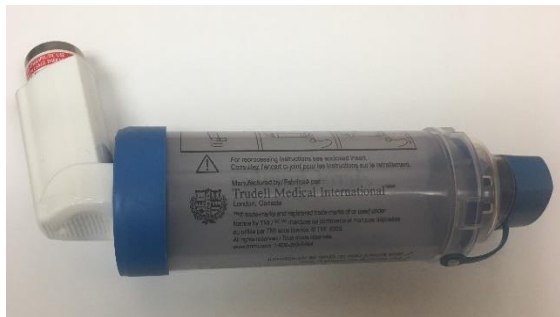


For healthcare providers Helping patients use their MDI device with a Spacer



Available in MDI Device:

- Ipratropium bromide (Atrovent®) Short-acting
- Salbutamol sulphate (Ventolin®) Short-acting
- Ciclesonide (Alvesco®) Steroid
- Fluticasone propionate (Flovent®) Steroid
- Beclomethasone dipropionate (Qvar®) Steroid
- Fluticasone propionate/salmeterol xinafoate (Advair®) Steroid/LABA*
- Mometasone furoate/formoterol fumarate (Zenhale®) Steroid/LABA*
- Budesonide/Formoterol (Symbicort®) Steroid/LABA

*LABA = long-acting beta agonist

We can help patients stay at home longer and reduce their risk of a COPD/asthma exacerbation and hospital admission, by following this approach, to motivate them to use their inhalers properly and regularly.

Technique is assessed, using a checklist, and corrected if needed.

The goal is to confirm that the patient (+/- family support) can self-administer their device in hospital. If needed, the RT/pharmacist provides further coaching/ explores a different device / identifies need for community supports.

1. Identify potential intentional Non-Adherence

- Patients will decide not to take medications if they don't see the value in them. The patient needs to understand how why they need them, how they will benefit and have any concerns addressed.
- Ask brief open-ended questions in a non-judgmental way to make them comfortable to admit non-adherence.

2. Explore perceived need: Explore understanding of COPD /asthma

- **COPD:** The patient may not believe they need the medication if they do not attribute symptoms to COPD. Ask them open-ended questions identify presence of COPD symptoms (that they may not be attributing to condition; **it is not just about breathing**): inability to do usual activities, decreased energy, difficulty sleeping, afraid of leaving the house.
- **Asthma:** Good control is being **close to symptom free**; see reverse for action plan text box for "yellow level" asthma symptoms. These are the range of symptoms that patients with asthma can experience.

3. Explore perceived benefit:

- Explore understanding of how use of inhaler will help them.

4. Show that you listened and get their attention:

- Summarize their perceived need and benefit of inhalers, then ask them if it is OK to offer information on what they can do to help them stay at home longer. *"Would it be OK if we talk more about COPD/asthma? I think there are maybe things that you could do to help reduce the chances of coming back to hospital again"*

5. Explain specific benefit:

- Explain how they will benefit, be specific not vague, e.g. "Using this inhaler regularly will decrease your risk of having another COPD flare up and needing to return to hospital, it will also help improve those symptoms that you just mentioned after using it regularly for a few months: **NOT** "This will help your breathing" "This is for your COPD"

6. Why proper technique is important

- Explore their understanding that good technique is needed to get the full potential benefit.
- Observe their technique using the checklist;

7. Confirm patient/family understanding

- Use **TeachBack®** method to confirm that patient understands. This is very important to check that they have understood the information you provided.

8. Ask about their concerns and confidence (after reviewing technique)

- If their confidence is less than 8/10, get their input into how we can improve it

9. Assess for prior use and future capacity to follow an action plan: Using an Action plan can help the patient avoid an ED visit or hospital admission, by guiding the patient to recognize and respond to early symptoms of COPD/asthma worsening

- **Action Plan.** Assess if the patient/family adjusted their medications for COPD/asthma when symptoms initially worsened, if not, do they have capacity to follow a COPD/asthma action plan? Note that the action plan would be provided by a physician, pharmacist or community RT, but by mentioning that this is something they could do, you can help spark their interest in this as a tool that can help them prevent another admission.

Important points:

- **COPD:** Regular use of long-acting medications is needed to **reduce exacerbation risk** even if the patient feels well and COPD symptoms seem controlled. The patient may not believe their inhalers help them (especially if they think an immediate improvement in breathing is expected- this will not occur with long-acting agents as they work to **prevent COPD flare-ups and improve symptoms over the longer term**). The patient may think their inhalers do not help them or falsely conclude they do not have COPD.
- **Asthma:** Good control is being **close to symptom free**; long-acting agents/steroids reduce exacerbation risk and control symptoms over the longer term. Even if symptoms are controlled, **exacerbation risk persists**; to reduce exacerbation risk, the patient needs steroids every day or each time they use Ventolin or alternatively, be using Symbicort® (budesonide/formoterol) PRN.

