



For steps to follow in *all* procedures, refer to the inside back cover of Volume 2. Also refer to Medication Guidelines: Steps to Follow for Medications (Regardless of Type or Route).

### critical aspects

- Identify the number of remaining inhalations in the canister.
- Assist the patient to a seated position.
- Shake the inhaler. Remove the mouthpiece cap of the inhaler and insert the mouthpiece into the spacer while holding the canister upright.
- Remove the cap from the spacer.
- Ask the patient to breathe out slowly and completely.
- Place the spacer's mouthpiece into the patient's mouth and have him seal his lips around the mouthpiece. Press down on the inhaler canister to discharge one puff of medication into the spacer.
- Ask the patient to slowly inhale then hold his breath for as long as possible.
- If a second puff is needed, wait at least 1 minute.

### Equipment

- Metered Dose Inhaler
- Spacer
- Tissues

### Delegation

As an RN, you can usually delegate administration of metered dose inhaler medications to a licensed practical nurse. You usually cannot delegate this task to a UAP unless the UAP has special training for a specific defined situation (e.g., "medication aides" in some long-term care settings in some states). See the Medication Guidelines at the beginning of the Procedures section.

### Assessment

Assess the patient's respiratory status prior to administration of medication to establish a baseline that can be used to evaluate the effects of treatment.

### Procedural Steps

**Step 1** Identify the number of remaining inhalations in the canister. Based on the start date and instructions for use, you can determine the number of remaining inhalations. Replace the canister promptly

when the complete number of inhalations approaches zero.

Historically patients have been instructed to float the canister in water to determine how much medication remains. However, propellants affect the weight of the canis-

ter and may lead to false reassurance that there is medication in an empty container. Some MDI medications are used as rescue agents during asthma attacks or periods of dyspnea. It is important to always have medication available for use. ➤

## PROCEDURE 23–17

# Administering Metered Dose Inhaler Medications *(continued)*

**Step 2** Assist the patient to a seated position.

Helps the patient take a deep inhalation when medication administered.

**Step 3** Shake the inhaler. Remove the mouthpiece cap of the inhaler and insert the mouthpiece into the spacer while holding the canister upright.

A spacer is the most efficient method to deliver inhaled medications. It should be used if the patient has difficulty coordinating the use of the inhaler, is using a corticosteroid, or if it is ordered.

**Variation** If a spacer is not used, the canister may be placed 1 to 2 inches (2.5 to 5.0 cm) in front of an open mouth or directly into the mouth.

**Step 4** Remove the cap from the spacer.

Prepares the spacer for use.

**Step 5** Ask the patient to breathe out slowly and completely.

Readies the patient for MDI use.

**Step 6** Place the spacer mouthpiece into the patient's mouth and have him seal his lips around the mouthpiece. Press down on the inhaler canister to discharge one puff of medication into the spacer.

Allows proper delivery of medication. ▼



**Step 7** Ask the patient to slowly inhale then hold his breath for as long as possible. Encourage the patient to hold his breath for 10 seconds if possible.

Allows the medication to be delivered deep into the lungs.

**Step 8** If a second puff is needed, wait at least 1 minute before repeating Steps 5 through 7.

Allows the medication to be absorbed and the canister to recharge.

**Step 9** If a corticosteroid inhaler was used, assist the patient to rinse out his mouth with water and discard the rinse.

Limits the risk of developing thrush.

**Step 10** Clean the mouthpiece with a tissue and replace the cap. Periodically rinse the spacer, mouthpiece, and cap with water.

Readies the MDI for future use.

## Developmental Modifications

For clients who are unable to assist with medication administration (e.g., infants, small children, frail elders) it may be necessary to time discharge of the medication with the client's respirations.

## Evaluation

Assess for change in respiratory status after medication administration.

## Patient Teaching

- Teach patients how to correctly use a spacer and MDI.
- Explain that some inhalers are used in combination with others and must be used in correct order to receive the desired effect.
- Teach patient how to calculate inhaler replacement date and post date on canister to ensure prompt replacement.

**Documentation**

Refer to Medication Guidelines: Steps to Follow for All Medications (regardless of Type or Route).  
 Chart the response to medications.

*Sample documentation:*

2/2/07	0800	Pt c/o shortness of breath. RR 26 and labored.
		Combivent MDI 2 puffs administered with
		spacer. _____ S. Smythe, RN
	0815	RR 20 regular, even, comfortable. _____
		_____ S. Smythe, RN