Care of the Adult Suspected/Confirmed COVID-19/ILI Patient in the Emergency Department/Urgent Care Centre

Emergency Strategic Clinical Network

Note: This document is an adaptation of the Care of ADULT Critically Ill COVID-19 document. The original document was developed by the Provincial Critical Care Communicable Disease Working Group and the Critical Care Strategic Clinical Network. This adaptation for use within the Emergency Department and/or Urgent Care Centre (ED/UCC) care area was coordinated by the Emergency Strategic Clinical Network with permission.

Intention for use:
- To guide all providers of ED/UCC care in Alberta as to the basic care of adult patients with known or suspected COVID-19 infection to ensure such patients receive optimal, consistent and equitable care throughout the ED/UCCs of Alberta
- Recognize that the application of the guidance in this document will need to be adapted to the characteristics of each individual site, zone and department.

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Questions or concerns with this document may be directed to Emergency.SCN@AHS.ca
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A. Surveillance

Case Description for COVID-19

COVID-19 is an infectious syndrome caused by SARS-CoV-2, a novel coronavirus that has not been previously detected in humans. Though information is rapidly evolving, at this point it is noted that though the vast majority of patients have only mild symptoms, a small portion develop critical illness, in particular hypoxemic respiratory failure. In some cases there has been late cardiac decompensation, after hypoxic failure seems to be resolving. COVID-19 is believed to be spread via respiratory droplets (similar to influenza, MERS, and SARS) and/or contact (e.g. contaminated hands to mucous membranes). Person to person spread has been identified within Alberta.

COVID-19/ILI Screening Criteria:

Click link to see the current updated screening criteria for COVID-19/ILI: https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-ncov-ed-ucc-triage-algorithm.pdf

NOTE: This link is updated regularly and must be reviewed prior to every shift.

B. Facility Entrances, Pre-Triage and Triage

All sites shall ensure that appropriate signage (as indicated on the ECC Insite page https://www.albertahealthservices.ca/topics/Page17000.aspx) is posted for all patients and visitors entering the facility.

Dedicated staff for pre-triage is strongly encouraged to identify and sort patients who meet COVID-19/ILI screening criteria if possible in the ED. Screening staff in pre-triage to maintain contact and droplet precautions (https://www.albertahealthservices.ca/assets/healthinfo/ipc/IPC-assmt-cntrs-covid-ppe-matrix-res-topics-z0-emerging-issues.pdf). If ED registration staff are first point of contact, they too should use appropriate precautions. Symptomatic patients should immediately apply facemask and use antiseptic hand solution prior to entry. Symptomatic patients should be moved to an appropriate treatment space or holding area for triage and care. All patients who cannot be screened (e.g. unconscious) should be considered positive until proven otherwise. All patients who screen negative for COVID-19/ILI will proceed to regular triage for further evaluation.

All visitors to the ED/UCC must also be screened for COVID-19/ILI symptoms. All symptomatic visitors will not be allowed within the ED/UCC.

For sites not utilizing pre-triage, contact and droplet PPE precautions shall be used by triage staff. All symptomatic patients should immediately apply facemask and use antiseptic hand solution. Cohorting decisions are site specific and staff will follow site processes.

Registration staff should also be using contact and droplet PPE precautions and practice routine hand cleansing between each patient interaction.
C. General ED/UCC Logistics

1. Patient Area Supplies
   - Use disposable supplies wherever possible
   - Stock isolation cart with adequate supply of N95 masks (all brands and sizes), goggles, face shields, gloves (all sizes), yellow isolation gowns, surgical masks and disinfectant wipes.
   - Ensure canisters of disinfectant wipes inside and outside the patient room are adequately full.
   - Avoid overstocking rooms – only bring in supplies as required. All items that cannot be surface disinfected should be discarded when the patient is discharged.
   - Alert charge nurse/unit clerk ASAP if supplies of PPE equipment are low so that they can be ordered.
   - Alcohol based hand sanitizer will be available outside and inside patient rooms.
   - Ensure garbage and laundry hamper are stationed inside patient room for doffing of PPE.

