COVID-19: Management of Severe Respiratory Illness in Pediatric Patients during COVID-19 Pandemic

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Site Applicability

Applicable for managing all children with an acute viral respiratory illness.

Practice Level

Specialized skill – An activity that has a high degree of risk, requires advanced education and is limited to providers trained to provide pediatric care.

Guideline Statements

- To guide all providers of British Columbia as to the basic essential care needs of pediatric patients with known or suspected COVID-19 infection to ensure such patients receive optimal, consistent care.
- Recognize that the application of the guidance in this document will need to be adapted to the characteristics of each individual unit, department and Health Authority. In particular there may be variability in epidemiology across geographic areas, variability over time in COVID-19 testing and Infection Prevention and Control recommendations, so users are encouraged to refer to local up-to-date guidance on these measures.

COVID-19 (Novel Coronavirus) Resources Index

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A. Infection Prevention and Control

Please refer to the BCCDC COVID-19 site for up to date recommendations: http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care

BC Children's Hospital-specific recommendations / policies and procedures are available at: http://policyandorders.cw.bc.ca/

1. IDENTIFICATION

- Most children with COVID-19 have mild illness; a minority, particularly those who have complex underlying medical conditions may present with more severe disease
- **Symptoms:** May include fever, cough, shortness of breath, rhinorrhea, nasal congestion, loss of sense of smell, sore throat, odynophagia, headache, muscle aches, fatigue, loss of appetite, chills, vomiting, or diarrhea
- **Potential contacts**: People who have been instructed in last 14 days to self-isolate, includes travel outside of Canada in the last 14 days, been in contact with someone known to have COVID-19 in last 14 days, or tested for COVID-19 and results are pending

Click link to see other Screening-related resources from BCCH:

- COVID-19 Patient And Support Persons Screening Form
- COVID-19. What I Need to Know! - Clinicians
- COVID-19. What I Need to Know! - Ambulatory Reception Staff s

2. ISOLATION / PPE

- Following local infection control policies, children with symptoms consistent with COVID-19 (see above – symptoms), including new respiratory tract symptoms and/or fever of unknown origin, should be isolated
- Put the patient/family in a single room. Apply face masks when possible – close the door
- Use Droplet & Contact precautions including procedure mask, eye protection (shield/ visor/ goggles), gown and gloves
- Add Airborne precautions if Aerosol-Generating Medical Procedures (AGMP) are likely to be required: use an N-95 mask, and place in a negative pressure isolation room if one is available.
- The restricted visitor policy for your organization should be followed; local policies should address the need for a parent to be present with the child

Note: Nasopharyngeal Swab collection - refer to the most recent Public Health Agency of Canada (PHAC) and BCCDC guidelines.

3. TESTING

Testing criteria changes frequently, please refer to BCCDC Testing Guidelines. Broadly, testing is recommended any patient with symptoms consistent with COVID-19; particularly for groups that are more vulnerable to complications due to COVID-19. Children with respiratory symptoms who are likely to be hospitalized, are residents of a long-term care facility or are

part of an outbreak investigation should be prioritized for testing. This includes children with medical complexity or significant immunosuppression, and children from remote, rural or Indigenous communities.

To prioritize testing, label requisition as coming from:

- Hospital (label as HOS) – this includes children who are admitted or are likely to be admitted, including those with significant medical complexity, oncology patients.
- Community (label as CMM) – this includes children from remote, isolated or Indigenous communities, doctors' offices, primary care centres, emergency departments where admission is not anticipated.
- Long-term care facility (label as LTC)

Testing Procedure

- Nasopharyngeal (NP) swabs can be performed using Droplet and Contact Precautions and do not require an N95 respirator. Indicate COVID-19 NAT on the requisition.
- For outpatients: 1 NP swab OR 1 viral throat swab (NP swab preferred)
- For inpatients: 1 NP Swab (OR sputum OR endotracheal aspirate)

Even in patients with proven COVID-19 infection, particularly in patients with severe respiratory disease, bacterial and/or other viral co-pathogens are often also present.

Testing considerations should include:

- A nasopharyngeal flocked swab is the primary sample to submit for COVID-19 testing
- If the child is an age where they can expectorate sputum (generally ≥ 8 years of age) and are productive of sputum then a sputum sample would be an acceptable alternative.
    - For intubated patients, an endotracheal tube aspirate (ETA) would be the preferred sample
    - **Sputum induction or nasopharyngeal aspirates are generally **not** recommended as they may induce aerosols.
- Influenza and RSV testing on the same sample is also recommended during the season and testing for other respiratory pathogens may also be indicated for those with more complex illness or risk factors, for example, requiring ICU admission, immunocompromised.

