Interim IPAC guidance for patients with confirmed or suspected (rule-out) COVID-19

This interim IPAC guidance is based on currently available scientific evidence and provincial and federal public health authority guidelines; it is subject to review and change as new information becomes available.

PROMPT IDENTIFICATION & EARLY SOURCE CONTROL	
Case definition (probable case)	A person with fever (over 38 degrees Celsius) **and/or** onset of (or exacerbation of chronic) cough AND any of the following within 14 days prior to onset of illness: • Travel to an impacted area or • Close contact* with a confirmed or probable case of COVID-19 or • Close contact*with a person with acute respiratory illness who has been to an impacted area AND In whom laboratory diagnosis of COVID-19 is not available, inconclusive, or negative (if specimen quality or timing is suspect) OR A person with fever (over 38 degrees Celsius) and/or onset of (or exacerbation of chronic) cough AND in whom laboratory diagnosis of COVID-19 is inconclusive * 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. (http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_case_definition.pdf)
Lab testing recommenda-tions	Testing is recommended for: 1. **Symptomatic ED patients or outpatients** who meet the provincial case definition of a probable case above. 2. **Symptomatic patients requiring or likely requiring inpatient admission** who are experiencing one of the following symptoms regardless of exposure or travel history: • Fever (Temperature over 38°C); OR • Any new/worsening acute respiratory illness symptom (e.g. cough, shortness of breath (dyspnea), sore throat, runny nose or sneezing, nasal congestion, hoarse voice, difficulty swallowing); OR

	• Clinical or radiological evidence of pneumonia. Testing should also be considered for: • Individuals with acute respiratory illness who reside in other institutions as directed by Ottawa Public Health • Children with fever and/or respiratory symptoms whose parents or household members are health care workers • Health care workers with acute respiratory illness, including mild illness and/or atypical presentation • Health care workers as part of a health care institutional outbreaks and as directed by Ottawa Public Health • First Nation Community members living on-reserve with acute respiratory illness Atypical presentations of COVID-19 should be considered in children.
Atypical Symptoms and Signs of COVID-19	**Symptoms** • Unexplained fatigue/malaise • Delirium (acutely altered mental status and inattention) • Falls • Acute functional decline • Exacerbation of chronic conditions • Digestive symptoms, including nausea/vomiting, diarrhea, abdominal pain • Chills • Headaches • Croup **Signs** • Unexplained tachycardia, including age specific tachycardia for children • Decrease in blood pressure • Unexplained hypoxia (even if mild i.e. O2 sat <90%) • Lethargy, difficulty feeding in infants (if no other diagnosis)
ID consultation	**ID consult is required for the following scenarios:** • all patients with confirmed COVID-19 infection • patients in whom ID consultation is needed for management advice (e.g. patient with suspected COVID-19 infection along with moderate/severe/critical illness) **Other scenarios:** In patients for whom there are questions regarding whether or not COVID-19 testing should be performed, please page the COVID-19 pager physician weekdays 0900-1700 or ID physician on call weekday evenings or weekends.

	There is no longer a need to consult ID for all patients in whom COVID-19 testing is requested.
Early source control	Patient and symptomatic accompanying parent/caregiver should be directed to clean their hands and don mask(s) until they can be placed in an appropriate single patient room.
Epic identification	Patients in whom testing has been sent for COVID-19 will have "**COVID-19 rule out**" added as an infection in their header. Patients with lab confirmed COVID-19 will have **"COVID-19"** added as an infection in their header. This will differentiate these patients from patients who may have non-novel coronavirus infections. Patients with a high risk exposure history in whom laboratory testing is negative will have their **"COVID-19 rule out"** alert resolved and an **"Exposure"** alert added to their header. Infection Prevention and Control will manage this alert process.
ROUTINE PRACTICES & ADDITIONAL PRECAUTIONS	
Additional precautions	In addition to routine practices, patients with **confirmed or suspected COVID-19** require: **Droplet-Contact precautions** for all routine care • Gloves; AND • Gown; AND • Mask with visor (eye protection) OR **Droplet Contact <u>and</u> Airborne precautions** (N95 + face shield) for aerosol-generating medical procedures (AGMPs). See "Provision of Safe Clinical Care" for list of AGMPs. The duration and discontinuation of precautions should be determined on a case-by-case basis, **in consultation with IPAC/ID**, and in accordance with provincial and territorial guidelines. Patients who are asymptomatic but on home isolation due to a high risk exposure (travel to an impacted area in the past 14 days OR close contact with person with acute respiratory infection who has been to an impacted area OR close contact with a confirmed or probable case of COVID-19) should be placed on **Droplet-Contact precautions** for ED visits, outpatient visits and inpatient admission.
Hand hygiene	Hand hygiene should be performed whenever indicated, paying particularly attention to <u>during and after removal of PPE</u>, and <u>after leaving</u> the patient care environment. Educate patients and parent caregivers about how and when to perform hand hygiene.