2. Equipment
   - All equipment (e.g. BP cuffs, Sat monitors) should be kept in the patient’s room to avoid transmission via objects. Dedicate equipment (e.g. stethoscope, vitals monitor, etc,) to isolation room or clean with hospital grade disinfectant after use prior to returning to general circulation.
   - Review Stethoscope Use for Patients on Contact and Droplet Precautions including COVID-19 Patients.

3. Charting
   - Do not take the paper chart or laboratory results into the patient room.
   - Mobile computer terminals are to remain outside the patient room at all times unless a dedicated mobile terminal is available to remain in room (e.g. for units where dedicated mobile terminals are available for very sick patients requiring in-room presence of staff a majority of the time). Regular cleaning of computers/keyboards must be performed.
   - Review Nursing Practice and Documentation Efficiency During a Pandemic. Recommendations for COVID-19.

4. Diagnostic Imaging (DI) considerations:
   - Follow site process for advance communication with DI prior to movement of symptomatic patients
   - Symptomatic unwell patients will have all x-rays performed via portable means where possible
   - See General Radiography Chest Imaging during COVID-19 Pandemic

5. EMS Interface
   - EMS crews will screen patients for COVID-19/ILI prior to ED/UCC arrival
   - EMS will contact receiving site to inform of any symptomatic patient prior to arrival to allow for space allocation and proper precautions
   - Receiving ED/UCC will seek to accommodate symptomatic EMS patients in appropriate care space

6. Meals: Disposable dishes are not required. Leave tray outside the room to avoid contamination. Take only food and dishes into isolation room. Return used dishes to tray and follow routine precautions.

7. Visitors of suspected/confirmed COVID-19/ILI patients:
   - In person visitation should be discouraged. Consider electronic means of communication for patients and visitors.
   - Watch for updates on visitation rules on the COVID-19 AHS webpage.
   - Pediatric visitors will not be allowed to visit any patient care spaces.
   - Minimize number of visitors for ALL patients in department to one per patient, where possible. Visitors must be asymptomatic.

8. Provincial ED/UCC COVID-19 Pandemic Surge Phases
   Refer to AHS Provincial Emergency Department/Urgent Care Centre COVID-19 Pandemic Surge Phases for direction/planning for potential surges.
D. Infection Prevention Precautions

1. Handwashing is critical to prevent the spread of COVID-19. Special attention to hand hygiene is essential for staff, patients, and visitors. Wash hands with soap and water or use antiseptic hand rub before and after each and every contact with patients or their environment. Remind colleagues if you see lapses in hand hygiene behaviour. Educate patients and visitors about how and when to use hand hygiene products: https://www.albertahealthservices.ca/assets/healthinfo/ipc/if-hp-ipc-flu-handwash-how-to.pdf

2. Confirmed and suspected COVID-19/ILI cases in the ED/UCC should be managed with contact and droplet precautions. Use N95 respirators for all aerosol generating medical procedures (AGMP, see definitions Section B 2.) and for all intubated patients.


4. Personal eyewear is not sufficient eye protection.

5. For patients with suspected but not confirmed COVID-19/ILI infection, maintain contact and droplet isolation precautions including N95 respirators for AGMP and intubated patients

   Applying N95 respirators: Hold mask in your hand and pull both elastic ties, bottom first, over your hand for ease of putting mask on. Test to ensure that mask is secure and that there are no leaks. Discard immediately outside of room after use.

   Eye protection (disposable face shields/goggles): Face shields or goggles are to be worn upon entering the patient room. Personal eyewear (glasses) is not sufficient. Face shields are single use. Discard face shields outside of the room after use. If googles are re-used they must be fully wiped down with disinfectant wipes prior to re-use.

   Gloves: Always perform hand hygiene prior to putting on gloves and after removal.

   Gowns: Remove lab coat before donning. Ensure the back of the gown is secured.


E. Medical Care

At this time there are no specific proven treatments recommended for COVID-19 infections. Supportive and symptomatic care is important particularly for those with severe symptoms of COVID-19.

For patients presenting with an ILI where SARS-CoV-2 is one possible etiology, it is critical to recognize the high likelihood of more common viral and bacterial pathogens to underlie the patients presentation, even in the presence of exposure to COVID-19 infected individuals or relevant travel exposures.