Bronchoscopy solely for the purposes of microbial sampling in otherwise uncomplicated patients is not recommended due to unproven benefit and high-risk procedure. If there is a clinical possibility of other more unusual pathogens (as in an immunosuppressed patient), consideration could be given to performing bronchoalveolar lavage (BAL) recognizing that bronchoscopy is a highly aerosolizing procedure.

For patients sent home after swab collection, ask them to self-isolate and provide them with the local health authority's or the BCCDC patient handout including the phone number to call for test results.

For patients who are clinically suspected of having COVID-19 based on symptoms above but not

tested, advise them to self-isolate until:

- At least 10 days have passed since the onset of symptoms; AND
- Fever has resolved without the use of fever-reducing medication; AND
- Symptoms (respiratory, gastrointestinal, and systemic) have improved.

B. Preparation and Admission of Patient

1. Appropriate PPE must be used when caring for patients with suspected COVID-19, irrespective of location. For details, see BC Children's Hospital Reference Tool. For other hospitals, see BCCDC PPE guidance or local policies.

2. IPAC guidelines for donning and doffing PPE should be followed.

3. Patients who may have COVID-19 or who have laboratory confirmed COVID-19 admitted to the inpatient unit will be cared for using droplet and contact precautions. Use N95 respirators for aerosol generated medical procedures (AGMP). Refer to local health authority's guidance for more information on AGMPs, such as air clearance time, keeping door closed.

   Intranasal medication administration is not considered aerosolizing.
   http://www.bccdc.ca/Health-Info-Site/Documents/Respiratory-protection-COVID19.pdf

4. Patients with COVID-19 or other viral respiratory illnesses should be admitted to single patient rooms if available, regardless of the need of AGMPs are anticipated or not.

5. Stock isolation cart outside of room with adequate supply of surgical/procedure masks, N95 respirators, eye protection (goggles and face shields), gloves (all sizes), isolation gowns, hospital-approved disinfectant wipes and N95 respirators (all brands and sizes).

   Ensure canisters of disinfectant wipes inside and outside the patient room are adequately full. It is recommended **not** to have a stethoscope in the room because of issues with cleaning and disinfection, and potential risk of HCW contamination.

6. Place signage for droplet and contact precautions. Add additional signage for airborne IF AGMPs are anticipated.

C. Transport within Hospitals

Please see your local health authority guidance on transport for further details.

1. Prior to transport, handles of stretcher should be cleaned and disinfected. The patient environment is the stretcher or bed that the team is moving for transportation of patient. The team does not have to doff and don new PPE for transport; they are still considered in the patient environment. The team does not leaving that patient environment until they hand over to receiving team; at that point they doff their PPE. Point of Care Risk Assessment

needs to be done to determine if PPE is required during transport. Transport with minimum number of people necessary – registered nurse (RN), registered respiratory therapist (RRT), Most Responsible Provider (MRP) as appropriate. Avoid sending paper chart as this can't be properly disinfected. Consider e-mail or faxing the clinical information.

2. All health care providers involved in transport must use appropriate PPE and additional precautions. For suspected or confirmed COVID-19 intubated patients, if possible, avoid transporting with active AGMP underway (e.g. open suctioning), staff involved in the transport should don N95 respirators. In the absence of the above conditions, routine droplet and contact precautions should be followed.

3. Staff providing direct care during the transport should also don eye protection, masks, gown and gloves. Note: personal eye wear (i.e. eyeglasses) is not sufficient.

4. Hand hygiene should be performed before, during and after patient transport. Ensure access to alcohol-based hand rub for entire transport. Avoid touching your face.

5. Clean and disinfect the handles of the bed before transport with disinfectant wipes. Wipe elevator buttons with disinfectant wipes.

6. Perform hand hygiene on arrival at patient destination.

For intubated patients

- Manual bagging units should have appropriate viral/bacterial filters in place.
- Use of transport ventilators are preferred to minimize the need for manual ventilation. Many critical care ventilators have transport capability if required.
- Ventilators, including transport ventilators, should have expiratory limb filters in place as appropriate to the device and type of ventilation.
- RRT (if available) will manage airway and oxygen requirements in consultation with MRP.
- Clean and disinfect O2 cylinder(s) and transport stretcher with disinfectant wipes before returning to general circulation.
- If your hospital is moving patients between units on a transport ventilator, for example, ED to ICU, consider leaving the patient on the transport ventilator until COVID test results available to minimize circuit disconnection. Clean and disinfect transport ventilator after use and discard breathing circuit.