Table for specific benefit of medications in MDI devices

Medications	Benefit For COPD		Benefit for asthma	
	Immediate relief of symptoms	Reduce COPD exacerbation risk and hospital admission risk AND improvement in COPD-related symptoms and quality of life over the long-term.	Immediate relief of symptoms	Reduce asthma exacerbation risk and improved asthma control over the long term
Salbutamol	Yes	No	Yes	No
Ipratropium	Yes	No	Not used	Not used
Advair (Steroid/LABA)	No	Yes	No	Yes
Zenhale (Steroid/LABA)	No	Not used	No	Yes
Symbicort (Steroid/LABA)	No	Yes	Yes**	Yes
Fluticasone	No*	Not used	No	Yes
Ciclesonide	No*	Not used	No	Yes
Beclomethasone	No*	Not used	No	Yes

*Note that for patients with asthma, increasing inhaled steroids is part of a self-initiated action plan in response to worsening of (yellow level) symptoms, but salbutamol is still their reliever inhaler for immediate relief of these symptoms. **Some patients using Symbicort may be use it both for immediate relief of symptoms and treatment of asthma flare up as part of their action plan

Differences between benefits if used for COPD or asthma:

COPD: LABAs and LAMAs* reduce hospital admissions by reducing exacerbation risk and improve symptoms/QOL over long term use; inhaled steroids same benefit except not been shown to reduce hospital admission. Patients with COPD may receive inhaled steroids in combination with a LABA/LAMA, but not steroids alone,

Asthma: Inhaled steroids are necessary to reduce exacerbation risk and control symptoms (long term use); LABAs (not LAMAs) also reduce exacerbation risk and improve symptoms over long term use. Patients with asthma will always need inhaled steroids either alone or in combination with a LABA.

Long acting agents and inhaled steroids require long term use for patients to get these benefits.

*LAMA=Long-acting muscarinic agent

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Technique assessment

Chart copy

- Suggest to go through key questions on conversational checklist 1-6, first then assess technique, then finish 7-9.
- Give patient/family the patient version of this leaflet. Only in English, currently.
- Patient leaflet **“How to Use Your Metered Dose Inhaler with Spacer”** can be found at: <https://vch.eduhealth.ca/>. Search under “metered dose inhaler” or EA942.M48
- Ask patient to show you how they would use their inhaler, get the patient to do as much as possible.
 - Consider use of video on caregiver’s phone to capture correct technique and or coaching tips. Involve family or caregiver in teaching as much as possible.
- Observe the patient’s process noting, what steps (if any) they need to correct.
 - **Interrupt to correct, if they did not shake the device properly.**
 - **Consider asking them to repeat dose, if they did not take an effective inhalation. (Repeat 1 dose if patient put in 2 sprays at once, as 2nd dose should be separated by 30 seconds).**
 - Write a Y (or tick) if performed task correctly, N (or X) if done incorrectly.
If patient (or with help from family member) can perform technique successfully, document in physician’s orders that: “Patient can self-administer MDI with spacer (+/- family support)”
- Ask RT or pharmacist to coach patient if patient makes an error on 2 consecutive attempts. RT/pharmacist provides further coaching, considers need for different device / further community supports.

Date of Initial Assessment:

Training Dates:

PREPARE THE DEVICE				
1. Remove cap from the MDI*				
2. Shake well * (about 5 times to mix propellant and drug together)				
3. Remove cap from spacer and insert mouthpiece of inhaler into spacer (above the air intake valve, show the patient/family where this is.)				
GET READY TO INHALE				
4. Breathe out until your lungs are empty				
5. Place spacer mouthpiece in mouth between your teeth and close your lips around the mouthpiece*				
6. Press down on the MDI canister ONCE*				
7. Inhale slowly and deeply for 3 to 5 seconds (spacer should not whistle. If you do hear a whistle sound it means you are inhaling too fast, slow down to get more drug into your lungs)				
8. Hold breath for 5 -10 seconds and breathe out				
9. If a second dose is required wait at least 30 seconds and shake* (to mix propellant and drug) before repeating steps 4 to 8				
10. If you have trouble holding your breath or breathing deeply in then you can breathe in and out of the spacer normally for 5 breaths.				
HOW TO KNOW WHEN TO GET A NEW INHALER				
Some MDIs have dose counters while others do not. You have to keep track of your doses. This can be done by either tallying them up on your phone or on the inhaler box. If you do not keep track of doses than you could be using an empty inhaler and not know it.				

