London Health Sciences Centre
Southwest Ontario Regional Base Hospital Program

Date	May 8, 2020
To	SWO Paramedics
From	Dr. Matthew Davis, Regional Medical Director
Subject	Key Changes for Treatment Considerations

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The fourth iteration of the **Considerations for Paramedics Managing Patients during the COVID-19 Pandemic** has been released and goes into effect immediately. You will notice that the format of the memo has been revamped in an attempt to help with clarity and ease of use.

The document now has a table of contents to assist with locating information. The memo has been broken down into 3 sections: Part A – ALS PCS Medical Directives with COVID-19 Treatment Considerations; Part B – Additional COVID-19 Treatment Considerations and Part C: Infection Prevention and Control. A reference section has also been added.

The treatment recommendations now align with the Ontario Agency for Health Protection and Promotion (Public Health Ontario) Guidelines. Although there are some language changes to assist with clarity, there are very few changes to practice and these changes are only minor. Below are the key changes:

Key Changes:

- Page 3 - **When an SGA is used, the gastric/suction port should be occluded prior to insertion.**
  - This has been previously covered in SWORBHP "Tip of the Week" and in SWORBHP Podcast #2. Please review this on the SWORBHP website for more information.

- Page 4 - **Withholding manual ventilation in any spontaneously breathing patient unless severe hypoxia (SpO2 < 85%) is not improving with other therapies.**
  - Manual ventilation with a BVM is permitted if other therapies have not resulted in adequate oxygenation AND the patient's SpO2 is less than 85% despite these treatments (ex – high concentration oxygen via Flo2Max, HiOx, Tavish Non-Rebreather etc.).

- Page 5 - **Using a maximum of 6 L/min oxygen via nasal cannula**.
  - Changed from 5 L/min. This now aligns with the PHO guidelines.

- Page 5 - **Avoiding oxygen delivery rates ≥ 16 L/min via a non-rebreather mask or BVM.**
    - Oxygen flow rates should not exceed 15 L/min (ex. 15 L/min maximum flow rate).
    - This aligns with the PHO guidelines which no longer consider this an AGMP.
    - **SWORBHP recommendations do not change from previous**:
        - For patients that require higher flows of oxygen than what can be delivered by nasal cannula, High Concentration/Low flow masks are the preferred oxygen delivery systems (Flo2Max, HiOx mask, Tavish Non-Rebreather etc.).
        - Start at lower flow rates and titrate up as required to obtain adequate oxygenation, **but do not exceed 15 L/min**.
        - These High Concentration/Low Flow masks have built in viral filters and are considered to be a closed system. As such, thought to reduce potential for viral transmission when compared to a Non-rebreather (NRB) face mask which does not have the viral filter.
        - Suggest only using NRB if stock of NRB depleted or High Concentration/Low Flow masks are not available.
        - For manual ventilation with BVM, do not exceed 15 L/min. Recommend using lowest flow rate that allows for reservoir bag to be filled.

- Page 5 - **STEMI Hospital Bypass Protocol**
    - This does not change any current COVID-19 practices for paramedics in SWORBHP Region.

- Page 6 - **Documentation**
    - 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.

SWORBHP will highlight some of these changes via Tip of the Week and our 3rd podcast which will be recorded and released the week of May 11th.

If there are any questions, please review ASK MAC on the SWORBHP website. If you cannot find the answer there, please submit your question and we will do our best to answer and post the question within 48 hours.

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Regional Medical Director - SWORBHP

ONTARIO BASE HOSPITAL GROUP
MEDICAL ADVISORY COMMITTEE

M E M O R A N D U M

TO: Ontario Paramedics

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

DATE: May 6th, 2020

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

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This is the fourth version of the MAC memorandum on considerations for paramedics during the COVID-19 pandemic. This memo supersedes previous considerations.

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.

Thank you for your on-going commitment to providing excellent patient care during these exceptional times.

Contents

Paramedic Considerations during the COVID-19 Pandemic: Directions for use of these considerations

- Paramedics should apply these recommendations in **all patients with respiratory symptoms or in cardiac arrest,** regardless of COVID screening.
- The word "**consider**" indicates that a paramedic should provide care consistent with the context of the treatment considerations in this document unless there is strong clinical rationale to do otherwise.
- 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. Supraglottic Airway Insertion and Orotracheal Intubation Medical Directives

Paramedics should consider, **in all cases**, withholding supraglottic airway (SGA) insertion or orotracheal intubation (ETT) unless the patient is in cardiac arrest.

2. Cardiac Arrest Medical Directive

Paramedics should consider, **in all cases**:

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

3. Bronchoconstriction Medical Directive

Paramedics should consider:

a. Withholding **nebulized** salbutamol **in all cases**.
b. Withholding salbutamol **MDI** with spacer for mild-moderate respiratory distress unless respiratory distress becomes **severe with no cough**. If using salbutamol **MDI**, administer using a "tidal breathing" technique where the patient takes 5 normal breaths through the spacer rather than a single deep breath with a breath hold.

c. Administering IM epinephrine for **severe respiratory distress with cough in known asthma patients**, per the Bronchoconstriction Medical Directive, but allows for a second dose where needed.
   - Administer a maximum of 2 doses of epinephrine with a 5-minute interval between doses.

4. CPAP Medical Directive

Paramedics should consider, **in all cases**, withholding CPAP.

5. 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.

6. Croup Medical Directive

Paramedics should consider withholding nebulized epinephrine in suspected croup.

7. Opioid Toxicity Medical Directive

In all cases of patients with opioid toxicity and inadequate spontaneous respirations, Paramedics should consider administering naloxone, without the requirement of an "inability to adequately ventilate."

Part B: Additional COVID-19 Treatment Considerations

1. General

a. Paramedics should consider donning the appropriate PPE for all airway procedures, all cardiac arrests and all patients with respiratory symptoms or hypoxia (SpO2 < 92%) in addition to all patients who have a positive screen for COVID-19.

2. Airway Management & Ventilation

Paramedics should consider:

a. Withholding manual ventilation in any spontaneously breathing patient unless severe hypoxia (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. Applying an in-line filter as close to the patient as possible when providing manual ventilation.

c. Pausing 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

Paramedics should consider, **in all cases**:

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

4. Medication Administration

Paramedics should consider:

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

5. STEMI Hospital Bypass Protocol

Paramedics should consider:

a. Transporting STEMI patients directly to a cardiac centre if they meet all of the documented indications (including the defined ECG findings) and none of the contraindications and have **chest pain** consistent with myocardial ischemia/myocardial infarction (contact the interventional cardiology program and/or transmit the ECG as per local process).
b. Transporting patients to the closest Emergency Department if there is no complaint of chest pain.

6. Alerting Receiving Facilities

Paramedics should consider pre-alerting receiving facilities such as hospitals, bypass centers, maternity wards or others if a patient's COVID-19 screen is positive.

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.
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 aerosols[1].
- 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 AGMPs[2] 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).
- 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 possible[3].
- 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 for personal protective equipment and post-intervention cleaning or decontamination.

Best Regards,

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References

[1]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

[2] 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

[3] 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