For patients not intubated

- Transport with non-humidified (dry) oxygen supply - respiratory therapist or MRP to identify the most appropriate oxygen delivery mask.
- Patients should wear a surgical/procedure mask if tolerated.
- All nebulizer therapy should be stopped.
- If heated humidified nasal high flow (HHNHF) cannula has been started, continue with therapy and transport with surgical mask on patient's face.
- If patient has been started on non-invasive positive pressure ventilation (NIV), use only full face mask for continuous positive airway pressure (CPAP)/ non-invasive positive-pressure

ventilation (NIPPV). For short term use and transport use full face mask, high-efficiency particulate arrestor (HEPA) filter and heat and moisture exchangers (HME) in-line.
- Hallways should be cleared of extraneous personnel.
- Clean and disinfect O2 cylinder(s) and transport stretcher with disinfectant wipes before returning to general circulation.

D. General Care

The suggestions below are what is practiced at BCCH. Your local hospital may have a different approach. These are suggestions, that may need adapting to your local environment.

1. Patient Room Supplies
    a. Use disposable supplies wherever possible.
    b. Additional supplies should be delivered by a clean staff member to the room at the request of the in-room nurse/RRT. Whether stethoscopes are assigned to patients or to staff, meticulous cleaning of the stethoscope in between staff use or patient contact is important.
    c. All equipment should be kept in the patient's room to avoid transmission via objects. Dedicate equipment to isolation room or clean with hospital grade disinfectant after use prior to returning to general circulation.
    d. Avoid overstocking rooms – only bring in supplies as required. All items that cannot be surface disinfected should be discarded when the patient is discharged.

2. Charting
    a. Do not take the paper chart into the patient room. Scan or fax medical history preferably to a receiving centre to avoid paper copy transfer and HCW contamination.
    b. 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).
    c. Consider virtual interviews with parents using telephones to encourage physical distancing.

3. Visitors: All hospitals have visitor restrictions in place. BC Women's Hospital and Health Centre and BC Children's Hospital policy: http://policyandorders.cw.bc.ca/resource-gallery/Documents/Infection%20Control/C-0506-11-60580%20COVID-19%20Visitor%20Restrictions.pdf

E. Code Blue

COVID-19: Positive And Presumed Positive CPR Protocol For Children

Assessment	
Confirm code blue activation	• DON Airborne PPE prior to patient contact • Activate Code Blue call per unit standard • Communicate CODE status and COVID-19 status to code team on arrival
Code Blue Team	
Team Members/ Role	• If Available, 2 airway support personnel, 2 Code RN, Physician team leader, Airway expert • Airway to be managed by best possible operator • Code Team to don airborne PPE Prior to entering room • If available, one additional Physician or RN to be available outside the room donned in PPE as backup if needed • Minimize code team personnel (other roles to be outside the room ie. recorder, runner etc.)
PALS Management	
Standard Resuscitation Protocol	• Follow Heart and Stroke PALS algorithm for suspected or confirmed COVID-19 Patients (CAB – compression, airway, breaths). Pediatric cardiac arrest is most commonly secondary to a respiratory cause. • Airway management by expert
Transport/Return of Spontaneous Circulation (ROSC)	
Post ROSC Care	• Communication with PICU/ICU regarding time of transfer and disposition • CXR and ECG to be completed in PICU/ICU • Ensure a clear path to PICU/ICU destination • Establish doffing partner system to supervise doffing once no longer caring for the patient • Ensure all contaminated equipment is disposed or cleaned • Give opportunity for health care workers and code team members to change scrubs and/or shower at the end of shift or at the end of patient handover

Considerations

When possible, a first responder may enter the room in droplet and contact PPE and attach defibrillation PADs. If a shockable rhythm is present, this responder may provide early defibrillation while the code team don airborne (AGMP) PPE as per individual hospital policies.

F. Respiratory Care

The basic principles are to always use PPE in addition to appropriate additional precautions and minimize the use of AGMPs.

For Non-Intubated Patients

1. Provide O_2 as ordered with continuous SpO_2 monitoring as available in your setting.

2. No peak flow monitoring.

3. Nebulization should be avoided if possible. It is recognized that children will continue to present with typical viral syndromes such as croup and acute exacerbations of asthma. Best clinical judgement should be used in those situations and the child managed using your best clinical skills and therapies appropriate for the clinical situation.

