

MEMORANDUM

To: Physicians, Clinical Services Directors, Clinical Services Managers, Clinical Nurse Educators, Nurses and Allied Health Professionals

From: Patricia Mosnia, Clinical Director of Oncology, Palliative Care and Pharmacy, Co-Chair P&T
Dr. Sergio Borgia, Medical Director Infection Prevention and Control, Infectious Disease, Co-Chair P&T

Date: March 13, 2020

Subject: **Practice Change: Nebulized Medications for Adult Patients at Osler in Response to COVID-19**

To limit the potential spread of the COVID-19 virus via aerosolization and to ensure staff and patient safety, medication administration via nebulizer will cease for all adult patients at Osler. Consideration should be given to alternate dosage forms including administration of medications via inhaler (MDI) with a spacer when appropriate. Also of note, current evidence does not support the use of nebulizers to be more effective than MDI with spacer.

To facilitate the transition from nebules to inhalers, the following automatic substitutions for **adult** patients received expedited MAC approval (see below). These automatic substitutions will replace the historical therapeutic interchanges at Osler.

Paediatric changes are being finalized and will be implemented next week.

Note: sodium chloride 3% nebules (i.e. for sputum induction) will continue to be stocked on current Pyxis Medstations. Patients are evaluated by the RRT prior to administration.

IMPLEMENTATION TIMELINE:

Friday March 13, 2020:

- All nebulized medications will be removed from all stocking locations at Osler (budesonide, ipratropium and salbutamol)
 - Exceptions: Paediatrics, NICU, UCC and one Emergency Program Pyxis Medstation at BCH/EGH (for paediatric patients)
- All adult patients currently prescribed nebulized medications will be converted to a corresponding inhaler (MDI) with/without aerochamber

Actions by Prescribers:

- Order inhalers whenever possible
- Avoid ordering medications to be given via nebulizer
- Select the inhaler route on order sets when this is an option

Actions by Pharmacy:

Pharmacists will convert all adult patients currently prescribed nebules to an equivalent dose of an appropriate inhaler on March 13, 2020. A statement will print on the cMAR identifying implementation of the automatic substitution.

Pharmacy technicians will:

- remove all nebulas from all stocking locations at Osler, including Pyxis MedStations
- stock salbutamol MDI (100 mcg/puff), ipratropium MDI (20 mcg/puff), and fluticasone MDI (125 mcg/puff) on selected Pyxis MedStations where nebulas were previously stocked
- dispense patient-specific inhalers for all adult inpatients

Note: Pharmacy will dispense patient-specific inhalers for all inpatients. Inhalers stocked on inpatient Pyxis Medstations should be accessed for emergent situations only.

Actions by Nursing:

All automatic substitutions are implemented without a new written order in the patient chart. Therefore, the nurse should transcribe the new order onto the cMAR and administer the medication via inhaler, as outlined in the automatic substitution.

Salbutamol nebulas automatic substitution:

All Adult Orders for:	Will be changed to:
Salbutamol 2.5 mg inhalation (via nebulas)	Salbutamol inhaler (100 mcg/puff) 2 puffs INH at the same prescribed frequency
Salbutamol 5 mg inhalation (via nebulas)	Salbutamol inhaler (100 mcg/puff) 4 puffs INH at the same prescribed frequency

Ipratropium nebulas automatic substitution:

All Adult Orders for:	Will be changed to:
Ipratropium 250 mcg inhalation (via nebulas)	Ipratropium inhaler (20 mcg/puff) 4 puffs INH at the same prescribed frequency
Ipratropium 500 mcg inhalation (via nebulas)	Ipratropium inhaler (20 mcg/puff) 8 puffs INH at the same prescribed frequency

Budesonide nebulas automatic substitution:

All Adult Orders for:	Will be changed to:
Budesonide 0.25 mg inhalation (via nebulas)	Fluticasone inhaler 125 mcg/puff – 1 puff INH at the same prescribed frequency
Budesonide 0.5 mg inhalation (via nebulas)	Fluticasone inhaler 125 mcg/puff – 2 puffs INH at the same prescribed frequency
Budesonide 1 mg inhalation (via nebulas)	Fluticasone inhaler 125 mcg/puff – 3 puffs INH at the same prescribed frequency
Budesonide 2 mg inhalation (via nebulas)	Fluticasone inhaler 125 mcg/puff – 4 puffs INH at the same prescribed frequency

Thank you for your cooperation in this important safety initiative!