Establishment of Goals of Care (GOC) designation should be pursued as early as possible; where GOC designation isn’t available, use clinical judgment and facility practice.

1. Microbial Testing

Last Updated: 04/15/20 0800h
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Even in patients with proven COVID-19 infection, particularly in patients with severe disease, bacterial and/or other viral co-pathogens often are also present.

All patients evolving severe illness should be tested for the full spectrum of respiratory viruses (including SARS-CoV-2) and bacterial pathogens. This should include:

- In all patients, a nasopharyngeal swab for respiratory viruses (including SARS-CoV-2)
- Wherever possible and in addition to a nasopharyngeal swab, a sputum sample for respiratory viruses (including SARS-CoV-2) and bacterial culture.
  - For intubated patients, this is best sent as an endotracheal tube aspirate (ETA).
  - For non-intubated patients able to produce sputum, this is best sent as expectorated sputum.
  - Sputum induction is **not** recommended in non-intubated patients (to reduce exposure risks).
  - In critically ill patients sputum samples may be important to send in addition to nasopharyngeal swabs given they have a higher sensitivity for the detection of viral pathogens (SARS-CoV-2 and most other viruses, including influenza).
- Blood cultures x 2 drawn from separate lines/sites

2. **Empiric Antimicrobial Therapy**

Refer to [Recommendations for Antimicrobial Management of Adult Hospitalized Patients with COVID-19](#).

3. **Imaging**

Where clinically necessary, COVID-19 suspected cases should have chest x-ray performed. CT chest should be reserved for severe cases where the study can be used to guide or monitor management. Currently there are no pathognomonic imaging findings for COVID-19.

4. **COVID-19 Specific Antiviral Therapy**

Refer to [Recommendations for Antimicrobial Management of Adult Hospitalized Patients with COVID-19](#).

4. **Systemic Corticosteroids**

Systemic corticosteroids for the treatment of viral pneumonia is **NOT** recommended. Studies thus far in patients with severe influenza, SARS, and MERS have revealed either harm or no benefit. Systemic steroids may be of value for other clinical indications such as severe septic shock.

5. **Fluid Management**

Use conservative fluid management in patients with COVID-19 when there is no evidence of significant dehydration. COVID-19 patients should be assessed for dehydration as fever may have increased fluid losses with decreased oral intake. Patients with COVID-19 should be treated cautiously with intravenous fluids, because aggressive fluid resuscitation may worsen oxygenation. Hypotonic fluids, starches and albumin should generally be avoided.

5. **Goals of Care Designation**

Care of the COVID-19 patient within the ED/UCC should align with the patient’s goals of care designation.
F. Respiratory Care

For more detailed respiratory care refer to *Respiratory Management of Confirmed and Suspected Adult COVID-19 Patients.*

The World Health organization (WHO) suggests that all respiratory care poses a potential risk during the COVID-19 pandemic. Staff should strictly adhere to hand hygiene protocol and ensure they use optimal donning and doffing technique of all PPE to reduce risk. Use N95 and other appropriate PPE for aerosol generating medical procedures (AGMP) which are described within the link below.

**NOTE** this document doesn’t contain a full list of AGMP, but it will be updated as new evidence becomes available: https://www.albertahealthservices.ca/assets/healthinfo/ipc/hi-ipc-respiratory-additional-precautions-assessment.pdf

The basic principles are to always use personal protective equipment in addition to appropriate isolation precautions and minimize the use of aerosol-generating procedures. Consider following Infection Prevention guidelines found here: https://www.albertahealthservices.ca/assets/healthinfo/ipc/hi-ipc-respiratory-additional-precautions-assessment.pdf

For Non-Intubated Patients:

- Oxygen therapy may be necessary for patients with COVID-19. The primary goal is to provide supportive care.

