



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

MEMORANDUM

TO: Ontario Paramedics

FROM: Ontario Base Hospital Group—Medical Advisory Committee (OBHG MAC)

DATE: October 19, 2021

RE: **Considerations for Paramedics Managing Patients during the COVID-19 Pandemic**

This is the sixth and current version of the MAC memorandum on considerations for paramedics during the COVID-19 pandemic. This memo replaces the Feb 22, 2021 considerations documents and memos.

The protection of paramedics is paramount in providing care during the COVID-19 pandemic. We are constantly reviewing the latest evidence, coordinating with the Emergency Services Advisory Committee and incorporating direction from Public Health Ontario and the Ministry of Health. As additional evidence, guidance or direction emerges, practice changes may again be required. Additional information related to these considerations and critical thinking perspectives regarding application of medical directives will be circulated as necessary.

During this unprecedented time, we continue to provide you with only the necessary, most up to date considerations for managing patients. We provide these updated considerations using a phased approach. The phased approach examines the latest evidence for many factors including the epidemiology, the risks to paramedics and other health care workers and the capacity of the health care system and we provide practice changes when they are indicated. We also incorporate the feedback we receive from Base Hospitals, much of which comes from you as you apply the considerations to clinical situations. Our approach recognizes that paramedics are often at the forefront of clinical response.

These considerations **do not** represent a change to the current medical directives found in the Advanced Life Support Patient Care Standards (ALS PCS). Any treatment paramedics provide as a result of this memo is compatible with the “Comprehensive Care” approach outlined in the preamble of the ALS PCS which states, “It is acknowledged that there may be circumstances and situations where complying with ALS PCS is not clinically justified, possible or prudent (e.g. multiple crews, trapped patient, extenuating circumstances, competing patient care priorities).” (p.4); the global COVID-19 pandemic represents an extenuating circumstance.

We understand that the COVID-19 case numbers may vary in parts of the province and that vaccination rates among paramedics and population may play a role in your decision on how to use these clinical considerations. We always encourage consultation when the complexity is often increased for both patient presentation and the context of the treatment. Paramedics may always initiate a patch for consultation with a Base Hospital Physician.

COVID-19 Considerations Update
October 19, 2021



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

We appreciate and use the feedback you are providing to your Regional Base Hospital about clinical issues. Please continue to ask your base hospital questions and provide comments on the COVID-19 issues that are important to you. Thank you for your on-going commitment to providing excellent patient care during these exceptional times.

Table of Contents

Paramedic Considerations during the COVID-19 Pandemic:	3
Part A: ALS PCS Medical Directives with COVID-19 Treatment Considerations	3
1. Cardiac Arrest Medical Directive	3
2. Bronchoconstriction Medical Directive	3
3. CPAP Medical Directive.....	4
4. Endotracheal & Tracheostomy Suctioning Medical Directive	4
5. Croup Medical Directive.....	4
6. Opioid Toxicity Medical Directive	4
Part B: Additional COVID-19 Treatment Considerations	4
1. General.....	4
2. Airway Management & Ventilation	5
3. Oxygen Therapy	5
4. Medication Administration	5
5. STEMI Hospital Bypass Protocol.....	5
6. Alerting Receiving Facilities	5
7. Documentation	5
Part C: Infection Prevention and Control.....	6
Patient Contact	6
Airway Management.....	6
Aerosol-Generating Medical Procedures (AGMP)	6
Environmental Hazards.....	7
References	8



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

Paramedic Considerations during the COVID-19 Pandemic:

Directions for use of these considerations

- Paramedics may use these recommendations in **all patients with respiratory symptoms or in cardiac arrest, regardless** of COVID screening.
- Paramedics should continue to provide other patient care not specified in the present memo as outlined in the Patient Care Standards and in line with the current Medical Directives.
Paramedics can consult with the Base Hospital Physician (online medical consultation/patch) for advice at any time regarding treatments regardless of COVID-19 status.

Part A: ALS PCS Medical Directives with COVID-19 Treatment Considerations

1. Cardiac Arrest Medical Directive

Paramedics may:

- a. Insert an advanced airway as soon as feasible.
- b. Use either SGA (if available and authorized) or oral ETT as options for advanced airways.
 - When an SGA is used, the gastric/suction port should be occluded prior to insertion.
- c. Use the advanced airway technique with which the paramedic is most comfortable.
- d. Withhold chest compressions **only** during advanced airway insertion.