4. Bronchodilator delivery via MDI via spacer is preferred if available and the patient can effectively utilize (using a mask attached to the spacer in under 5 years of age)

5. If patient is on HHNHF cannula or NIV, aerosolization should be administered via in-line devices, rather than disconnection and delivery of MDI

Heated Humidified Nasal High Flow (HHNHF) Oxygen Therapy Devices (AIRVO/Optiflow)

High flow heated humidified oxygen therapy devices may be aerosolizing, and while there is a lack of definitive evidence as to whether this is considered an AGMP, on the basis of an abundance of caution it is considered an AGMP for COVID-19.

Similar to adult management trends, the pediatric COVID-19 patient may require HHNHF cannula treatment which may prevent unnecessary intubation. If used in pediatric patients with suspected or confirmed COVID-19 infection, care of the patient in a negative pressure room is ideal, but it is also perfectly acceptable to manage the patient in a single room with the door closed.

Check with your local IPAC experts for additional measures, for example, clearance time, in your medical facility. See BCCDC High-Flow Oxygen Guidance for further details.

Non-Invasive Ventilation (CPAP or BIPAP)

Non-invasive positive pressure ventilation (NIV) may result in aerosolization of respiratory secretions and thus is not recommended for routine use in COVID-19 patients. If used in adults with ILI (COVID- 19 or other pathogens) with hypoxemic respiratory failure or ARDS, NIV has been associated with high failure rates and need for emergent intubation. It is unclear if this is true for

children with COVID-19 infection. Patients with hemodynamic instability, multi-organ failure, or abnormal mental status are at very high risk for failure and should not receive NIV. Pro-active intubation under less emergent conditions is the preferred strategy.

If used in patients with suspect or confirmed COVID-19 infection, for example, in patients with goals of care limiting intubation, patients with predominant airway disease or co-existing cardiogenic pulmonary edema, NIV treatment must be performed in a single patient room (preferably negative pressure) with the door closed and with staff using airborne and contact precautions including use of N95 respirators. Preferentially an NIV device with a HEPA filtered expiratory limb should be used, for example, Servo U ventilator.

Tracheostomy care and management in the non-ventilated patient

Patients spontaneously breathing via a tracheostomy and remaining on contact and droplet precautions for COVID-19 should:

1. Continue to be managed in single patient rooms using appropriate PPE.
2. Attach an HME tracheostomy t-piece and place a regular procedure mask on patient's face, place a clean tracheostomy dressing under phalange of tracheostomy.
3. Uncuffed tracheostomy tubes should be changed to a cuffed tube by appropriate medical staff if the appropriate tube and staff are available
4. Provide humidity as indicated and per current practice

Tracheostomy care and management in the ventilated patient

Patients ventilated via a tracheostomy remaining on airborne precautions for COVID-19 should:

1. Continue to be managed in single patient rooms using appropriate PPE
2. Place a regular procedure mask on patient's face and also place a mask over tracheostomy
3. Place a clean tracheostomy dressing under phalange
4. Uncuffed tracheostomy tubes should be changed to a cuffed tube by appropriate medical staff if the appropriate tube and staff are available
5. Provide humidity as indicated and per current practice
6. Closed suction systems are recommended for these patients

For Intubated Patients

1. The following strategies should be considered to support children who have been intubated and awaiting the arrival of the transport team:
    a. Deep sedation and paralysis may be required to reduce the chances of endotracheal dislodgement. Otherwise, follow usual sedation assessment and management practices
    b. Elevation of head of bed to 30 degrees
    c. Humidified gases as per usual practice
    d. Lung protective ventilator strategies that restrict tidal volumes to 6-8 mL/kg of Ideal Body Weight (IBW)
    e. Limit plateau pressures to ≤ 30 cm H_2O
    f. Allowing permissive hypercapnia ($PaCO_2$ 45-55mmHg)
    g. PEEP 5 to 8 cmH_20

h. Minimize fluid boluses unless hypotensive

2. Bronchodilator delivery should only be provided via MDI and spacer. Nebulizers should not be used.

3. Use in-line suction only for all ventilated patients if available. Avoid open suctioning.

4. Post ventilation handling of ventilator: Strip ventilator of all disposable parts and place waste in biohazard bag and discard in room. Send reusable components for processing and mark as isolation. Clean the surfaces of unit with hospital grade disinfectant wipes.