- The provision of oxygen therapy for patients with confirmed or suspected COVID-19 follows standard practices with the exception:
  - Avoid humidification as much as possible to reduce the risk of aerosolization and microbial spread

- Start oxygen in an adult with suspected COVID-19 if SpO2 is less than 95%, in a patient with normal cardio-pulmonary function. Oxygen initiation in patients with chronic cardio-pulmonary disease will need to be individualized based on individual patient characteristics.
  - In cardio-pulmonary patients, consider applying oxygen if SpO2 is less than 92%

- Adults with emergency signs (e.g. obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions) should receive airway management and oxygen therapy during resuscitation.2
  - If patient is not acutely unstable, initiate oxygen therapy at 5 LPM and titrate to reach target SpO2 at least 93% during resuscitation; or use Non-rebreather mask/high concentration face mask with reservoir bag (at 10 to 15 LPM) if patient in critical condition.
  - Once patient is stable, the target is at least 95% SpO2 in non-pregnant adults and at least 98% SpO2 in pregnant patients of any age.
  - If severe respiratory distress persists despite initiation and stabilization with adequate oxygen therapy, intubation may be required (if concordant with the GOC of the patient).

- Unless an adult patient has emergency signs, maintain target SpO2 range at 92 to 96%

- Patients should be cared for with head of bed elevated 30-45 degrees at all times

- Patients receiving oxygen by any type of nasal cannula should also be given a procedure mask to wear, so to reduce others’ exposure to cough/sneeze droplet spread

**Non-Invasive Ventilation (CPAP or BiPAP):**

- Non-invasive positive pressure ventilation (NIV) may result in aerosolization of respiratory secretions and infectious spread; NIV is considered an AGMP which must be delivered with extra precautions per AHS protocol

- Recommendations are based on the considered balance of likely benefit of NIV to the patient versus risk of AGMP and the resources consumed by the intervention (PPE, staff, and isolation rooms).
Heated Humidified High Flow Oxygen Therapy

- The use of heated humidified high flow oxygen therapy during the COVID-19 pandemic is controversial. There is some indication that it may offer value to individuals with early hypoxemia using appropriate PPE with inclusion of N95, but is a very limited resource and creates the need for AGMP precautions where they would not otherwise be required.

- Heated humidified high flow oxygen therapy may also be used in the event that ventilator care is not available, or is delayed, so guidelines may need to be adjusted for future resource limitations.

When to Consider Intubation (R1 or R2 Goals of Care):

- Rapidly progressive oxygen needs and/or progressive respiratory distress, despite adequate oxygen.
- Clinical judgment is paramount.
- If time and situation permits, consult critical care for participation in patient management prior to intubation.

For intubation procedure, see suggested guidance here: https://insite.albertahealthservices.ca/Main/assets/ccmc/tms-ccmc-covid19-ilicovid-modifications.pdf

Sample intubation checklist can be found in Appendix C.

G. ‘Code Blue’ response for COVID-19/ILI patients

- Staff responding to emergencies inside or outside of the ED/UCC during an epi/pandemic may not have adequate time to perform a thorough risk assessment, thus should be very cautious and ensure PPE is utilized for their protection.
  
  **NOTE:** CPR is an AGMP and N95 masks must be worn by all responding to the Code Blue

- The crash cart will be brought into the patient’s room and used as required.

- The crash cart must be appropriately decontaminated according to the equipment cleaning guidelines before it is removed from the room.

- **Charting:**
  
  i. Use code blue standardized paper charting sheets. Unless room has dedicated workstation on wheels (WOW) do not use real time in room electronic charting (e.g. do not bring laptops or pads into the patient room).
  
  ii. To avoid contaminating documents or rhythm strips, the recorder should be located as far from the patient as possible and both the recorder and charting record should remain clean.
  
  iii. The recorder should refrain from doing any direct patient care and should not come in contact with anything in the environment.
  
  iv. Extra assistance may be required from other staff due to the recorder being a “hands off” member of the team.
  
  v. Where possible, the recorder should be stationed outside of the room to minimize risk of exposure otherwise use the following PPE:
   
   1. N95 respirator and face shield.
   2. Gloves and gown.
  
  vi. When resuscitation is complete, recorder to place the clean documents outside the room without leaving the room. Remove face shield, then mask, perform hand hygiene and exit room.
H. Laboratory Testing

