet at least one of the following:

- Returning from travel outside of Canada within 14 days prior to their illness onset, OR
- Returning from an area in Canada with established local transmission within 14 days prior to their illness onset, OR
- A close contact of a confirmed or probable case of COVID-19 in the last 14 days.

A close contact is defined as:

- A person who provided care for the patient, including family members or other caregivers, or who had other similar close physical contact (e.g., healthcare workers without appropriate personal protective equipment) OR
- A person who lived with or otherwise had close prolonged contact with a probable or confirmed case while the case was symptomatic.

Example:



(last update: March 20, 2020)



OPH also recommends COVID-19 testing of the following individuals, regardless of exposure or travel history:

- Health care workers with acute respiratory illness, including mild illness
- Individuals admitted to hospital with acute respiratory illness
- Individuals with acute respiratory illness who reside in long-term care homes and retirement homes
- Individuals with acute respiratory illness who reside in other institutions (e.g., group homes, homeless shelters, and correctional facilities)
- First Nation Community members living on-reserve with acute respiratory illness

Testing for COVID-19 is **NOT** recommended if a person has no symptoms, regardless of their travel or exposure history.

PPE



- Goggles vs face shields
 - Either is recommended eye protection for droplet isolation, use depends on your local resources
 - Goggles have more challenges in practice, but are re-usable

PPE



- How safe is “extended” PPE?
 - Not first choice
 - Requires increased vigilance by HCW to hand hygiene and mask status.
 - Regions with supply interruptions may use this model for masks.
 - Specific advice about how to do this as safely as possible will accompany these recommendations.
 - PHAC/PHO/OPH have not yet issued these directives or guidance.

PPE



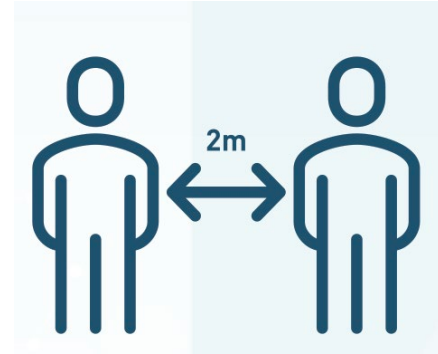
- How to protect family at home?
 - Very little evidence about the risk to HCW families so far from epidemics.
 - Precautionary principle
 - Hand Hygiene is the key to preventing forward transmission.

Social Distancing



■ Avoid:

- Crowded places
- Non-essential gatherings
- Common greetings (e.g. handshakes)



- ## ■ Limit contact with high risk individuals (e.g. elderly)

What level of social distancing is appropriate?

“The safest number to congregate in is one. Not 50, not 10, it's one.” - Dr. Michael Warner

Antiviral Therapy



- To date there are no antiviral therapies that are clearly demonstrated to treat or prevent COVID-19.
- Hospitalized patients may receive investigational therapies at the discretion of treating physicians and/or in the context of a clinical trial and subject to their availability.



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THANK YOU.