PATIENT PLACEMENT	
Airborne infection isolation room (AIIR) for patients requiring AGMPs	<u>Emergency Department</u> • Use Isolation room A, B or C preferentially for patients with confirmed or suspected COVID-19 requiring aerosol-generating medical procedures (AGMPs) • If isolation rooms not available, then use single room with door closed and restrict the use aerosol-generating medical procedures (AGMPs) <u>Admission to units:</u> • Patients with confirmed or suspected (rule out) COVID-19 who require or have a high likelihood of requiring AGMPs should be placed in an airborne infection isolation room (AIIR) (negative pressure room) if possible. • If AIIRs unavailable and no anticipated aerosol-generating medical procedures (see below for details): patient should be placed in single room or alone in a double bed room with private toilet and sink for designated patient use. • If AIIR unavailable, AGMPs should be limited; if they cannot be avoided, place patient in a single room with a private toilet and sink and an anteroom (4E room 5) with door closed (first choice) or a double bed room with the second bed blocked to admission on 4E. • See Proposed Bed Flow Guidelines and algorithm on CHEOnet for complete details
Cohorting	Patients with suspected COVID-19 are <u>not</u> eligible for cohorting until COVID-19 is ruled out and then follow usual cohorting guidelines as per policy. Confirmed COVID-19 patients may be considered for cohorting <u>by IPAC</u> only under exceptional circumstances.
PROVISION OF SAFE CLINICAL CARE	
Point of care risk assessment	• A point of care risk assessment is an evaluation of the interaction of the health care provider, the patient and the patient environment to assess and analyze the potential for exposure to infectious disease. • All health care providers are responsible for completing a point of care risk assessment before every interaction with a patient or their environment recognizing that as a patient's status or care needs change, the risk of infection transmission can also change. • In general, the risk assessment answers the question "W*hat precautions (in addition to routine practices) are required for me to safely care for this patient?*" • Specifically, for patients with suspected or confirmed COVID-19, a risk assessment would include assessing if the patient encounter will involve an aerosol-generating medical procedure for which an N95 must be worn.

Aerosol-generating medical procedures (AGMP)	Certain procedures may generate aerosols that may present a potential risk of exposure for health care providers and others in the area. **List of Aerosol-Generating Medical Procedures (AGMP):** • Endotracheal intubation and related procedures (e.g., manual ventilation with MIE or Ambu bag, extubation) • Cardio-pulmonary resuscitation during airway management (chest compressions and cardioversion/defibrillation alone are not considered AGMP) • Open airway suctioning • Bronchoscopy and airway surgeries • Non-invasive positive pressure ventilation • High flow oxygen therapy • Sputum induction (e.g., inhalation of nebulized saline solution to liquefy and produce airway secretions, not natural coughing to bring up sputum) • Nebulized medication by small volume nebulizer • Large volume nebulizers for humidity (e.g., Misty-Ox) • Airway clearance therapies such as Cough Assist and lung volume recruitment • High-frequency oscillatory ventilation • Providing tracheostomy care or performing a tracheostomy • Needle thoracostomy Notes: 1. Collection of an NP swab and upper respiratory tract suctioning (nasal/oral) are NOT considered AMGPs (see Appendix A for evidence summary and references); deep naso-pharyngeal and tracheal suctioning are considered AGMPs. 2. The number of HCWs present during an AGMP should be limited to those essential for patient care and support. 3. If a negative pressure room is not available, AGMPs should be restricted. If unavoidable, AGMPs should be carried out using a process and environment that minimizes exposure risk (e.g., single room with door closed and away from high-risk patients). 4. After an AGMP has been completed in an AIIR, Airborne precautions should be maintained (signage posted, door(s) closed, HCW should wear an N95 mask) for 1 hour post AGMP; if AGMP performed in a non-AIIR, Airborne precautions should be maintained (signage posted, door(s) closed, HCW should wear N95 mask) for at least 2 hours post AGMP as per existing Airborne isolation policy.