5. Follow Section C. Transport & Admission in Hospital.

6. To initiate a referral for all pediatric patients outside of BCCH, consult BC Patient Transfer Network (PTN) Phone: 604-215-5911 Toll Free: 1-866-233-2337

Intubation Guidelines

NIV and high-flow oxygen therapies may not adequately support children with COVID-19 infection, making intubation necessary. Close monitoring is crucial in order to detect failure of non-invasive support means so that intubation can be performed in a timely and controlled manner using all optimal IPAC strategies.

1. Endotracheal intubation should, ideally, be performed by the most experienced physician available: attending Intensivist, anesthesiologist or critical care resident/fellow

2. Recommend the use of an intubation checklist (**see Appendices COVID-19 Pediatric intubation checklist**)

3. Minimize number of people involved. **Close the room door**. Nursing and RRT support ideally should be provided by the same individuals assigned to patient. Follow local IPAC guidance regarding AGMPs (see comments above)

4. In units with adjustable room airflow rates, increase the rate of airflow prior to intubation.

5. Don full PPE as per IPAC guidance. Proper application of PPE should be verified by an independent observer prior to entry into the patient room. (Follow the guideline for reuse of goggles: Work Goggle Cleaning for Re-use)

6. Pre-oxygenate as much as possible using non-invasive oxygen. Reserve use of bag-valve-mask ventilation via facemask to situations where non-invasive oxygen delivery is failing, to reduce aerosolization risks.

7. The best pharmacotherapy will be determined by the physicians on a case-by-case basis but in general should include strategies that minimize chances of cough or aerosol generation through the use of agents inducing deep sedation and paralytics when clinically appropriate, for example, no signs predicting difficult intubation.

8. Consider use of video-laryngoscope for the initial attempts at intubation, to reduce the risk of aerosol contact and reducing the need to look directly down the airway.

9. Place in-line suction catheter.

10. Heated humidification should be used in the pediatric population.

11. If sputum samples have not already been collected, collect now while all additional precautions for AGMP are in place for intubation.

12. If difficult airway cart or other stand-by equipment is brought to the area, do not bring entire cart/equipment into the room – bring in only the necessary equipment as it is needed.

13. Door to remain closed until appropriate amount of time has passed based on room exchange rate as per facility guidelines.

G. Medical Care

At this time there are no specific 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 patient's presentation, even in the presence of exposure to COVID-19 infected individuals or relevant travel exposures.

Empiric Antimicrobial Therapy

Consider initiating empiric oseltamivir or broad-spectrum antibiotics depending on the clinical presentation, pending results of microbial testing.

Although broad-spectrum antibiotics are uncommonly required for children presenting with respiratory infections, the decision to prescribe anti-bacterial agents should take into consideration patient presentation (isolated respiratory vs more generalized illness), allergies, prior or high risk for colonization with antibiotic resistant organisms (ARO, particularly MRSA), local microbial resistance patterns and comorbid disease that might influence antibiotic use, such as conduction delay. Initial empiric therapy should be de-escalated as microbiology results return as appropriate.

COVID-19 Specific Antiviral Therapy

As of the date of this guideline, there are no approved or clinical trial informed therapies directed

towards SARS-CoV-2 (the virus that causes COVID-19 infection). There are numerous clinical trials underway in many countries and it can be expected that new treatment information will evolve over time. It is important to check the current status of directed anti-viral therapies via the following agencies:

- BCCDC - http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/clinical-care/treatments
- PHAC - https://www.canada.ca/en/public-health/services/diseases/2019-novel- coronavirus-infection/health-professionals.html
- WHO - https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical- guidance/patient-management
- CDC - https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html

Consultation with the Pediatric Infectious Disease Division at BCCH is recommended, located through BCCH switchboard: 604-875-2161.

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 or ILI triggered asthmatic exacerbation. Steroids should not be delayed in children with conditions where they are part of the standard of care, for example, acute asthma exacerbation, even when waiting for COVID-19 results.

Fluid Management

Use conservative fluid management in patients with ILI when there is no evidence of shock. Patients with ILI should be treated cautiously with intravenous fluids, because aggressive fluid resuscitation may worsen oxygenation. Hypotonic fluids and albumin should generally be avoided.

H. Environmental Control

Please refer to your local housekeeping or environmental services for specific policies in your health authority.