***Critical Errors are in bold and italicized**

Completion of patient leaflet. After your conversation (see over), write expected benefit on the patient leaflet (or ask patient/family to do this). **Action Plan: Assess prior use/introduce concept:** Using an Action plan can help the patient avoid an ED visit or hospital admission, by guiding the patient to recognize and respond to early symptoms of COPD/asthma worsening. If they did not use one, introduce concept if you think they have capacity to do this.

Yellow level symptoms (early symptoms of worsening when patients need to take action)

- **For COPD are:** increased shortness of breath for 2 days, or increased phlegm/sputum production for 2 days **OR** change in colour of sputum to yellowgreen or rust
- **For asthma are:** shortness of breath, wheezing, daytime cough or chest tightness more than 3 x per week; asthma symptoms at night or early am more than 1 x per week; use of SABA more than 3 x per week, limited physical activities.

Conversational checklist

Addressograph

(For long-acting agents, inhaled steroids, not expected to be repeated, unless needed);

Fax to Community RT if discharged from ED and referral sent (for asthma)

Key Questions	Response and Action
1. Identify potential intentional non-adherence: For long-acting agents or steroids and if used prior: <i>"It can be difficult to manage to get in the habit of using this every day (or twice a day). Thinking back these past couple of weeks, if you had to rate yourself out of 10 (10 being the best) for whether you managed to use your inhaler the expected number of times, what number would you give yourself?"</i>	___ out of 10; <i>(Less than 8 indicates non-adherence and needing help).</i>
2. Perceived need for inhaler: <i>"Sometimes we are not very good at explaining how COPD can affect a person. Can you tell me a bit about how COPD affects you? What kind of symptoms do you have?" (Don't correct any misunderstanding here, just listen).</i>	<input type="checkbox"/> Good understanding of symptoms, no further action needed OR <input type="checkbox"/> Needs some explanation of range of symptoms
3. Perceived benefit: <i>"Sometimes we are not very good at explaining how medications help people. Can you tell me a bit about how regular use of this medication (if steroid/long-acting) helps you? (Refer to page 1 for specific benefit of medication contained in patient's device)"</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No for reduced risk of COPD flare-ups and hospital admission <input type="checkbox"/> Yes <input type="checkbox"/> No for reduced asthma exacerbation risk and better asthma symptom control (if applicable)
4. Ask if it is OK to offer information that could help them avoid a readmission for COPD/asthma. <i>"Would it be OK if we talk more about COPD/asthma? I think there are maybe things that you could do to help reduce the chances of coming back to hospital again"</i>	
5. How they will benefit: Regular use (of long-acting/steroids) will: 1) Reduce your chances of having a COPD/asthma flare-up and needing to see your doctor or coming to hospital 2) Regular use of these inhalers can help improve the symptoms of COPD (or asthma) that you just mentioned.	
6. Why proper technique is important. <i>"For you to get the full benefit the medication needs to get into your lungs properly. Patients with proper technique have less risk of flare-ups. So show me how you would use this device" (see over for checklist).</i>	
7. Check that the patient understood the information <i>"So just for me to check that I have explained things clearly. If your family asked you why you need this inhaler, what would you tell them?"</i>	<input type="checkbox"/> Yes <input type="checkbox"/> Needed further coaching <input type="checkbox"/> More support/coaching needed
8. Ask about concerns and confidence. a) <i>"Do you have any concerns or questions? Is there anything that you can think of that would make this inhaler difficult for you to use?"</i> b) After reviewing their technique, ask <i>"How confident are you that you will use this device, can you rate this out of 10, 10 being the most confident?"</i>	<input type="checkbox"/> None Concerns: _____ <input type="checkbox"/> Confidence, less than 8/10 Patient's suggestions to improve score: _____
9. Did the patient use an action plan in response to worsening of symptoms? If not, introduce concept if there is capacity to follow required actions. <i>"Before coming to the hospital, when you noticed your symptoms worsening. Did you take any additional medications for your COPD or increase your inhaled steroid (for asthma)? Has your doctor ever spoken to you about this? It is something that can help worsening of symptoms, "to nip it in the bud early", and can reduce your chances of hospital admission.</i> Or if you know the patient did not follow an action plan: <i>"I think there is one more thing that you can do for yourself. Self-treating worsening of COPD symptoms at home can reduce your chances of coming back to the hospital. Has your doctor ever spoken to you about this?"</i>	<input type="checkbox"/> Took oral prednisone for increased SOB / phlegm/sputum +/- antibiotic for sputum colour change (for COPD) <input type="checkbox"/> Increased inhaled steroid or Symbicort (for asthma) <input type="checkbox"/> Action Plan concept introduced