1. Diagnostic studies:
   a. **Nasopharyngeal Swab (NPS):** Collect NPS using a flocked swab inserted deep into the nasopharynx. Place the swab in Universal Transport medium that is stored at room temperature. Mark sample as STAT. Order both COVID-19 and Respiratory Virus Panel for the same sample (only a single sample is required for all respiratory viral testing). Send sample to lab.
   b. **Endotracheal Tube Aspirate (ETA)/Expectorated sputum:** If ordered by Critical Care, collect ETA/sputum and place minimum 0.5-1 ml of secretions into sterile leak proof container. No additional transport medium is required. Mark sample as STAT. Order both COVID-19 and Respiratory Virus Panel for the same sample (only a single sample is required for all respiratory viral testing). Send sample to lab.

2. The expected turn-around time for Provincial Laboratory reporting of the full respiratory virus panel including COVID-19 testing is <72 hours.

3. Only one nasopharyngeal swab +/- ETA/sputum sample needs to be collected for both routine respiratory panel testing and COVID-19 investigation.

4. For all hospitalized and emergency department patients with respiratory virus testing ordered, COVID-19 testing will be performed along with the usual respiratory pathogen panel (RPP).

5. For all hospitalized and emergency department patients with rapid influenza/RSV testing ordered (if available at that site), COVID-19 testing will be performed along with the rapid influenza/RSV test.

I. Movement of Patient from ED/UCC

1. Contact receiving department prior to moving a critically ill patient.

2. All health care providers involved in transport must use appropriate isolation precautions. For intubated patients and those with active aerosol generating medical procedures (AGMP) underway (e.g. open suctioning), staff involved in the transport should don N95 respirators with their PPE. In the absence of the above conditions, surgical masks should be worn.

3. Staff providing direct care during the transport should also don protective eye wear, masks, gown and gloves. Note: personal eye wear is not sufficient.

4. Hand hygiene should be performed before and after patient transport.

5. Wipe the handles of the bed before transport with disinfectant wipes. Designate one porter/assistant as ‘clean’ to open doors and touch elevator buttons.

6. Transport with minimum number of people necessary - registered nurse (RN), registered respiratory therapist (RRT), most responsible health practitioner (MRHP), and health care aide (HCA) as appropriate.
7. If patient intubated:
   b. Use of transport ventilators (with filtering systems) is preferred to minimize the need for hand bagging. If use of a transport ventilator is not possible, use a manual bagging unit (with PEEP valve).
   c. Where available, RRT will manage airway and oxygen requirements.
   d. Clean O₂ cylinder(s) and transport stretcher with disinfectant wipes before returning to general circulation. Clean and disinfect transport ventilator after use and discard breathing circuit.

8. If patient not intubated:
   a. Transport with non-humidified (dry) oxygen supply - respiratory to identify the most appropriate oxygen delivery mask.
   b. Patients should wear a procedure mask if tolerated

9. Clean O₂ cylinder(s) and transport stretcher with disinfectant wipes before returning to general circulation.

J. Preparation and Admission of COVID-19/ILI Patients to ICU

1. AHS Point of Care Risk Assessment [https://www.albertahealthservices.ca/ipc/hi-ipc-routine-practices-algorithim-cc.pdf](https://www.albertahealthservices.ca/ipc/hi-ipc-routine-practices-algorithim-cc.pdf) must be applied to patients with a suspected COVID-19/ILI, irrespective of location.

2. Patients who meet the case definition of COVID-19/ILI or have laboratory confirmed COVID-19 admitted to the ICU will be cared for using contact and droplet precautions. [https://www.albertahealthservices.ca/assets/healthinfo/ipc/hi-ipc-respiratory-additional-precautions-assessment.pdf](https://www.albertahealthservices.ca/assets/healthinfo/ipc/hi-ipc-respiratory-additional-precautions-assessment.pdf)

   For patients receiving continuous or frequent AGMP (e.g. high flow heated humidity oxygen therapy devices, NIV, tracheostomy with frequent suctioning) healthcare providers should wear N95 masks. In addition, due to the risk of disconnection of endotracheal tube and ventilator, healthcare providers should use N95 masks when providing care to all intubated, presumed or confirmed, COVID-19 patients.

