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Best Practice Guidance for Inhalers in Care Homes

For prescribers and all staff responsible for administering inhalers in care homes

Definition

An inhaler is a device holding a medicine that is taken by breathing in (inhaling)¹. Inhalers are the main treatment for asthma or COPD (Chronic Obstructive Pulmonary Disease).

Background

In the UK, over a seven-year period, half a million people have died from lung disease such as asthma, COPD, and pneumonia². According to a new study from Asthma + Lung UK, the UK has the worst death rate from lung diseases such as asthma and chronic obstructive pulmonary disease (COPD) in Western Europe, apart from Turkey. Further, the annual cost of asthma and COPD to the NHS in the UK is estimated to be £3 billion and £1.9 billion, respectively³.

Undoubtedly, correct technique in using medicine delivery devices, such as metered dose inhalers, is key to managing asthma and COPD effectively. Care Home staff (and therefore ultimately residents) would benefit from specific training relating to inhaler use.

Aim or Purpose

- To support care home staff, care agency staff and pharmacists to provide high quality care for using inhalers for asthma or COPD patients
- There are many different types of inhalers, which can be confusing. This guide gives information on the medicines inside inhalers, the types of inhaler device, and some general information about inhalers. It also highlights some of the issues to consider and signposts to currently available support and resources.

Good Practice points

- Every patient should have an individualised care plan within the care home which includes overall aims and a monitoring plan and when to contact their GP.
- When asking about asthma symptoms, use specific questions, such as the Royal College of Physicians '3 Questions'⁴ 1. Have you had difficulty sleeping because of your asthma symptoms, including cough? 2. Have you had your usual asthma symptoms during the day (cough, wheeze, chest tightness, or breathlessness)? 3. Has your asthma interfered with your usual activities (e.g. housework, work/school, etc.)?
- Good inhaler spacer device care and regular monitoring of the inhaler technique are essential to ensure effective treatment and management of asthma or COPD is achieved.
- A suitable device for individual patients should be prescribed, taking into consideration dexterity and those with impaired cognition such as dementia; some devices need more co-ordination than others.
- Some of the inhaler medicine may hit the back of the throat which can sometimes cause problems such as thrush in the mouth. This tends to be more of a problem with higher doses of steroid inhalers.
- Less medicine hits the throat when using a spacer device. Therefore, a spacer device should be advised if inhalers cause throat problems, especially when a high dose of inhaled steroid is prescribed.
- Patients should be advised to rinse their mouth and have a drink of water after using the steroid inhaler
- Inhaler technique should be checked at every opportunity and before changing or increasing a patients' medication.
- Everyone with asthma or COPD should have a review with their doctor or respiratory nurse as appropriate or at least once a year.⁵⁻⁶

The use of inhalers in asthma and COPD	
<p style="text-align: center;">Reliever inhalers</p> <ul style="list-style-type: none"> • Contain bronchodilator medicines - these can be taken as required to ease symptoms of breathlessness, wheeziness, or tightness in the chest. • The medicine in a reliever inhaler relaxes the muscle in the airways. This opens the airways wider, and symptoms usually quickly ease. These medicines are called bronchodilators as they widen (dilate) the airways (bronchi). • If a reliever is needed three times a week or more to ease symptoms, a preventer inhaler is usually advised. 	<p style="text-align: center;">Preventer Inhalers</p> <ul style="list-style-type: none"> • These may be steroid inhalers and/or long-acting bronchodilators. • These are taken every day to prevent symptoms from developing and should be taken on a regular basis. • It takes 3-7 days for the steroid in a preventer inhaler to build up its effect. • N.B: In COPD a preventer inhaler will only be used in some patients.
<p>The choice of inhaler is personal preference, ability to use the device and the drugs available in it. There are several different types of inhaler devices: Appendix 1: types of inhaler devices Appendix 2: spacer devices</p>	

Inhaler choices and the environmental impact

The relationship between inhaler choices and the climate is becoming increasingly important, as we work to lessen our environmental footprint and combat climate change (global warming).

Some inhalers use a propellant (gas) to carry the medicine into the lungs. These types of inhalers are called pressurised metered dose inhalers (pMDIs). The propellants in pMDIs are powerful greenhouse gases, thousands of times more potent than carbon dioxide, and contribute to climate changes. **pMDIs account for 70% of inhalers prescribed in the UK and contribute to 3% of the NHS overall carbon emissions.**⁷ The good news is, there are other inhalers with a much lower-carbon footprints than pMDIs. For this reason, the NHS is encouraging professionals to provide people over the age of 12 the choice to switch to lower-carbon inhaler where clinically appropriate.

Inhalers with much lower-carbon footprints

- Dry powder inhalers (DPIs): These generally don't rely on propellants; hence their carbon footprints are lower. They require patients to inhale quickly and deeply, this inhalation technique may not be suitable for everyone.
- Soft mist inhalers (SMIs): These use pressurised water vapour instead of propellants, resulting in lower carbon footprints.

Reducing the climate impact of inhalers

1. Optimise Care: Ensure residents receive regular reviews and medication check. This is an opportunity to identify poor control, reduce overuse of reliever (rescue) inhaler, meaning lower carbon footprint.
2. Reviewing inhaler technique: Checking resident's inhaler technique is crucial for optimal disease control, cutting down waste doses, and reducing their impact on the environment.
3. Offer inhalers with lower carbon footprints: When clinically appropriate and suitable for residents, switch to inhalers with lower carbon footprints. This is the outcome of a personalised, shared decision-making consultation with the patients and their healthcare professionals⁸.
4. Proper disposal of inhalers: All used and unwanted inhalers in the care home should be returned to community pharmacy for proper disposal. The pharmacy or dispensary can then send it for recycling or incineration. This type of disposal minimises the impact of the leftover greenhouse gases. This is better for the climate, compared to putting inhalers in landfill⁹.

