INSTITUT UNIVERSITAIRE DE CARDIOLOGIE ET DE PNEUMOLOGIE DE QUÉBEC UNIVERSITÉ LAVAL	**PROCEDURE**
	Code: STR 76
	Responsible body: DSM Approved by: Isabelle Winter, Head of Respiratory Therapy and Respiratory Physiology Services Respiratory Therapy and Respiratory Physiology
	Presented and adopted by the Management Committee on:
	Effective date:
	Scope: Respiratory therapists working in respiratory therapy and respiratory physiology services

TITLE: Procedure for the reuse of bronchodilator metered-dose inhalers

1. OBJECTIVE

The purpose of this procedure is to allow the reuse of inhaled bronchodilator metered-dose inhalers (Ventolin®, Atrovent®) in certain predefined contexts in order to reduce the Institute's carbon footprint and thereby reduce the costs associated with purchasing these medications. The objective is to allow the reuse of metered-dose inhalers while ensuring that the risk of infection transmission is minimal.

2. SCOPE OF APPLICATION

This procedure applies to respiratory therapists working in respiratory therapy and respiratory physiology departments. The areas targeted for the reuse of metered-dose inhalers are minor emergencies and respiratory physiology, but other areas may also be included.

Users who have contact, droplet/contact, droplet, and airborne isolation are covered by this procedure. However, it does not apply to users who have enhanced contact isolation. For users with enhanced contact isolation, a new metered-dose inhaler will be used for each user.

3. DEFINITIONS

Not applicable.

4. PROCEDURE

For minor emergencies:

The respiratory therapist ensures that only one metered-dose inhaler is used for all minor emergency users. The metered-dose inhaler is disinfected and then reused between users.

1. The respiratory therapist primes the metered-dose inhaler:
   Ventolin®: Press the inhaler canister four times. The priming must be repeated if the inhaler has not been used for more than five days.
   Atrovent[md] : Press the metered-dose inhaler twice. The priming must be repeated if the metered-dose inhaler has not been used for more than 3 days.
2. He places the metered-dose inhaler in a plastic bag, which he labels for minor emergencies.
3. At the start, they complete a dose count sheet (see Appendix 1: Dose count sheet for reusable metered-dose inhalers) and keep it in the metered-dose inhaler bag. The doses for priming must also be counted.
4. The respiratory therapist uses a disposable or reusable spacer device (if available) for each user. The spacer device is identified with the user's name and file number and is left at the bedside for possible reuse.
5. The metered-dose inhaler is disinfected between each user. At the end of the treatment, the respiratory therapist separates the canister, plastic device, and cap and disinfects the exterior with a hydrogen peroxide-based disinfectant wipe (Virox). He or she places all components of the metered-dose inhaler back into the plastic bag with the tally sheet.
6. When the metered-dose inhaler is empty (number of doses remaining at "0"), the respiratory therapist disposes of the medication by placing it in a "Go Zero" type metered-dose inhaler recycling box. If a recycling box is not available, the medication is placed in a red bin.

For respiratory physiology:

The respiratory therapist ensures that only one metered-dose inhaler is used per examination room. The metered-dose inhaler is disinfected and then reused between users.

1. The respiratory therapist primes the metered-dose inhaler:
   Ventolin®: Press the metered-dose inhaler canister 4 times. The priming must be repeated if the metered-dose inhaler has not been used for more than 5 days.
   Atrovent®: Press the metered-dose inhaler canister twice. The priming must be repeated if the metered-dose inhaler is not used for more than 3 days.
2. He places the metered-dose inhaler in a plastic bag, which he labels in the examination room.
3. At the start, they complete a dose count sheet (see Appendix 1: Dose count sheet for reusable metered-dose inhalers) and keep it in the metered-dose inhaler bag. The doses for priming must also be counted.
4. The respiratory therapist uses a disposable or reusable spacer device (if available) for each user. If a reusable spacer device is available, the spacer device is sent to the central sterilization department after each use.
5. The metered-dose inhaler is disinfected between each user. At the end of treatment, the respiratory therapist separates the canister, plastic device, and cap and disinfects the exterior with a hydrogen peroxide-based disinfectant wipe (Virox). They place all components of the metered-dose inhaler back into the plastic bag with the tally sheet.

6. When the metered-dose inhaler is empty (number of doses remaining at "0"), the respiratory therapist disposes of the medication by placing it in a "Go Zero" type metered-dose inhaler box. If a recycling box is not available, place the medication in a red bin.

5. RESPONSIBILITY

Respiratory therapists in respiratory therapy and respiratory physiology departments are responsible for knowing and following this procedure.

Technical coordinators in respiratory physiology and respiratory therapy are responsible for implementing and reviewing this procedure.

Assistant chiefs of respiratory physiology and respiratory therapy are responsible for applying this procedure.

The head of respiratory physiology and respiratory therapy services is responsible for applying and complying with this procedure.

6. EFFECTIVE DATE

(Specify the effective date of the procedure, the date of revision, or, if applicable, the procedure that has been repealed.)

7. PERSONNEL CONSULTED

- Isabelle Giroux, B. Pharm, M.Sc, clinical pharmacist in bariatric, thoracic, and emergency medicine IUCPQ
- Olivier Bouffard-Chabot, RN, Infection Prevention and Control Advisor

8. APPENDICES

Appendix 1: Dose count sheet for reusable metered-dose inhalers

APPENDIX 1: Dose count sheet for reusable metered-dose inhalers

LOCATION: ________________

MEDICATION: □ VENTOLIN 200 doses: □ ATROVENT 200 doses

Date	User file number or Priming (A)	Number of doses administered	Number of doses remaining

Date	User file number or Initialization (A)	Number of doses administered	Number of doses remaining