Appendices

- Donning (Putting On) & Doffing Personal Protective Equipment Procedure
  - Donning (Putting On) PPE POSTER
  - Doffing (Taking Off) PPE POSTER
- COVID-19 Guideline for AGMPs Only: Personal Protective Equipment Donning & Doffing
- Intubation checklists:
  - Adults
  - Children (BC Children's Hospital); please see regional checklist for children below.

Coronavirus COVID-19

BC Centre for Disease Control | BC Ministry of Health

Pediatric Intubation Procedure

MOST EXPERIENCED PRACTITIONER TO PERFORM PROCEDURE

Team ready?

- **Inside team**
  - MD
  - RT
  - +/- RN
- **Outside team**
  - Observer for PPE
  - Recorder
  - Runner
  - +/- second MD
  - Family support
- **PPE for team (airborne precautions)**
- **Observer to supervise DONNING /DOFFING of PPE**

Any AGMP (PPV, NG insertion, HHNFC, nebs etc)
=
Airborne precautions

Equipment ready?

- **Suction**
  - Rigid suction catheter turned onto max
- **Oxygen**
  - Mask
  - Viral filter
  - Bag valve mask + PEEP valve (use 2 person technique if needed)
- **Airway equipment**
  - Working laryngoscope and blade (video preferred)
  - Cuffed ETT plus extra 0.5 smaller size
  - Lubricated stylet
  - Syringe to fill cuff
  - Tube securement device
  - Tape
  - Scissors
  - Clamp (& gauze) for ETT
  - Oral airways
  - LMA
- **Pharmacologic agents**
  - Induction/paralytic drugs
  - Bring extra doses
  - Fluids / vasopressor
- **Monitoring Equipment**
  - SaO2, ECG, BP
  - ETCO2 (in-line preferred)
- **Ventilator** set up
  NG or OG ready to place
  In-line suction ready to place
  'IV Start Kit'/'IO Set' PRN

Patient prepared?

- **Negative pressure room** (if available)
- **Functioning IV/IO** 2 if possible
- **Optimize patient position**
- **Pre-oxygenate patient** face mask, 2 hands, 5 minutes
- **Optimize physiology** fluid bolus or vasopressors?
- **Expose patient**
- **Failed intubation backup plan?**

Plan for consequences?

- **Successful intubation**
  - Secure ETT
  - NG or OG tube
  - Continuous ETCO2
- **Ongoing sedation / paralysis**
- **Ventilation parameters set**
- **Failed intubation backup plan utilized?**
- **CXR**
- **Team to follow DOFFING procedure**
- **Document procedure**

Team may need to remain in room to allow droplet clearance. Clarify with Infection Control at your hospital.

Abreviations:

HHNHFC – Heated Humidified Nasal High Flow Cannula
NIV – non-invasive positive pressure ventilation
NG – nasogastric
Nebs- nebulization
PPV – positive pressure ventilation

BRITISH COLUMBIA Ministry of Health
BC Centre for Disease Control

Guideline Working Group

The Management of Pediatric Patient Under Investigation (PUI) or Confirmed COVID-19 Guideline was adapted from the Critical Care Strategic Clinical Network (Alberta Health Services) Guideline on Care of the Pediatric Critically Ill COVID-19 Patient developed by the Provincial Critical Care Communicable Disease Working Group.

The Guideline Working Group was composed of members representing pediatric critical care, hospital medicine, emergency medicine, infectious disease, hospital infection prevention and control practitioners, public health, medical microbiology, and acute care response professionals.

The following individuals formed the Guideline

Working Group:

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Disclaimer

This document is intended for use by health care professionals caring for children with respiratory illness in British Columbia. The content does not constitute and is not in substitution of professional medical advice. IPAC recommendations may change and the most recent recommendations should be checked on the BCCDC website. Provincial Health Services Authority

References

PHAC - https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus- infection/health-professionals.html

WHO - https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management

CDC - https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html

American Heart Association – Interim Guidance for Basic and Advanced Life Support in Adults, Children, and Neonates With Suspected or Confirmed COVID-19

Care of the Pediatric Critically Ill COVID-19 Patient (Annex E)- Provincial Critical Care Communicable Disease Working Group: Critical Care Strategic Clinical Network (Alberta Health Services)

The Surviving Sepsis Campaign (SSC) has released Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19)

BCCDC COVID-19 resources

There is guidance for families of children with medical complexity on both the BCCDC and BCCH websites; click on this link for more information.

Feedback

To provide feedback on this document please email covidguidelines@bcpsqc.ca - including the document title in the subject line.