



Inhaler Standards and Competency Document

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The UK Inhaler Group is a coalition of not-for-profit organisations and professional societies with a common interest in promoting the correct use of inhaled therapies to improve the outcomes of patients with respiratory conditions. We seek to achieve our vision by galvanising the collective power of the respiratory community and by raising the importance of correct inhaler technique across the health system and among governmental departments.

For more information about our activities and membership:

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Objective

This document is intended to be used as a framework to set, assess and support the standards of those initiating inhaler therapies and checking inhaler techniques, in order that they can demonstrate competency in prescribing medications via an inhaled route and teaching the correct technique for the inhaler device prescribed in order to optimise drug administration. It also provides an outline basis for competency assessment.

Background

Inhaled medications are the cornerstone for treating both asthma and COPD. The most important advantage of the inhaled route for delivery of medicines is that they are delivered directly into the airways and lungs. This results in higher local concentrations, with lower systemic exposure and therefore fewer systemic side effects when compared with oral or intravenous routes. Unfortunately, inhalation of medicines can be complicated and difficult for many people, leading to suboptimal use and effect. Effective drug deposition into the lungs depends on the type of inhaler device, the characteristics of the inhaled medicine, and on the ability of the patient to use the device. Recognising that people are still unable to use their devices optimally and that many health care professionals are unable to assist people effectively in optimising their technique, UKIG has developed standards and competencies for those prescribing inhaled medications. In 2019 UKIG has worked with the Taskforce Medicines Optimisation group to adopt the standards nationally. The standards also set out how healthcare professionals can work with patients to optimise their technique and maximise the benefit of their medication.

Standards for training and assessment of inhaler technique

- 1 All healthcare professionals prescribing an inhaler should ensure that the patient knows how to use their device(s). If they are initiating it, the prescriber should know how to use the device and be competent in teaching the technique. Prescribers should be able to demonstrate device technique correctly and clearly to the patient and/or carers. This ability should also apply if a clinician is reviewing a patient, and their continued need for an inhaled medication.
- 2 Any prescriber unsure about an inhaler device technique should signpost to a competent colleague, documenting this and when the next review should occur.
- 3 If the prescription is for a repeat inhaled medication, the prescriber should have assurance that an appropriate assessment of continued need and ability to use has been made and that there is an appropriate review date planned.
- 4 No inhaler should be prescribed without knowing that the person receiving it can use it. This may involve watching, instructing, reinforcing and repeating accordingly. It should be agreed who is undertaking this role.
- 5 Device technique should be checked either using the prescribed device or with a relevant placebo/dummy device (note these are for single person use only). Whilst a device may be demonstrated to the patient using a placebo/dummy device, once a prescription has been issued, the person's technique on that device should be reviewed regularly thereafter.
- 6 Inhaler technique should be an essential part of any respiratory consultation and review. Adherence should be addressed during the review.
- 7 Any proposed changes to an inhaler prescription should be undertaken only after technique and, if possible, adherence is reviewed.
- 8 No patient should be switched to an alternative device until it has been established that they can use it effectively and they consent to the change.
- 9 All healthcare professionals who work with people using inhalers should understand the fundamental difference between aerosol devices (e.g. pressurised metered dose inhalers (pMDI)) soft mist inhaler (SMI) and dry powder inhalers (DPI) and their inspiratory requirements;

Aerosols (e.g pMDI/SMI)	- inhale Slow and steady
DPI	- inhale Quick and deep
- 10 Advice should be given on the care, maintenance and storage of the device (including spacer devices) in line with the manufacturer's instructions. Devices should be replaced according to the manufacturers'

instructions and good practice guidelines.

- 11 Patients should be advised against regularly testing the device and wasting doses. However, if prescribed aerosol type devices they will need to be advised on priming devices. Patients should be instructed to tell when the devices are empty as not all devices have dose counters.
- 12 There should be a regular audit of the quantity of inhalers prescribed and collected by individual patients (not just the number of prescriptions), considering all points of access.
- 13 Signposting to reputable inhaler device videos can supplement but not replace watching a patient's actual inhaler technique.

Seven Steps to using inhaler devices

Whilst it is beyond the scope of this document to list assessment criteria for each inhaler device, there are basic steps that are pertinent to all inhalers.

These should form the basis of a competency assessment for the patient (Appendix 2).

