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Risk Assessment: Use of Multi-Patient Metered Dose Inhaler

Risk Assessment

Multi-Patient Metered Dose Inhaler

Issue

During the current COVID-19 pandemic and for other epidemics healthcare organizations may need to conserve respiratory medications and reduce the spread of respiratory droplets associated with some types of respiratory therapy medication delivery. Therefore, healthcare organizations may choose to employ alternative measures to nebulizer treatments. This applies in common areas such as the Emergency Department or in Operating Rooms/ Perioperative locations for treatment of bronchospasms and other acute respiratory conditions. The following is a sample assessment which discusses considerations for use of a single metered dose inhaler (MDI) canister to administer medication to multiple patients.

Regulatory Analysis

Review regulatory (federal and state) and accrediting body requirements to determine alignment with proposed practice

Joint Commission

There are no Joint Commission standards that specifically address multi-patient MDIs.

CMS Conditions of Participation

There are no CMS regulations that specifically address multi-patient MDIs.

Pharmacy tag A-0501 §482.25(b)(1) states, "All compounding, packaging, and dispensing of drugs and biologicals must be under the supervision of a pharmacist and performed consistent with State and Federal laws." The interpretive guidelines state, "It should be noted that, for multi-dose medication vials with antimicrobial preservatives which have been opened or entered (e.g., needle-punctured), the USP standard is that the BUD (beyond use date) is 28 days, unless otherwise specified by the manufacturer." This standard does not apply as the MDI canister is not penetrated such with a multi-does medication *vial*, that is needle punctured. The beyond use date on the MDI cannister is the valid "expiration" date.

State and Local Laws and Regulations

There are no state or local laws and regulations that specifically address multi-patient MDIs.

Review of Quality and Risk Management Data

Review internal policies and adverse incident data to determine compliance with internal policy/protocol requirements and for identification of any negative issues related to expansion of practice. If this is a new practice this component of the risk assessment cannot be addressed.

The medical center currently allows for multi-patient MDI use in ambulatory/clinic areas. The existing protocol, <<List Protocol>> includes the necessary equipment, process and sanitation practice to prevent cross-contamination. The protocol and practice has been in place since <<List date>>. No adverse events or other data suggest a problem with this practice.

Operational Considerations and Analysis

Review current practice in any areas outside of the proposed use locations to determine operational efficiencies. Include consideration of any additional education/training and oversight/monitoring that may be necessary.

Multi-patient MDIs are currently being used in ambulatory/clinic areas of the medical center. With proper training and oversight, this practice can be safely instituted in the Emergency Department, Operating rooms and other perioperative locations. Specified staff will be performing this procedure (anesthesiologists, CRNAs, Respiratory Therapists and Registered Nurses with completed MDI competence); therefore, training will be limited, and oversight will be focused to these specific areas and individuals.

If this is a proposed practice, list the operational efficiencies this practice will bring (for example fewer treatment delays, staff efficiency and cost reduction).

Organizational Position

List the organization's determination after review of the analysis (include the rationale)

After due consideration, medical center leadership has determined during instances where respiratory treatments pose an undue risk of aerolizing respiratory droplets to the patient population, single MDIs may be used for multiple patients in the locations listed above. The organization requires:

- Guidelines for use during disease outbreaks where aerolizing of respiratory droplets pose undue risk to patients will be developed and followed.
- Common use MDI protocol implementation which includes use of a disposable spacer with the MDI and methodology for MDI nozzle and canister cleaning/sanitation to decrease cross contamination after use. Consideration should be given of limiting this practice for patients in isolation and/or immunocompromised patients on a case -by - case basis.
- Anesthesia providers, perioperative and emergency department staff to be trained regarding the guidelines and protocol.
- The Infection Control Department should observe proper cleaning and administration during their routine rounds in the locations where single use MDIs are used on multiple patients.

Approval and Adoption

The following leadership bodies have reviewed this risk assessment and adopted the position indicated. During this review, each leadership body has concluded that this position is in the best interest of the patient.

Leadership Body	Date of Approval / Adoption
Respiratory Therapy	
Infection Control	
Perioperative Administrator	

Literature Review

- Revisiting the need for MDI common canister protocols during the COVID-19 pandemic. ISMP Medication Safety Alert. March 26, 2020; 25(6).
- Grissinger, M. Shared Metered Dose Inhalers Among Multiple Patients: Can Cross-Contamination Be Avoided? Pharmacy and Therapeutics. 2013 Aug; 38(8): 434-442. ISMP Medication Safety Alert. 2009;14(7).
- Gowan, M, et al. Use of a Shared Canister Protocol for the Delivery of Metered-Dose Inhalers in Mechanically Ventilated Subjects. Respir Care. 2016 Oct; 61(10): 1285-92

Attachments

Risk Assessment: Use of Multi-Patient Metered Dose Inhaler (Word)

Approval Signatures

Approver	Date
Tynisha Revasz: Associate Consultant	04/2020
Lisa Eddy: Advisory Consultant	04/2020
Bud Pate: Vice President - Content Development	04/2020
Tynisha Revasz: Associate Consultant	03/2020

Applicability

Greeley Membership Library, The Greeley Company