Patient flow and activities	• Patients should be restricted to their room • They should not participate in group activities until additional precautions discontinued • Transfer within and between facilities should be avoided unless medically indicated, as this may place additional HCWs and patients at risk.
Patient transport	• Patients should leave their room for essential medical reasons only. • Put a **procedure mask on the patient** prior to transport. • **Droplet-Contact precautions should be maintained by HCWs** during patient transport and throughout all care off the unit. • PPE should be changed prior to transport (for example, if staff are providing care in the patient room and then will need to accompany them on transport, they would doff their PPE and don clean prior to moving the patient out of the room).
Single-use patient care equipment	• Most single-use items can be discarded in regular garbage bins. • Place single-use items containing large amounts of liquid body fluids, and those that are saturated with blood or body fluids containing blood (e.g. drainage collection units, suction containers, and saturated dressings) in biohazard bags and take to soiled utility room for collection by Environmental Services. • Refer to CHEO policies on Single-Use Medical Devices and Routine Practices.
Reusable patient care equipment	• Dedicate patient care equipment when possible. • Follow existing CHEO policy on cleaning of non-critical patient care equipment. • Disinfect reusable equipment that has been in contact with intact skin only (e.g. blood pressure cuffs, oxygen saturation monitors, stethoscopes) **at least daily**, and before use on other patients. • Equipment visibly soiled must be cleaned prior to disinfection. • Use an approved hospital-grade disinfectant. • Reusable equipment that requires reprocessing by Medical Devices Reprocessing Department (MDRD) (e.g. aerochambers, bedpans, basins etc.) should be rinsed if visibly soiled and placed in the collection bucket in the soiled utility room for pickup by MDRD staff. • Cleaning and disinfection / sterilization will be performed in MDRD.
Handling linen, dishes and cutlery	• Please follow existing CHEO IPAC Routine Practices policy. • Meal trays should be delivered outside the room when Airborne precautions are in effect for AGMPs. • When patient is on Droplet-Contact precautions alone, PPE must be worn to take trays into and out of patient room, as per usual practice. • Follow routine practices for linen handling; place used linen in soiled linen container and do not overfill. • If leakage of soaked linen container is a concern, place linen in a second plastic bag prior to depositing in the soiled linen container.

Waste management	• No special precautions are recommended; routine practices are sufficient as per Routine Practices Policy.
Environmental cleaning	• Horizontal surfaces must be cleaned **at least twice daily** with an approved hospital-grade disinfectant. • Terminal cleaning of patient rooms must follow Environmental Services guidelines. • If Airborne precautions in effect, these must be maintained for **one hour after the patient leaves** an airborne infection isolation room (**two hours** in a non-airborne infection isolation room). Room cleaning may be performed during this time by staff in appropriate PPE.
Patient discharge and room turnover	• If no aerosol-generating medical procedures have been performed, then room can be cleaned immediately and used for another patient. • If Airborne precautions have been in use for AGMPs, keep all isolation signs in place and doors closed for at least **1 hour**, to allow removal of airborne organisms (extend time to **two hours** for non-airborne isolation rooms). • Do NOT admit a new patient to the room within this time period. • Any HCW entering the room during this time period must wear an N95 mask.
CAREGIVER AND VISITORS	
Screening and movement through hospital	• Only 1 parent / caregiver will be eligible to be with inpatients at a time; they will be provided with a mask that must be worn when they are coming and going from the inpatient unit. • If parent/caregiver has infectious symptoms, an alternate caregiver should be arranged to stay with child. • Alternate caregivers who are not household contacts of the child must wear PPE (gown, gloves and mask with visor) and should be instructed on its use while in the patient's room and be taught how to safely remove and perform hand hygiene. • Accompanying individuals should be screened for signs and symptoms of acute respiratory illness, referred for medical assessment where appropriate. • Parent / caregiver must limit their movement within the facility by remaining in the patient's room at all times, not using public areas on the unit or visiting public areas of the hospital and coming and going directly (main entrance to patient room and vice versa).
MISCELLANEOUS	
Specimen and lab requisition	See **Protocol for Management of Suspected Cases in the Emergency Department** (CHEOnet IPAC - COVID-19 resources page) for more information about testing, including what specimens are needed. https://www.publichealthontario.ca/en/laboratory-services/test-information-index/wuhan-novel-coronavirus