Seven Steps to using an inhaler device:

1. **Prepare the inhaler device**
2. **Prepare or load the dose**
3. **Breathe out, fully and gently, but not into the inhaler**
4. **Tilt the chin up slightly and place the inhaler mouthpiece in the mouth, sealing the lips around the mouthpiece**
5. **Breathe in**
 - **Aerosol (e.g. pMD) or SMI): Slow and steady**
 - **DPI: Quick and deep**
6. **Remove inhaler from the mouth and hold the breath for up to 10 seconds**
7. **Wait for a few seconds then repeat as necessary**

If these areas are covered then specifics pertinent to each inhaler device can be assessed and technique optimised.

An Inhaler Devices Assessment (Appendix 1) or Patient Competency Checklist can be used for review (Appendix 3).

With acknowledgment and thanks to Anna Murphy (simplestepseducation) for the use of the Seven Step approach and a patient competency assessment

Bibliography and supporting documents

1. Booth A. (2015) Using an inhaler. *Respiratory Care Today* 1(1): 44–4
2. Brocklebank D. et al. (2001) Health Technology Assessment inhaler technique and training in people with Chronic Obstructive Pulmonary Disease and Asthma. *Expert Rev. Respiratory Medicine* 6(1): 91–103
3. BTS/SIGN. (2019) British Guideline on the management of Asthma. British Thoracic Society (BTS) and Scottish Intercollegiate Guidelines Network (SIGN) <https://www.brit-thoracic.org.uk/documentlibrary/clinical-information/asthma/btssign-asthma-guideline-2019>
4. Capstick TG. and Clifton IJ. (2012) Inhaler technique and training in people with Chronic Obstructive Pulmonary Disease and asthma *Expert Rev. Respiratory Medicine*.1: 91–103
5. *Drugs and Therapeutics Bulletin*. (2012) Improving inhaler technique who needs teaching? DTB 2012 doi:10.1136/dtb.2012.10.0131
6. Lenney J. et al. (2000) Inappropriate use: assessment of patient use and preference of seven inhalation devices. *Respiratory Medicine* 94:496-500
7. Melani A.S., Bonavia M., Cilenti V. et al. (2011) Inhaler mishandling remains common in real life and is associated with reduced disease control. *Respiratory Medicine*. 105(6): 930-8
8. NICE Clinical Guideline ng115. (2019) Chronic Obstructive Pulmonary Disease in over 16s:Diagnosis and . Management . National Institute for Health and Clinical Excellence. <http://www.nice.org.uk/guidance/ng115>. (December 2019)
9. Pearce L. (2000) Know How Asthma Inhalers. *Nursing Times* www.nursingtimes.net
10. Rau JL. (2006) Practical problems with aerosol therapy in COPD. *Respiratory Care*. 51(2): 158-72
11. Ram FSF., Wright J. and Brocklebank D. (2001) Systematic review of clinical effectiveness of pressurized metered dose inhalers versus other hand held inhaler devices for delivering β 2agonists bronchodilators in asthma. *BMJ* 2001;323:901
12. Sanchis J., Gich I. and Pederson S. (2016) Systematic Review of Errors in Inhaler Use: Has patient technique improved over time. *Chest* doi10.1016/j.chest.2016.03.041
13. Scullion J. (2015) Inhalers-do you know your DPIs from your MDIs? *Guidelines for Nurses*. Available at: www.GuidelinesforNurses.co.uk/inhalers-do-you-know-your-dpis-from-your-mdis (last accessed May 2016)
14. Scullion J. and Holmes S. (2013) Maximising the benefits of inhalation therapy. *Practice Nursing* 24(12): 592-598
15. Van Aalderen W.M., Garcia-Marcos L., Gappa M. et al. (2015) How to match the optimal currently available inhaler device to an individual child with asthma or recurrent wheeze npj *Primary Care Respiratory Medicine* 25, Article number: 14088(2015)doi:10.1038/npjpcrm.2014.88
16. Vincken W., Dekhuijzen PR., Barnes P. and The ADMIT Group. (2010) The ADMIT series - Issues in inhalation therapy. 4) How to choose inhaler devices for the treatment of COPD. *Primary Care Respiratory Journal*.19(1) 10-20

Appendix 1 Inhaler Device Assessment Example

	Type of Inhaler Device	1st Assessment		Comment	2nd Assessment		Date	Date
		Correct	Not Sure		Correct	Not Sure		
1	Metered Dose Inhaler (pMDI) 1. Remove mouthpiece cover 2. Shake the inhaler 3. Breathe out as far as is comfortable 4. Tilt the chin up slightly and place inhaler in mouth and seal your lips around it 5. As you breathe in press the canister down and continue breathing in slow and steady for up to 5 seconds 6. Remove device from mouth and hold breath for up to 10 seconds 7. Wait for a few seconds before repeating the dose and repeat the process if needed. Then replace the mouthpiece cover							
2	Spacer device & pMDI 1. Remove cap & shake the inhaler 2. Insert inhaler into spacer through the hole at the end 3. Breathe out gently as far as is comfortable 4. Tilt the chin up slightly and place spacer mouthpiece in mouth and close lips around it 5. Press canister down & breathe in slowly and steadily for up to 5 seconds (or tidal breathe, several breaths in and out). If the device whistles your breath is too fast (aerochamber) 6. Remove from mouth and hold breath for up to 10 seconds 7. Wait a few seconds and repeat process if needed							