3. Enter order for “Contact and droplet isolation precautions” in the patient record, adding the comment “Use N95 masks for aerosol generating medical procedures and all intubated patients” as additional information.


K. Staffing Considerations

The principle is to minimize the number of staff involved directly with the patient with suspected or confirmed COVID-19/ILI while providing quality patient care.

1. The nurse in charge is responsible to determine patient assignment and will coordinate care of all patients in the unit with the principle in mind that the total number of staff caring for a COVID-19/ILI patient should be kept to a minimum. If possible, cohort staff so that RNs and RRTs caring for COVID-19/ILI patients are not caring for non–COVID-19 patients. Geographical cohorting of COVID-19/ILI patients may assist with staff assignments if appropriate to facilitate.

2. All members of the healthcare team, inclusive of Physicians, NPs, RNs, RRTs, allied health, and support staff will continue to perform their usual duties. They must review and adhere to all appropriate isolation precautions prior to entering rooms.
3. Staff (including those who are pregnant, immunocompromised, or have underlying medical conditions) do not need to be restricted from providing care to patients who are under investigation for COVID-19, or who have probable or confirmed COVID-19/ILI, so long as the staff member is able to demonstrate proper use and fit of personal protective equipment, including donning and doffing, and can competently adhere to the IPC recommendations for COVID-19/ILI.

AHS Position Statement: [Pregnant Healthcare Workers and COVID-19](#)

AHS Position Statement: [Healthcare Workers with Underlying Medical Conditions and Potential Risk Factors for Severe COVID-19 Disease](#)

For students (medical or otherwise) working within an ED/UCC, please check with current site and educational institution guidelines for any restrictions to practice or exposures.

4. Individuals who are unable to competently adhere to the IPC recommendations for COVID-19 (e.g. skin condition that precludes proper hand hygiene practices) should not provide care to patients who are under investigation for COVID-19, or those who have probable or confirmed COVID-19/ILI. Staff who are unable to be “Fit Tested for N95 masks” should not care for COVID-19/ILI patients that are intubated or require any AGMP.

L. Environmental Control

1. Environmental services/housekeeping staff should use the same precautions when cleaning the room as are used during care of any other patient on isolation but must wear the recommended PPE for staff and visitors. Daily cleaning of room is the same as non-isolation rooms with the following exceptions:
   
   o Floor Cleaning Solution is to be changed and pail and mop handles decontaminated before removal from the room. Each isolation room should have a dedicated mop head.

2. All waste is managed per routine procedures. Liquid waste should be eliminated via the flusher, not via the sink.

3. All linens are managed per routine procedures. Wet or soiled linen is wrapped in dry linen and placed in the laundry bag to ensure it does not leak through.

4. Sharps should be placed in sharps containers per usual practice.

   When a suspected or confirmed COVID-19/ILI patient is discharged or transferred, all disposable items in the room should be discarded. All re-usable items/equipment should be cleaned and disinfected in the room and then placed in clean storage area. All unused linen should be placed in a soiled hamper.

5. Room surfaces and equipment cleaning/disinfection is required on a daily basis or more frequently if directed by IPC using AHS approved products and procedures.

   - AHS approved products that have Health Canada broad spectrum virucidal claims are effective against SARS-CoV 2.0.
   - After discharge, transfer or discontinuation of contact and droplet precautions, clean room as per existing facility cleaning practices.
   - Replace privacy curtains.
   - Additional precaution signs should not be removed until both patient’s personal hygiene and environmental cleaning have been completed.
Appendices

APPENDIX A

Putting on (Donning) Personal Protective Equipment (PPE)

1. Hand Hygiene
   A. Using an alcohol-based hand rub is the preferred way to clean your hands.
   B. If your hands look or feel dirty, soap and water should be used to wash your hands.

2. Gown
   A. Make sure the gown covers from neck to knees to waist.
   B. Tie the back of neck and waist.

3a. Procedure/Surgical mask
   A. Secure the ties or elastic around your head and the mask stays in place.
   B. Fit the elastic around the nose bridge. Fit snugly to your face and below chin.