2. Bronchoconstriction Medical Directive

Salbutamol

Previous advice regarding salbutamol is no longer required; the medical directive addresses what to do in cases of suspected Febrile Respiratory Illness.

Epinephrine

Paramedics should consider:

- a. Withholding the administration of IM epinephrine for patients **≥ 50 years old** presenting with bronchoconstriction.

Rationale:

- Bronchoconstriction and wheezes may present due to many different underlying clinical conditions, especially as age increases. At 50 years old and above, there is a higher incidence of combined disease pathways. Bronchoconstriction in this population may include acute exacerbation of chronic obstructive pulmonary disease (AECOPD), chronic asthma, pneumonia, CHF, acute cardiogenic pulmonary edema and others.
- Without specialised testing, knowledge and equipment, differentiation of the condition contributing to respiratory distress and bronchoconstriction is difficult. For paramedics, this means that **bronchoconstriction in older patients should be considered in most cases, to have no specific cause - even in the presence of wheezes or when patients report having asthma.**



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

- Over the last seven months, the OBHG MAC has noted an increased use of IM epinephrine for patient's ≥ 50 years old, in the context of the Bronchoconstriction medical directive, and evidence suggests that these patients may be at **increased risk of cardiovascular complications**¹. Therefore, in the context of **bronchoconstriction to have no specific cause**, there is little evidence of clinical benefit and some **evidence suggestive of potential severe complications for patients who are ≥ 50 years old**¹.
- Consider withholding IM Epi in ≥ 50 years of age in the undifferentiated SOB patient, but if one chooses to go ahead with its use, please justify the rationale within documentation.
- IM epinephrine has been shown to be safe for patients less than 50 years old, with severe respiratory distress, bronchoconstriction and a history of asthma **without** other contributing cardiorespiratory comorbidities.
- Administer a maximum of 2 doses of IM epinephrine with a 5-minute interval between doses.

In anaphylaxis, paramedics should continue to use IM epinephrine as per the ALS PCS for patient's of all ages as the benefits outweigh the risks of adverse events.

3. CPAP Medical Directive

Paramedics may withhold CPAP if alternative treatments are available/appropriate.

4. Endotracheal & Tracheostomy Suctioning Medical Directive

Paramedics should consider, **in all cases**, withholding suction via an endotracheal or tracheostomy tube unless using a closed system suction catheter.

5. Croup Medical Directive

Previous advice regarding croup medical directive is no longer required, please revert back to ALS PCS Croup Medical Directive.

6. Opioid Toxicity Medical Directive

Paramedics may:

- a. Administer naloxone in patients with opioid toxicity and inadequate spontaneous respirations without the requirement of an "inability to adequately ventilate."
- b. Withhold intra-nasal (IN) administration of medications when alternative routes exist.

Part B: Additional COVID-19 Treatment Considerations

1. General

Paramedics should don the appropriate PPE for all airway procedures, all cardiac arrests and all patients with respiratory symptoms or hypoxia ($SpO_2 < 92\%$) in addition to all patients who have a positive screen for COVID-19.



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

2. Airway Management & Ventilation

Paramedics may:

- a. Withhold manual ventilation in any spontaneously breathing patient unless severe hypoxia ($\text{SpO}_2 < 85\%$) is not improving with other therapies.
 - Maintaining a tight seal of the mask to the patient's face if using a face mask for manual ventilation.
- b. Apply an in-line filter as close to the patient as possible when providing manual ventilation.
- c. Pause manual ventilation briefly via BVM with face mask or SGA when transporting a patient through long term care homes, hospital hallways, or other enclosed public buildings.
 - Clinical judgement will be required for long extrication times and the need for ventilation.
 - Always consider the risk to bystanders without appropriate PPE.

3. Oxygen Therapy

In hypoxic patients, paramedics should:

- a. Use a maximum of 6 L/min oxygen via nasal cannula.
- b. Preferentially use high concentration/low flow masks with a hydrophobic submicron filter for adult patients who require high concentration oxygen.
- c. Preferentially use pediatric high concentration/low flow masks, if available, with a hydrophobic submicron filter for pediatric patients who require high concentration oxygen.
- d. Avoid oxygen delivery rates ≥ 16 L/min via a non-rebreather mask or BVM.

4. Medication Administration

Paramedics should:

- a. Withhold endotracheal medications **in all cases**.
- b. Withhold intra-nasal (IN) and buccal administration of medications when alternative routes exist.

5. STEMI Hospital Bypass Protocol

Revert to local STEMI by-pass protocols.

6. Alerting Receiving Facilities

Follow local policy.

