

Respiratory Care Services
John Dempsey Hospital
Respiratory Care Practitioner – Driven Protocols

Protocol #1: Conversion from Small Volume Nebulizer to Metered Dose Inhaler

1. Policy:
 - a. All small volume nebulizer orders will be reviewed for possible conversion to equivalent dosage metered dose inhalers (MDI) by the assigned respiratory care practitioner (RCP) after 24 hours duration
2. Objective:
 - a. To effectively convert patients from small volume nebulizers to metered dose inhalers for the purposes of:
 - i. Good medical practice
 - ii. Cost-effective measure
3. Benefits:
 - a. Enhanced patient and family education via thorough MDI instruction
 - b. Increased medication compliance
4. Personnel and Equipment:
 - a. Respiratory Care Practitioner
 - b. Stethoscope
 - c. Spacer device (Aerochamber)
 - d. Medication
5. Procedure:
 - a. All small volume nebulizer orders will be reviewed (after 24 hours duration) for MDI conversion.
 - b. The following patients will be initially excluded for MDI conversion:
 - i. Physician order: “No Substitution”
 - ii. Patients unable to perform a 5-10 second breath hold
 - iii. Patients unable to follow commands
 - iv. Patient refusal
 - v. Individuals on outpatient nebulizer regimen
 - vi. Patients who are critically ill (Emergency Department & Intensive Care Unit)
 - vii. Small volume nebulizer ordered more frequently than Q4 hrs, e.g. Q2 hrs.
 - c. Patients who are not initial candidates for MDI conversion may be re-evaluated for possible conversion if their specific circumstances change
 - d. Clinical assessment:
 - i. Assess patient’s level of dyspnea & respiratory rate (proceed if dyspnea is mild & respiratory rate ≤ 25 breaths / minute)
 - ii. Assess mental status (proceed if patient is awake, alert, and oriented)
 - iii. Assess whether the patient can sit up without assistance (if present, proceed with protocol)

- iv. Assess whether patient has full use of the arm and hand (if present, proceed with protocol)
 - v. Chest auscultation: assess breath sounds & air movement (proceed if breath sounds and air movement have improved)
6. Dosing:
- a. MDI frequency will initially be ordered at the same frequency as the patient’s small volume nebulizer order had been prior to the MDI conversion. The frequency will be greater than or equal to Q4 hrs.
 - b. Changes in MDI frequency should be accompanied by a physician’s or APRN’s order
 - c. For small volume nebulizer to MDI conversion doing, *please refer to the chart below*

<u>Medication:</u>	<u>Dose:</u>	<u>MDI Dosage:</u>
Albuterol	0.5 ml	4 puffs
Ipratropium	500 mcg	4 puffs
DuoNeb	unit dose	4 puffs (Combivent)

7. Documentation:
- a. Document conversion in the physician’s order section of the patient’s chart:
 - i. Date & time of order
 - ii. “Per Pharmacy & Therapeutics protocol, small volume nebulizer has been converted to MDI”
 - iii. Discontinue small volume nebulizer --(indicating specific name of medication, dosage, route, and frequency schedule/schedules)
Example: Discontinue Q4 hrs Unit Dose DuoNeb small volume nebulizer
 - iv. Begin (Name of Medication) --(indicating specific name of medication, dosage, route and frequency schedule) -- MDI to be administered with AeroChamber spacer device. **Example: Begin Combivent MDI 4 Puffs Q4 hrs with AeroChamber spacer.**
 - v. RCP Signature (with credentials)
 - b. RCP is to provide a written “SOAP” note in the Progress Notes section of the patient’s chart as well as document the conversion information defined under 7a (subsection i. – v.)
8. Post-MDI Conversion:
- a. RCP continues to supervise MDI administration to patient for a minimum of 72 hrs (3 days)

- b. RCP performs MDI education with patient and family

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- c. MDI medication will be kept in a secure location at the Nursing station
 - d. Once MDI instruction is completed, responsibility for MDI administration (and supervision) is to be transferred to the nursing staff
 - e. Document protocol adherence and transition to Registered Nurse supervision in the physician's orders section of the patient's chart
 - i. Date & time of order
 - ii. (Name of Medication) --(indicating specific name of medication, dosage, route and frequency schedule) -- MDI administered with AeroChamber spacer device. **Example: Combivent MDI 4 Puffs Q4 hrs with AeroChamber spacer**
 - iii. "To be administered by Nursing per MDI Protocol"
 - iv. RCP signature (with credentials)
 - f. Document your evaluation and clinical assessment of patient as a "SOAP" note within the progress note section of the patient's chart
 - include the protocol adherence and transition to RN supervision information described under 8e (subsections i. – iv.) and recorded in the Physician Order Section of the patient's chart
8. Considerations:
- a. If a patient's clinical status changes, the RCP (in their clinical judgment) can convert a patient back to small volume nebulizer