

COVID-19 Inhaled Medication Emergency Response Tiered Plan According to Metered Dose Inhaler Availability

Background

At Lifespan Hospitals, recommendations for the administration for inhaled bronchodilators have been modified in response to the COVID-19 pandemic. Orders for nebulized albuterol, ipratropium, albuterol/ipratropium (Duonebs), and levalbuterol need to be reviewed carefully due to precautions in place for COVID-19, the type of ventilator utilized, and availability of products. These recommendations include adult and pediatric patients at all affiliates. These recommendations are based on the ventilators available at affiliates and may change with worsening metered dose inhaler (MDI) shortages and ventilator availability.

Use the tables below to determine appropriate bronchodilator therapy based on patient ventilator status

Table One: NON-mechanically ventilated patients

COVID (-) patients may use therapy via nebulization upon request by RT/OP if unable to use MDI and/or nebulizations are essential to treatment**

Anticholinergic or Adrenergic Agent Ordered	Recommended Therapeutic Equivalent
Albuterol nebs Any number of inhalations at any frequency	Albuterol MDI 2 inhalations at ordered frequency PRN
Ipratropium (Atrovent) nebs or MDI Any number of inhalations at any frequency	Tiotropium Respimat 2 inhalations (5 mcg) once daily
Ipratropium/albuterol (Combivent Respimat or Duonebs) <i>scheduled</i> 1-2 inhalations q6h or 1 neb q4-6h	Tiotropium Respimat 2 inhalations (5 mcg) once daily PLUS Albuterol MDI 2 inhalations at ordered frequency
Ipratropium/albuterol (Combivent Respimat or Duonebs) <i>PRN</i> 1-2 inhalations/1 neb q4-6h PRN	Tiotropium Respimat 2 inhalations (5 mcg) once daily prn PLUS Albuterol MDI 2 inhalations at ordered frequency PRN
Levalbuterol nebs (non-formulary) or HFA (non-formulary) Any number of inhalations at any frequency	Albuterol MDI 2 inhalations at ordered frequency

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Table Two: Mechanically-ventilated patients on a ventilator that CAN accommodate therapy administered via nebulization

Any COVID status (+/-/unknown/not tested)

Anticholinergic or Adrenergic Agent Ordered	Recommended Therapeutic Equivalent
Albuterol nebs Any number of inhalations at any frequency	Do not interchange
Ipratropium (Atrovent) nebs Any number of inhalations at any frequency	Do not interchange
Ipratropium/albuterol (Duonebs) 1 neb q4-6h <i>PRN</i> or <i>scheduled</i>	Do not interchange
Levalbuterol nebs (non-formulary) or HFA (non-formulary) Any number of inhalations at any frequency	Albuterol neb 2.5 mg nebulized at ordered frequency

Table Three: Mechanically-ventilated patients on a ventilator that CANNOT accommodate therapy administered via nebulization

Any COVID status (+/-/unknown/not tested)

Anticholinergic or Adrenergic Agent Ordered	Recommended Therapeutic Equivalent
Albuterol nebs Any number of inhalations at any frequency	Albuterol MDI 6 puffs at ordered frequency
Ipratropium (Atrovent) nebs Any number of inhalations at any frequency	Ipratropium MDI 6 puffs at ordered frequency
Ipratropium/albuterol (Duonebs) 1 neb q4-6h <i>PRN</i> or <i>scheduled</i>	Ipratropium MDI 6 puffs at ordered frequency PLUS Albuterol MDI 6 puffs at ordered frequency
Levalbuterol nebs (non-formulary) or HFA (non-formulary) Any number of inhalations at any frequency	Albuterol MDI 6 puffs at ordered frequency

Contact Respiratory Therapy if unsure about medication compatibility with patient’s ventilator.

*** Respiratory Therapy Supervisor Contact Information**

Rhode Island Hospital: 401-255-3520 (24-7)

Miriam Hospital: Mike Carnevale 3-3180 (days); 350-7287 (nights)

Newport Hospital: Lisa Lima-Tessier 5-1205 (days); RT pagers 350-7772 & 350-7776 (nights)

**** Conditions where MDI use may not be feasible include:**

- Nebulized therapy are an essential part of the patient’s outpatient regimen
- Patients with a physical and/or cognitive functional status that prevents proper MDI use