Key considerations:

1. Care Home population: Residents in care homes often have a range of needs and abilities. Choose inhaler devices that are appropriate for each resident¹⁰. Think about things like manual dexterity, hand-eye coordination, grip strength, resident preference, and possibly cognitive limitations.
2. Staff training: Ensure care home staff are properly trained on appropriate inhaler technique demonstrations, and green inhaler options.

[Inhaler carbon footprint comparison tool](#)

Further information

[Health advice resources from Asthma + Lung UK](#)

[Asthma action plan](#)

[Asthma + Lung UK helpline details](#)

[Community pharmacy and the management of people with asthma](#)

[Managing medicines in care homes](#)

[Patient information leaflets for individual inhalers](#)

References

1. [Definition of inhaler](#)
 2. [Lung conditions kill more people in the UK than anywhere in Western Europe](#)
 3. [Respiratory high impact interventions](#)
 4. BTS/SIGN Asthma quick reference guidelines 2019
 5. [Asthma: diagnosis, monitoring and chronic asthma management](#)
 6. [COPD in over 16's: diagnosis and management](#)
 7. [How inhalers affect the environment](#)
 8. [How to reduce the carbon footprint of inhaler prescribing](#)
 9. [Inhaler disposal](#)
- [Factors to consider when choosing an inhaler](#)

Appendix 1 Inhaler Devices

Different inhaler devices suit different people. Inhaler devices can be divided into four main groups.

[Watch the videos](#) on how to use the various types of inhaler

[Use the respiratory inhaler identification chart](#) to help you identify the different types of inhalers and their manufacturers.

Pressurised metered dose inhalers (MDIs)	Breath-activated inhalers
The standard MDI is the most widely used inhaler. However, many people do not use it to its best effect.	These are alternatives to the standard MDI. Some are still pressurised MDIs, but these don't require pressing a canister on top. These would be useful for patients who have difficulty breathing and pressing the inhaler at the same time. Examples of breath-activated MDIs include the Autohaler and Easi-breathe inhaler
How to use a metered dose inhaler	How to use a breath-activated inhaler
<ol style="list-style-type: none"> 1. Remove cap and shake inhaler 2. Breathe out gently 3. Put mouthpiece in mouth and at start of inspiration, which should be slow and deep, press canister down and continue to inhale deeply 4. Hold breath for 10 seconds or as long as possible then breathe out slowly 5. Wait for a few seconds before repeating steps 2-4 6. Common error to avoid: <ul style="list-style-type: none"> • Not shaking the inhaler before using it. • Inhaling too sharply or at the wrong time. • Not holding your breath long enough after breathing in the contents 	<ol style="list-style-type: none"> 1. Remove protective mouthpiece and shake inhaler 2. Hold inhaler upright and push grey lever right up 3. Breathe out gently. Keep inhaler upright and put mouthpiece in mouth and close lips round it. (The air holes must not be blocked by the hand) 4. Breathe in steadily through mouth. Don't stop breathing when inhaler clicks - continue taking a really deep breath 5. Hold breath for about ten seconds. Breathe out gently 6. Wait several seconds before taking another inhalation <p>N.B. The autohaler lever must be pushed up (on) before each dose, and pushed down again (off) afterwards, otherwise it will not operate. The Easi-breathe does not have a lever.</p>

Dry powder inhalers.	Multidose liquid inhalers
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<ul style="list-style-type: none"> • Some breath-activated inhalers are also called dry-powder inhalers • These require breathing in fairly hard to get the powder into the lungs. • Examples include: Accuhalers, Clickhalers, Easyhalers, Novolizers, Turbohalers, Diskhalers and Twisthalers. • Each type has a slightly different method of use. Precise instructions are on patient information leaflets (link) and ensure you are competent in its use before using on a resident 	<ul style="list-style-type: none"> • These types of inhaler devices have medication in a liquid form which is converted to a fine mist which is then inhaled. • The slow-moving mist eases the effort to inhale it, enabling the resident to breathe more slowly and normally. • Examples include Spiriva Respimat and Spiolto Respimat.
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Appendix 2: Spacer devices

A spacer is usually a plastic container, with a mouthpiece at one end and a hole for the inhaler at the other. Spacers only work with a metered dose inhaler.

Spacers are important because they:

- Help to deliver asthma medicine to the lungs.
- Allow more medicine into your lungs than when just using the inhaler on its own.
- Make metered dose inhalers easier to use and more effective.
- Help to reduce the possibility of side effects from the higher doses of preventer medicines by reducing the amount of medicine that is swallowed and absorbed into the body.
- Are convenient and compact and work at least as well as nebulisers at treating most asthma attacks in children and adults

There are different types of spacers available. These include the Volumatic, Nebuhaler, Aerochamber, Able spacer, Space Chamber & Space Chamber Plus.

The different brands of spacer fit different metered dose inhalers and are available on prescription. Please refer to the relevant patient information leaflet on how to use each spacer with the appropriate inhaler device.

Handy Hints for Using a Spacer:

- Care home staff should be appropriately trained on how to use an inhaler and spacer properly
- Ensure that the spacer prescribed fits your inhaler
- Advise patient to put one puff of the inhaler into the spacer
- If the patient finds it difficult to take deep breaths, breathing in and out of the mouthpiece several times for at least 10 seconds is just as good.
- Repeat the step above for each dose/puff needed and allow 30 seconds between each puff.
- Wash the spacer once a month - leave it to drip-dry as this helps to prevent the medicines sticking to the sides. Do not put through a dishwasher.
- Spacers should be replaced at least once each year, especially if it is used daily.