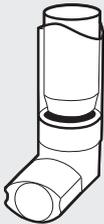
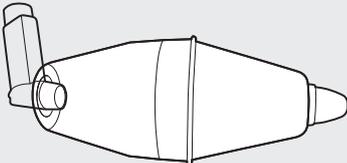
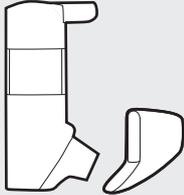
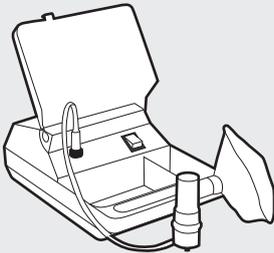
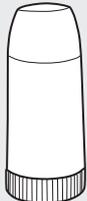
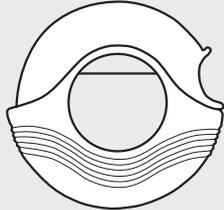
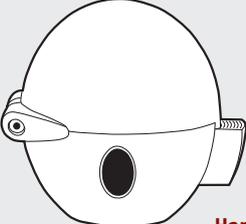
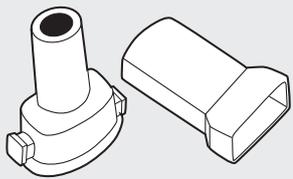


Table 2: Inhaler devices used in COPD[†]

The prescriber must certify that the patient satisfies criteria set out in the Schedule of Pharmaceutical Benefits and that the use is in accordance with the registered indications which may differ between agents.

Device type	Considerations	Recommendations	Counselling tips
<p>Metered dose inhalers (MDIs)</p> <p>Eg: Alvesco®, Asmol®, Atrovent® and Atrovent Forte®, Combivent®, Epaq®, Flixotide®, Qvar®, Seretide®, Ventolin®</p>	<p>Provide quick delivery of medicine however require good hand-breath co-ordination.¹</p> 	<p>Not for patients with poor dexterity.</p> <p>Require intensive counselling by doctor and pharmacist at regular intervals to ensure optimal technique.²</p>	<ul style="list-style-type: none"> • Ask patient to demonstrate technique regularly (every 2 to 3 months) or ask patient to check technique with pharmacist at each dispensing. • If patient is experiencing difficulties suggest the use of a spacer. • Educate patient on how to estimate what quantity of medicine is left in the canister. • Ensure patient regularly cleans plastic outer to prevent blockages.
<p>Spacers</p> <p>Eg: Volumatic, Breath-a-tec, Aerochamber, Fisonair, Nebuhaler</p>	<p>For use with MDIs. Improve pulmonary deposition pattern of medicine. Reduce oropharyngeal deposition of medicines and thus reduce systemic absorption, incidence of oral candidiasis and dysphonia. Reduced likelihood of triggering cough reflex with MDIs alone.³</p> 	<p>Useful for adults with poor hand-breath co-ordination.²</p> <p>When compared to nebulisers, spacers are cheaper, easier to clean and more portable.³</p> <p>Large volume spacers are more efficient than small volume spacers however, are more bulky to carry.¹</p>	<ul style="list-style-type: none"> • Educate patient to inhale dose of medicine immediately after actuation to minimise medicine deposition in the chamber. • Ensure patient delivers one actuation of MDI per inhalation. • Educate patient to wash the spacer in warm water and kitchen detergent and leave to drain (do not dry with cloth as increases electrostatic forces within chamber). The spacer should be washed at least once a month.
<p>Autohalers</p> <p>Eg: Airomir®, Qvar®, Atrovent®, Respocort®</p>	<p>Require less hand-breath co-ordination than MDIs as delivery of medicine is breath actuated.¹</p> 	<p>Alternative for those patients experiencing difficulties with MDIs and not wanting to use a spacer.</p>	<ul style="list-style-type: none"> • Educate patient to use same inhalation technique as with MDIs (breathe in slowly and hold breath for 5 seconds).
<p>Nebulisers</p> <p>A variety of devices are available, ranging from electronic to nebulisers with 12V pumps that plug into car cigarette lighters.</p>	<p>Delivery of medicine by nebuliser is no more effective than a MDI and spacer. Nebulised medicines are associated with unwanted effects such as paradoxical bronchoconstriction, glaucoma, dry mouth and urinary retention.² Users may experience skin and eye irritation.</p> 	<p>Only for those patients who are unable to use a MDI +/- spacer or a DPI.</p> <p>Restrict home use of nebulisers to specialised cases.</p> <p>Recommend mouthpiece instead of mask to avoid skin and eye irritation.</p>	<ul style="list-style-type: none"> • Ensure patient understands and has the ability to undertake the strict hygiene and maintenance regimens required for nebulisers. • Alert patient that nebulisers are more costly than other delivery devices.

Device type	Considerations	Recommendations	Counselling tips
Dry powder inhalers (DPIs)	Require less hand-breath co-ordination than MDIs. Require higher inhalation flow rate than MDIs and are not as effective as MDIs in acute exacerbations. Many of these devices have dose counters.	Useful for patients who are unable to co-ordinate hand-breath technique with MDIs. May be inappropriate for patients with severe airflow obstruction. ²	<ul style="list-style-type: none"> Educate patient to rinse mouth and throat after use to minimise systemic absorption and likelihood of dental caries.^{1,2} Ensure patients hold their breath for at least five seconds directly after inhalation of medicine.
Turbuhaler® Eg: Bricanyl®, Pulmicort®, Symbicort®, and Oxis®	Breath-activated delivery of medicine without the need to co-ordinate inspiration and drug release. 	Useful for patients who are unable to co-ordinate hand-breath technique with MDIs. May be inappropriate for patients with severe airflow obstruction. ²	<ul style="list-style-type: none"> Ensure patient holds the device upright (>45 degrees) during priming of device. Ensure patient does not breathe into the device or expose the medicine to moisture. Alert patient to dose counter or red mark indicating remaining doses.
Accuhaler® Eg: Flixotide®, Seretide® and Serevent®	Gives accurate and consistent drug delivery over 30-120L/min inspiratory flow rate. 	Useful for patients who are unable to co-ordinate hand-breath technique with MDIs. May be inappropriate for patients with severe airflow obstruction. ²	<ul style="list-style-type: none"> Ensure patient does not breathe into the device or expose the medicine to moisture. Alert patient to dose counter indicating remaining doses.
Aerolizer® and Handihaler® Eg: Foradile Aerolizer® and Spiriva Handihaler® Two distinct device types with similar recommendations	Require the patient to insert a capsule into the device prior to each dose being inhaled. In April 2005, the FDA released a warning to alert health professionals to the potential for inadvertent oral administration of the capsules. ⁴ Swallowing the capsules instead of inhaling the contents will reduce the efficacy of the medicine. ⁴ 	Pharmacists should clearly label the capsule outer package with cautionary and advisory label 22 or "Use only with approved/recommended device (capsules for inhalation)." ⁵	<ul style="list-style-type: none"> Counsel patient to administer each capsule into the device immediately prior to EACH dose being inhaled. Ensure patient stores the device and capsules away from oral medicines to avoid confusion. Ensure patient knows NOT to expose capsules to air and moisture as they may render the medicines ineffective. 

* Spinhalers® and Rotahalers® are not commonly used in the veteran population. They are two distinct single-dose devices which require the patient to insert each dose of medicine into the device. For more information on each of these devices, refer to the Consumer Medicines Information leaflet provided by the manufacturers.

† Content of table is accurate at time of printing.

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