7. Documentation

Paramedics should consider:

- a. Documenting on the Ambulance Call Report (ACR) the information that led to the conclusion the patient had a COVID-19 positive screen.



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

- b. Documenting the results of the “COVID-19 Screening Tool for Paramedics” using the ACR codes found in the training bulletin. A patient who “fails” the screening is a **positive** screen for possible COVID-19.
- c. Documenting on the ACR the clinical findings and the circumstances of any care where the paramedic did not apply the current patient care standards and/or considerations during the COVID-19 pandemic.

Part C: Infection Prevention and Control

OBHG MAC considers the risks for infection transmission and multiple levels of hazard control in creating considerations for paramedics. Here, we present a brief summary of the known and suspected risks associated with paramedic care. In all cases, paramedics should use appropriate PPE as specified by their employer.

Patient Contact

- When treating patients who have COVID-19, droplets are a known risk for transmission of the virus that produces the disease.
- Patients who are coughing, present an increased risk to paramedics of exposure to droplets and can produce some aerosols².
- Risk of transmission is a continuum and not only related to specific procedures. Paramedics must always remain vigilant and follow the recommended precautions to reduce this risk.

Airway Management

- All airway management strategies are a potential risk for coming into contact with secretions.
- Contact with the secretions of a patient who has the virus responsible for COVID-19 is a risk for infection.
- Paramedics should limit contact with secretions while providing appropriate care.

Aerosol-Generating Medical Procedures (AGMP)

- The risk of exposure to the virus that causes COVID-19 (SARS-CoV-2) increases during AGMPs in patients who are infected.
- The Ontario Provincial Infectious Diseases Advisory Committee (PIDAC) has released specific guidance as to what is considered to be an AGMP. Note that patients can generate their own aerosols through normal respirations that increases when coughing. Droplet and contact PPE are indicated for all respiratory patients. Airborne precautions are indicated for AGMPs.

Known AGMPs³ as per the Ontario Provincial Infectious Diseases Advisory Committee:

- Endotracheal intubation or SGA insertion including during cardiopulmonary resuscitation.
- Manual ventilation using the BVM (except following ETT placement with viral filter in place).



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

- CPAP.
- Open system airway suctioning (excluding the oral cavity).
- Nebulized medication administration.

Non AGMPs as per Ontario Provincial Infectious Diseases Advisory Committee:

- Defibrillation.
- Chest compressions (without airway management).
- Intra-nasal medication administration.

Environmental Hazards

- Contamination of surfaces with infectious droplets or other body fluids near an infected COVID-19 patient is possible⁴.
- Equipment used during patient care may come into contact with droplets produced by the patient. Paramedics may be exposed to these droplets during interventions.
- Paramedics should follow the guidance of their service for infection prevention and control policies and procedures.

Best Regards,

Dr. Jason Prpic, CCFP(EM)
Co-Chair OBHG MAC
Medical Director
HSN Centre for Prehospital Care
Associate Professor, Emergency Medicine,
NOSM
jprpic@hsnsudbury.ca

Andy Benson
Co-Chair OBHG MAC
Clinical Manager
Central East Prehospital Care Program
abenson@lh.ca

On behalf of the Ontario Base Hospital Group Medical Directors:

Dr. Michael Feldman
Dr. Paul Miller
Dr. Phil Moran

Dr. Matt Davis
Dr. Richard Dionne
Dr. Adam Exley



ONTARIO BASE HOSPITAL GROUP MEDICAL ADVISORY COMMITTEE

References

- ¹ Kawano & al.; Epinephrine use in older patients with anaphylaxis: Clinical outcomes and cardiovascular complications; Resuscitation 2017; Mar; 11253-58. Epub 2017 Jan 6.
- ² Ontario Agency for Health Protection and Promotion (Public Health Ontario). Aerosol generation from coughs and sneezes. Toronto, ON: Queen's Printer for Ontario; 2020. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/report-covid-19-aerosol-generation-coughs-sneezes.pdf?la=en>
- ³ Ontario Agency for Health Protection and Promotion (Public health Ontario). IPAC recommendations for use of personal protective equipment for care of individuals with suspect or confirmed COVID-19. Toronto, ON: Queens's Printer for Ontario; 2020. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en>
- ⁴ Ontario Agency for Health Protection and Promotion (Public health Ontario). COVID-19 – What we know so far about... routes of transmission. Toronto, ON: Queens's Printer for Ontario; 2020. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/wwksf-routes-transmission-mar-06-2020.pdf?la=en>