SECTION	SUBJECT	PAGE
RESTRICTED USE	Nebulized Medications e.g. budesonide nebules (Pulmicort®) ipratropium nebules (Atrovent®) ipratropium/salbutamol nebules (Combivent®) salbutamol nebules (Ventolin®)	1 of 2

	YY	MM	DD
Original	99	60	24
Revised	04	05	27
Revised	12	04	26
Revised	23	03	27

PREAMBLE:

There is good to excellent evidence[1,2,3,] that patients with COPD/Emphysema and Asthma who are ***stable*** and who are patients in continuing care centres can be managed with metered dose inhalation (MDI) administration of these agents with the use of a spacer device with or without a mask for good occlusion. The exception would be patients with tracheotomy where the anatomy does not allow use of spacers.

NOTE: only 8.8% of medication is deposited at the site of action with metered dose inhalers, 1-5% with nebulized medications and 13% with MDI and spacer.

All patients will be converted, ***excluding patients with tracheotomy,*** to MDI/Spacer use before admission or converted once settled in Care Centres. The use of nebulized **saline** is recommended before or after MDI use where the transition is difficult, as some of these patients are dependant on the nebulizer for delivery of additional moisture or on the act of mask/nebulization itself. When the process of converting to spacers is initiated, careful explanation by the attending physician, clinical pharmacist, and nursing staff, along with the offer of saline nebulization, increases acceptance and reduces anxiety related to a trial of this technique. For patients with significant psychological dependence on the act mask/nebulization, graduated transfer over several months is recommended.

Provided proper technique can be followed, another alternative to switching to an MDI/Spacer is switching to a dry powder inhaler (DPI) or soft mist inhaler.

PROTOCOL:

Nebules are approved for use under the following conditions (subject to the LTC facility's policy on use of nebulizers):

1. **SHORT-TERM USE**
   A maximum of 72 hours of therapy, PRN or routine, when the patient is in acute respiratory distress. The physician may order one more 72-hour period of therapy if, after assessing the patient, the physician deems that another 72 hours would be of benefit.

   OR

[1] Gordon Ford Respirologist 1996, Calgary. Personal Communication
[2] Rodrigo C: Am J Emerg Med 1998 Nov; 16(7): 637-42
[3] Raimondi AC: Chest 1997 Jul; 112(1): 24-8

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2. TAPERING OFF NEBULES VIA NEBULIZER

Tapered therapy to a maximum of 120 days when the patient has significant psychological dependence on nebulized medication. Replacing one nebulized dose with a MDI dose, once monthly, until a therapeutic interchange with MDI administration has been completed.

i.e. QID or Q6H nebulized medication will be replaced by MDI administration at the end of the tapering regimen. One approach is to initiate one (1) MDI dose with three (3) nebulized doses x 30 days followed by two (2) MDI doses with 2 nebulized doses x 30 days then, three (3) MDI doses with one (1) nebulized dose x 30 days followed by MDI administration only.

OR

3. FOR APPROVAL OF CONTINUOUS/LONG-TERM NEBULIZED THERAPY

For ongoing approval of nebulized medication, the following must be observed:

a) Completed Inhaled Medication Assessment Tool (albertahealthservices.ca)
b) Completed consultation with Respiratory Therapy through ISFL
c) Completed Non-Formulary application form with approval.

Please note that long-term approval will be considered on a case-by-case basis using all available evidence.

Additional Resources

Inhaled Medication Assessment Tool (albertahealthservices.ca)

Point of Care Risk Assessment (PCRA) for Personal Protective Equipment (PPE) Algorithm - Continuing Care (albertahealthservices.ca)

Respiratory Illness in Continuing Care (albertahealthservices.ca)

Respiratory Illness (Assessing the Need for Additional Precautions Algorithm) (albertahealthservices.ca)

COVID-19 Aerosol-Generating Medical Procedure Guidance Tool | Alberta Health Services