	The link to the PHOL lab requisition is here: https://www.publichealthontario.ca/-/media/documents/lab/2019-ncov-test-requisition.pdf?la=en Note: EORLA Microbiologists now recommend testing of outpatients (e.g. tested in ED/clinics then sent home) requires one viral throat swab. Patients who are likely to be admitted or who are admitted should have two samples sent for COVID-19 testing (e.g. nasopharyngeal and throat swabs).
Associated Policies	Please see the IPAC manual on CHEOnet (https://cheonet.cheo.on.ca/clinical-teams-programs/infection-prevention-and-control-ipac/infection-prevention-and-control-manual) for relevant IPAC policies including, but not limited to: 1.1 Routine Practices 1.2 Hand Hygiene 1.3 Single Use Medical Devices 1.6 Cleaning non-critical equipment in and between patient care environments 2.3 Droplet-Contact Precautions 2.4 Airborne Precautions
Support	**Infectious Diseases (ID)** Page ID for: Clinical guidance on treatment for patients with suspected or confirmed COVID-19 infection. URGENT IPAC issues after hours and on weekends. **Infection Prevention and Control (IPAC) On-call** Monday-Friday 0730-1530 Page IPAC for: All routine non-COVID-19 IPAC clinical issues, isolation management, IPAC guidance that impacts patient flow, discontinuing precautions on patients with COVID-19 results. **Infectious Diseases COVID pager** Monday-Friday 0900-1700 Page COVID pager for: General COVID questions such as: • Eligibility and practical issues for testing • What type of room isolation precautions are needed for patients being admitted (if uncertain) • Questions about new updates from Ottawa Public Health, Ministry of Health and Long-Term Care, or Public Health Agency of Canada The ID COVID physician may reach out to MRPs/delegates when an inpatient has had COVID testing sent as part of facilitating prioritization of lab testing for these patients.

Provincial guidance documents	Updated IPAC Recommendations for Use of PPE for Care of Individuals with Suspect or Confirmed COVID-19 (Public Health Ontario) https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en Infection Prevention and Control for Coronavirus Disease (COVID-19): Interim Guidance for Acute Healthcare Settings (Public Health Agency of Canada) https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/interim-guidance-acute-healthcare-settings.html COVID-19 Guidance: Acute Care (Ministry of Health, Ontario) http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/2019_acute_care_guidance.pdf Information on COVID-19 for Physician and Health Care Professionals (Ottawa Public Health) https://www.ottawapublichealth.ca/en/professionals-and-partners/hcp-ncov.aspx#Infection-Prevention-and-Control-IPAC-Measures-for-COVID-19-

Appendix A: Evidence to support procedures identified as aerosol-generating

Respiratory viruses such as RSV, influenza and COVID-19 are spread through large droplets which could travel 2 meters depending on the forcefulness of the cough or sneeze. They do not float in air because of size and density. Infected droplets can be transmitted to persons when closer than 2 meters without protection as they can contaminate the face or hands or if a person touches a surface where the respiratory droplet has landed and then introduces the virus into their body by touching their face. This type of transmission is called direct or indirect. Droplet/Contact personal protective equipment (PPE) worn by a healthcare worker along with appropriate hand hygiene when in contact with a symptomatic patient will therefore prevent the HCW from being infected from respiratory viruses, including COVID-19.[1]

In contrast, tuberculosis, measles or varicella viruses produce tiny particles that are so small that they can float in air. Particles from the lower respiratory tract (below vocal cords) are smaller than droplets and theoretically can aerosolize during certain procedures. A review article concluded that certain procedures (not nasal and oral airway sampling/suction) can generate aerosols that could potentially contribute to this mode of transmission.[2] Therefore the Public Health Agency of Canada, and Public Health Ontario have generated a list of these procedures.[3,4,5] Recently, the World Health organization report on COVID-19 cases in China stated that spread was not believed to occur via the airborne route but that it is theoretically possible with certain procedures.[6]

Given the evidence and directives, N95 masks and airborne infection isolation rooms are to be used in specific circumstances as outlined on the section on aerosol-generating medical procedures.

References (Appendix A):

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2. Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J. Aerosol Generating Procedures and Risk of Transmission of Acute Respiratory Infections to Healthcare Workers: A Systematic Review. Semple MG, ed. *PLoS One*. 2012;7(4):e35797.
3. Public Health Ontario. *Updated IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspected or Confirmed COVID-19:12 March 2020. Available at:* https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en
4. Public Health Agency of Canada. *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings*.; 2017. https://www.canada.ca/en/public-health/services/infectious-diseases/nosocomial-occupational-infections/routine-practices-additional-precautions-preventing-transmission-infection-healthcare-settings.html
5. Public Health Agency of Canada. *Infection Prevention and Control for Coronavirus Disease (COVID-19): Interim guidance for acute healthcare settings:* 2020 Available at: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/interim-guidance-acute-healthcare-settings.html
6. WHO. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19. WHO: 2020;2019(February):16-24.