

COVID-19 Emergency Respiratory Care Procedures for Pediatric Services

Proposed modifications to Respiratory Care Procedures during the COVID-19 pandemic outline indications for the use and precautions required for different oxygen delivery/ventilatory assist devices (nasal cannula and face mask oxygen, non-invasive positive pressure ventilation (NIV) and mechanical ventilation) and standard procedures performed by Respiratory Therapy for patients in the following contact precautions categories:

1. Modified Contact / Droplet Isolation: COVID-19 **positive** patients and PUIs
2. Droplet or Airborne Precautions: COVID-19 **negative** patients or COVID-19 status **unknown** who require droplet or airborne precautions for other reasons
3. Contact Precautions and Standard Care (no precautions): COVID-19 **negative** patients or COVID-19 status **unknown** who require contact precautions or no precautions.

In addition, conditions that mandate restrictions on nebulizer use and recommended conversion from nebulized to MDI delivery systems, as outlined in detail in a separate protocol (COVID-19 Emergency Therapeutic Interchange Modification – Tiered Interchange According to MDI Availability), are described.

Current Practice	Pandemic Modifications
Modified Contact/Droplet Precautions (PUI and COVID-19 Positive)	
Nebulized Medication	MDI/DPI treatments only –non intubated pt. and LTV/Trilogy vents No Continuous Nebs Aerogen Nebs for patients on Critical Care Vents only
Oxygen Administration – NC, face mask	No Standard Nebulizers Standard NC oxygen may be used NRB mask may be used short term but consider early intubation. N95/face shield or CAPR must be worn with use of NRB
NIV, including transport on NIV	Circuit with Filter only – N95/face shield
Vents	Heated Wire with DuoGuard Filters Dry Circuit with HMEF Travel vents with HMEF
Transport	Standard NC NIV BiPAP/CPAP with filtered circuit On Ventilator with filtered circuit Do not use any other oxygen delivery device Filtered BVM device if intubated
Intubation / Extubation	CAPR if available or N95/face shield to be worn
Bag Mask Ventilation	Filter on BVM device
HFNC	N95 / Face shield surgical face mask for patient recommended
Sputum Induction	NONE
Ventilator Suctioning	In-line only
NT Suction	Consult with practitioner for necessity, N95/Face Shield
Chest Physiotherapy / Vibratory Device	Consult with practitioner for necessity - N95/Face Shield

MetaNeb / Cough Assist	NONE
Bedside PFT	NONE

Current Practice	Pandemic Modifications
Droplet or Airborne Precautions (AND COVID 19-Negative or Unknown)	
Handheld Medication Nebulizers	MDI / DPI - if available HHN with Filter Continuous Nebs after discussion with Attending Aerogen nebs for vented patients only*
Oxygen Administration – NC, NRB	No Standard Nebulizers Standard Practice
NIV, including transport on NIV	Circuit with Filter only
Vents	Standard Practice
Intubation / Extubation	Standard Practice
HFNC	Standard Practice- N95/face shield surgical face mask for patient recommended
Sputum Induction	NONE – appeals can be reviewed by the Medical Director of RT and allowed on a case-by-case basis
Ventilator Suctioning	In-line only
NT Suction	Standard Practice - N95/face shield
Chest Physiotherapy / Vibratory Device	Consult with practitioner for necessity
MetaNeb / Cough Assist	NONE – appeals can be reviewed by the Medical Director of RT and allowed on a case-by-case basis
Bedside PFT	Consult with practitioner for necessity

Current Practice	Pandemic Modifications
Contact Precautions and Standard Care (AND COVID 19-Negative or Unknown)	
Handheld Medication Nebulizers	MDI DPI if available Filtered Nebulizers only – use with care Continuous Nebs- Consult with Attending
Oxygen Administration – NC, NRB	No Standard Nebulizers Standard Practice
NIV, including transport on NIV	Filtered Circuit only - N95/face shield
Vents	Standard Practice
Intubation / Extubation	Standard Practice - N95/face shield

HFNC	Standard Practice – N95/face shield surgical face mask for patient recommended
Sputum Induction	NONE – appeals can be reviewed by the Medical Director of RT and allowed on a case-by-case basis
Ventilator Suctioning	In-line only
NT Suction	Standard Practice -N95/face shield
Chest Physiotherapy / Vibratory Device	Consult with practitioner for necessity N95/face shield
MetaNeb / Cough Assist	NONE – appeals can be reviewed by the Medical Director of RT and allowed on a case-by-case basis

Pandemic Modifications

Other Nebulized Medications for Specific Patient Populations (nebulized medications deemed ESSENTIAL to care plan)

1. CF patients (medications include inhaled antibiotics, pulmozyme, hypertonic saline)
2. Continuous Nebulizers should be avoided if possible but if deemed appropriate is acceptable with appropriate PPE.

CF patients requiring nebulized medications MUST be tested for COVID-19 upon admission (ED or Floor)

N95 / Face Shield must be worn

Weight Based Asthma Medications

WEIGHT (KG)	ALBUTEROL INHALED	CONTINUOUS ALBUTEROL
< 10	4 puffs (2.5mg)	5mg/hr
10-15	6 puffs (3.75mg)	10mg/hr
15-30	8 puffs (5mg)	15mg/hr
30+	8 puffs (5mg)	20mg/hr

Conversion Chart for Continuous Nebulizers vs. MDI @ Q1 hour

*Nebulizers may be used in mechanically ventilated patients depending on ventilator compatibility and availability of the proper delivery device (Aerogen neb delivery system). This can be determined by the Respiratory Therapy Supervisor on call

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