3b. N95 respirator
   A. There are different styles of N95 respirators (plaid Band-aid). They include:
      1. N95 cap, N95 mask, N95 mask and
      2. N95 hood.
   B. All styles have the same basic steps for donning: masked caps and masks are picture-matched. Refer to the manufacturer for specific donning instructions.

4. Eye protection or face shield
   A. Place over the eyes or nose.
   B. Adjust to fit.

5. Gloves
   A. Pull the cuffs of the gloves over the cuffs of the gowns.

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APPENDIX B

Taking off (Doffing) Personal Protective Equipment (PPE)

1. Gloves
   - A. Grasp the outside edge of the glove near the wrist and peel away from the hand, tucking the glove inside out.
   - B. Hold the glove in the opposite gloved hand.
   - C. Slide an unpouched finger or thumb under the wrist of the remaining glove.
   - D. Peel the glove off and over the first glove, placing a bag for both gloves.
   - E. Put the gloves in the garbage.

2. Hand Hygiene
   - A. Using an alcohol-based hand rub is the preferred way to clean your hands.
   - B. If your hands look or feel dirty, soap and water must be used to wash your hands.

3. Gown
   - A. Carefully pull off gown.
   - B. Grasp the outside of the gown at the back of the shoulders and pull the gown down over the arms.
   - C. Turn the gown inside out during removal.
   - D. Pull in tunic or, if disposable, put in garbage.

4. Hand Hygiene
   - A. Clean your hands. (See No. 2)
   - B. Enter the clean room, don the gown and clean your hands again.

5. Eye Protection or Face Shield
   - A. Handle only by headband or ear preservers.
   - B. Carefully pull away from face.
   - C. Put reusable items in appropriate areas for cleaning.
   - D. Put disposable items into garbage.

6. Mask or N95 Respirator
   - A. Bend forward slightly and carefully remove the mask from your face by touching only the ties or elastic bands.
   - B. Start with the bottom tie, then remove the top tie.
   - C. Toss the mask in the garbage.

7. Hand Hygiene
   - A. Clean your hands. (See No. 2)

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# APPENDIX C

## URGENT INTUBATION CHECKLIST

### PREPARATION
- Is the patient stable enough to allow time for the pause?
- Are Goals of Care R1 or R2?
- Assign roles: 
  - primary intubator
  - airway assistance
  - med RN
  - clean runner
  - backup intubator
  - c-spine
- Is everyone wearing full PPE correctly (goggles/face shield, N95 mask, gown, gloves)?
- Has communication with the clean runner been established?

### PATIENT
- Predicted anatomical difficulties? (and mitigation strategies)
- Predicted physiological difficulties? (anticipate hypoxia; mitigation strategies)
- Patient position optimized
- Oxygenation maximized
- Monitor on and read out current vitals
- Who will read out CO2 level? (determine threshold for action)

### DRUGS
- Functional vascular access
- Premedication required? (for asystole, blood pressure)
- Intubation medications and doses (any contraindications?)
- Hemodynamic compromise plan
- Post-intubation medications
- Crash cart and ICU equipment located and ready

### RESPIRATORY
- Bagger, FILTER, PEEP valve, suction, oxygen sources, oral airway, bougie
- Laryngoscopes ready and operational (video-laryngoscope, direct laryngoscopy)
- What sizes of blades and ETTS are prepared?
- End-tidal CO2 ready?
- Post-intubation equipment ready (syringe, tube holder, ETT clamp, tape)?
- Difficult intubation cart located and on standby (including cricothyrotomy kit)?
- Surgical cric kit located (taped to wall)?
- Critical ventilation/oxygenation consideration:
  - 2 person and 2 hand BVM ventilation with OPA only if oxygen saturation <70%
  - Ensure FILTER is between the mask/ETT and bagger
  - No bagging until ETT cuff is inflated
  - Clamp ETT before disconnecting from bagger or ventilator unless spontaneous resps

### PLAN (please verbalize)
- **PLAN A**
- **PLAN B**
- When to call backup
- **EMERGENCY PLAN**

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Department of Emergency Medicine, Edmonton Zone, Alberta Health Services (March 29th 2020 edition)