COVID 19 Respiratory Support Guidelines

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Purpose	
Policy Reference	

Major Steps	Details	Diagram, Work-flow, or Picture
OXYGEN	• Oxygen delivered by nasal **prongs** should be titrated to maintain target Sp02 of 92% or as clinically indicated • Oxygen should be delivered without added humidity <u>Transport of patient through hospital</u>: • Place surgical mask over patient's nose and mouth • Staff should wear Droplet-Contact precautions PPE	
HFNC	HFNC may be considered for COVID-19 patients with hypoxemia who do not require immediate intubation. • **Droplet-Contact plus Airborne** • Staff should use **a fit tested N95 mask,** given the risk of aerosol generation • HFNC should be used in a private/isolation room (ideally negative pressure) • When using HFNC, the patient should wear a surgical mask covering the mouth, nose, and cannula to reduce the risk of dispersion of droplets, if tolerated <u>Transport of patient through hospital</u>: • Patient should be placed on nasal prongs with surgical mask covering nose, mouth and prongs - essential • Staff should continue to wear Droplet-Contact plus Airborne precautions PPE (Gown, gloves, fit- tested N95 mask and eye protection)	

NIV (Non-Invasive Ventilation)	If NIV is appropriate for an alternate clinical presentation of COVID-19 it should be provided using **Droplet-Contact plus Airborne Precautions.** • Staff should use a **fit tested N95 mask,** given the risk of aerosol generation. • Negative pressure single rooms are preferable for patients receiving NIV, given the concern of aerosolization of droplets • First choice for NIV is to use a non-vented FFM (Full Face Mask) or Scuba mask with a double limb circuit to maintain a closed system (Servo I in PICU) • Second choice will be a non-vented mask with a single limb circuit (Trilogy) **NOTE THAT FFM AND SCUBA MASK USE REQUIRES INCREASED VIGILANCE TO AVOID ASPIRATION.** <u>Transport of patient through hospital</u>: • Remove patient from non-invasive pressure if tolerated for transport, and place mask over the patient's nose and mouth - essential • Use Trilogy with non-vented FFM or Scuba mask with HEPA filter over the exhalation valve – HEPA filter is to be removed once in isolation room to reduce the risk of expiratory resistance. Pressures may need to be increased for transport with filter on leak valve • Staff should continue to wear Droplet-Contact plus Airborne precautions PPE (Gown, gloves, fit- tested N95 mask and eye protection)	
Airway clearance therapies, such as Cough Assist and LVR	• **Droplet-Contact plus Airborne Precautions** • Cough assist/lung volume recruitment (LVR) may be required for airway clearance but should also be performed by family members whenever possible as it is also aerosol generating • Staff should continue to wear Droplet-Contact plus Airborne precautions PPE (Gown, gloves, fit- tested N95 mask and eye protection) during these procedures	

Management of patients with chronic ventilation and/or tracheostomy

The general principle is that these patients utilize positive-pressure ventilation and/or an open invasive airway (i.e., tracheostomy) and so are either persistently, or at least intermittently, generating aerosols. Chronically ventilated children, those with tracheostomies, or both represent a wide array of conditions and the following are guidance specific to Covid-19:

- All patients should be managed at home, by phone and/or video assistance if possible
- If a patient requires hospitalization:
    - If possible, the Complex care/Respirology service may attempt to arrange for a direct admission to an inpatient space, and bypass the ED
    - These patients will preferentially be initially admitted to the PICU then transferred to the pediatric ward if felt to be medical stable
    - This may change if PICU acuity and bed situation becomes unmanageable
    - Patients on chronic NIV that are safely able to be discontinued from this therapy for the short-term, should do so in discussion with Respirology/ Home ventilation team
    - All patients should have an NPS for SARS-CoV2 regardless of their symptoms and remain under **Droplet-Contact plus Airborne precautions** when aerosol-generating procedures (such as trach care) are performed until resulted
    - In the event that COVID is suspected, and the NP/throat swab is negative, a tracheal specimen for SARS-CoV2 can be sent.
    - If such a patient is found to be SARS-CoV2 NEGATIVE, manage on Droplet-Contact precautions until clear of other respiratory viruses and bacteria and then usual care

Management of Children with Tracheostomy and Home Mechanical Ventilation	• <u>Manage at home with close telemonitoring if possible</u> • Tracheostomy care and tracheal suction is considered an AGMP and hospital staff should wear a **fit-tested N95 mask** for protection • Patient to come to hospital with their own ventilator and equipment, as well as heated/humidity circuits (i.e., Airvo) • Patient will initially use their own equipment, which should be brought in cleaned and bagged where possible, and all remain in the patient's room • Consider changing to a cuffed trach/in-line suction if reasonable (caregiver to perform exchange where possible) • Tracheostomy care to be carried out by parents/caregivers as much as possible • If negative pressure room unavailable, may consider cuffed trach + dual limb sealed ventilation in the PICU with heated-humidity and HEPA filter on expiratory limb <u>Transport of patient through hospital</u>: ○ With HEPA filter attached to tracheotomy if patient tolerates being off of ventilator ○ HEPA filter to be placed on leak port of circuit or manual bagging with HEPA filter in-line if patient is ventilator dependent ○ Staff should continue to wear a fit-tested N95 mask for protection	

Management of Children with Tracheostomy	• <u>Manage at home with close telemonitoring if possible</u> • Tracheostomy care and tracheal suction is considered an AGMP and staff should continue to wear a fit-tested N95 mask for protection • Tracheostomy care to be carried out by parents/caregivers as much as possible • Patients/caregivers are to bring own heated-humidity circuits (Airvo), but consider defaulting to HME until Covid-19 status is known • Change Airvo intake filters between patients and follow normal cleaning instructions <u>Transport of patient through hospital</u>: ○ HEPA filter or Cap (if tolerated) to be placed on tracheostomy ○ Staff should continue to wear a fitted N95 mask for protection	
Management of patients with NPT	• The use of a Nasopharyngeal trumpet or stent is not considered an AGMP	
Respite admission of patients with tracheostomy	• Children with technology dependency who are admitted for social reasons should be screened for symptoms and contact exposure. If negative, they do not require additional isolation precautions.	

Revision History

Version	**Date** (YYYY-MM-DD)	**Edited by**	**Description of Update**
V1			
V2			
V3			

References

Date (YYYY-MM-DD)	**Reference**