Appendix 2 Competency Statements

This document assesses competency in the administration of medication via the inhaled route using the correct technique for the inhaler device prescribed.

Assessment Criteria	Good	Advice Given	Assessment Date	Signature
<p>Ensures that the patient receives and understands the relevant information regarding the inhaled medication to be administered.</p> <p>This may include the medication name, purpose, dose, frequency, side effects etc.</p>				
<p>Can identify the type of inhaler device that has been prescribed for the patient:</p> <ul style="list-style-type: none"> Accuhaler Aerolizer Autohaler Breezhaler Clickhaler Easibreathe Easyhaler Ellipta Forspiro Genuair Handihaler K-haler Metered Dose Inhaler Metered Dose inhaler with a spacer device NEXThaler Novolizer Respimat Soft Mist Inhaler Spiromax Stalpex Turbohaler Twisthaler Zonda <p>and use of spacer devices with and without face masks.</p>				
<p>Demonstrates the ability to instruct the patient or carer to use the correct technique for the inhaler(s) that they have been prescribed.</p>				
<p>Identifies that the patient is using an optimal technique when inhaling medication via their device.</p> <p>This may include the use of tools to reinforce good technique (AIMS, 2tone, In-check, clip-tone, flo-tone trainer whistles, Aerochamber, online resource).</p>				

This document assesses competency in the administration of medication via an inhaled route using the correct technique for the inhaler device prescribed.

Assessment Criteria	Good	Advice Given	Assessment Date	Signature
<p>Identifies any potential problems that may affect the patient's ability to take the inhaled medication.</p> <ul style="list-style-type: none"> - Lack of manual dexterity - Inability to co-ordinate press and breath manoeuvre (pMDI and SMI only) - Reduced ability to follow instructions - Impaired eyesight <p>Insufficient inspiratory flow rate using a DPI Excessive inspiratory flow rate using an aerosol (e.g. pMDI) Inability to hold breath for up to 5seconds</p>				
<p>Identifies & takes the correct course of action if a problem is identified with the patient's ability to take prescribed inhaled medication</p>				
<p>Identifies when a patient is struggling with multiple devices and is able to simplify regimens</p>				
<p>Demonstrates knowledge on optimal device and medication selection</p>				
<p>Demonstrates safe practice in relation to:</p> <ul style="list-style-type: none"> Prevention of cross infection Cleaning of spacer devices 				

Demonstrates safe practice and delivery of advice in relation to:

- Priming of device
- Mouth care
- Skin care for patients using spacers with masks
- Cleaning of device
- Storage of device

Completes the appropriate documentation
Demonstrates evaluation and documentation of the effectiveness of the medication i.e. impact on patient's symptoms

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This document assesses competency in the administration of medication via the inhaled route using the correct technique for the inhaler device prescribed.

Assessment Criteria	Good	Advice Given	Assessment Date	Signature
Related Knowledge - Is able to: <ul style="list-style-type: none"> • State the indications for the inhaled medication prescribed in relation to the patient's condition • Discuss the effects of the inhaled medication being administered. • Can discuss the side effects of the inhaled medication • Can identify and discuss the different types of medication used to treat respiratory conditions available in an inhaler format • Can identify and discuss the correct procedure for administering inhaled medications in the variety of formats as stated in the range • State the appropriate action to take if not familiar with the medication prescribed 				

Signature Assessor: _____ Signature of Assessed: _____

Appendix 3 Patient Competency Checklist

Step	Action	Device		Device		Device	
		Competent	Unable to Use	Competent	Unable to Use	Competent	Unable to Use
1	Prepare the inhaler device						
2	Prepare or load the dose						
3	Breathe out but not into the inhaler						
4	Gently tilt the chin and place inhaler mouthpiece in mouth, sealing the lips around the mouthpiece						
5	Breathe in Aerosols (e.g.pMDI / SMI) : Slow and Steady DPI: Quick and Deep						
6	Remove from mouth and hold breath for up to 10 seconds						
7	Wait a few seconds before repeating						



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