

Bath and North East Somerset, Swindon and Wiltshire

Integrated Care Board

ASTHMA INHALER PRESCRIBING GUIDELINE

(adult -18 years and over)

Abbreviations

DPI: Dry Powder Inhaler ICS: Inhaled corticosteroid LABA: Long-acting beta agonist

LAMA: Long-acting muscarinic antagonist

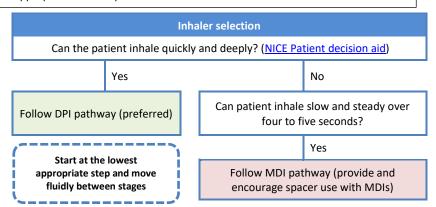
MDI: Metered dose inhaler SABA: Short acting beta agonist

SAMA: Short acting muscarinic antagonist

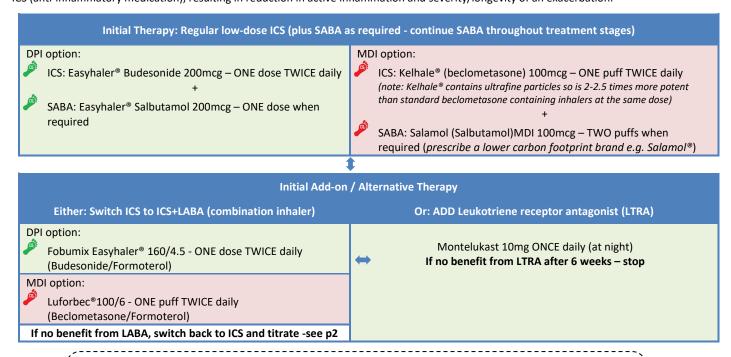
- This guideline states the BSW Formulary recommended, first choice inhalers.
- The intention is to support the choice of treatment for new patients, or patients needing stepping up or down.
- The intention is that, for most patients requiring a new or changed inhaler, one
 of the below inhaler choices will be prescribed, using the brand names stated
 below to minimise the risk of dispensing errors.
- Patients currently using alternative inhalers should only be switched if clinically appropriate and the patient has an asthma review.

Inhaler Prescribing Principles

- Match the device type to the patient's inspiratory flow rate.
- Use DPIs first-line if suitable.
- Use MDIs with spacer in patients unsuitable for DPI.
- Check inhaler technique at every review and before treatment escalation.
- Use combination inhaler where appropriate.
- See information on greener inhaler prescribing on page 2.



Asthma is caused by inflammation of the airways so initial treatment is with low-dose ICS to treat the underlying inflammation.¹⁻³ SABA can be used to treat occasional breakthrough symptoms. The use of bronchodilators without ICS has been associated with increased mortality regardless of asthma severity.⁴ Most ICS/LABA combinations containing formoterol (a fast-acting LABA) can be used as both maintenance and reliever therapy (MART) – see page 2. When patients are exacerbating, they will use more bronchodilator therapy and more ICS (anti-inflammatory medication), resulting in reduction in active inflammation and severity/longevity of an exacerbation.^{1, 2, 4}



Maintenance and Reliever Therapy (MART) Options:

DPI: Fobumix Easyhaler® 160/4.5 ONE to TWO doses TWICE daily & PRN (max. 12 doses/day)

MDI: Luforbec® 100/6 ONE to TWO puffs TWICE daily & PRN (max. 8 puffs/day)

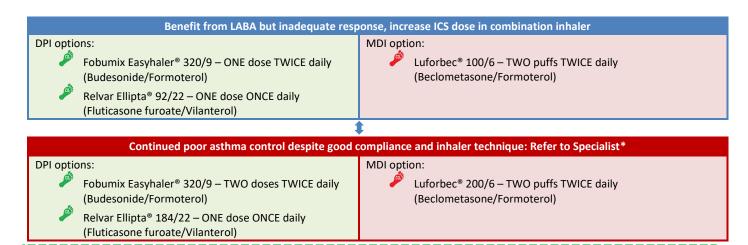


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Greener Inhaler Prescribing

- The NHS long term plan has committed the NHS to reducing greenhouse gas emissions from inhalers, with a target to reduce the carbon impacts of inhalers by 50% by 2030, and a drive to reduce MDI prescribing.
- Metered dose inhalers (MDIs) contain hydrofluorocarbon propellants which are powerful greenhouse gases.
- As such, MDIs have a carbon footprint many times greater than DPIs and make up the largest proportion of the NHS
 carbon footprint of any group of medicines.
- Therefore, if a patient is able to use both MDI and DPI, they should be given a DPI.
- Ventolin® Evohalers should **not** be prescribed as they have a carbon footprint more than double that of the smaller volume Salamol®.
- All inhalers should be returned to a pharmacy to be disposed of in an environmentally safe way.
- In this guideline each inhaler is allocated a footprint symbol:
 - indicates a 'greener' choice
 indicates a 'less-green' choice

Inhaler Technique

- For MDI devices (with or without spacers), patients should be educated to inhale gently.
- For **DPI** devices, patients should inhale forcefully (requiring a higher inspiratory flow rate than MDIs).
- Further information can be found via https://www.rightbreathe.com

If adding LABA to ICS is ineffective:

If the addition of a LABA to regular ICS does not result in a significant additional benefit - consider switching back to regular ICS and titrating accordingly:

	_	
BDP 400mcg/day:	0);	Easyhaler® budesonide 200mcg (DPI) – ONE dose TWICE daily
	ø	Kelhale® 100mcg beclometasone (MDI) – ONE puff TWICE daily
BDP 800mcg/day:		Easyhaler® budesonide 200mcg (DPI) – TWO doses TWICE daily Kelhale® 100mcg beclometasone (MDI) – TWO puffs TWICE daily
BDP 1,600mcg/day:		Easyhaler® budesonide 400mcg (DPI) – TWO doses TWICE daily Kelhale® 100mcg beclometasone (MDI) – FOUR puffs TWICE daily

Beclometasone Potency

- Luforbec®, Fostair®, Kelhale® and Qvar® inhalers contain ultrafine particles and are therefore 2 2.5 times more potent than alternative beclometasone containing MDIs (e.g. Clenil®) and DPI inhalers per inhaled dose.
- Corticosteroid safety cards are required for patients on ICS doses of > 1000mcg BDP equivalent/day.
- Montelukast can be particularly beneficial in patients with allergic asthma, rhinitis or exercise-induced asthma and should be considered before further increasing the inhaled steroid dose.



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Spacer Devices

- Prescribe a compatible spacer for use with MDI devices in ALL patients, but especially important in those with sub-optimal inhaler technique.
- Spacers should be replaced at least annually. Please follow manufacturer's cleaning instructions with each device.

EasyChamber® Anti-static spacer with detachable latex-free mask	Compatible with most MDI devices
Aero Chamber Plus® One-piece medium volume spacer	Compatible with most MDI devices
Volumatic® Two-piece larger volume (750ml) spacer	Only compatible with Clenil®, Flixotide®, Salamol®, Seretide®, Serevent®, Ventolin®

When to refer to secondary care?

Once <u>adherence and inhaler technique have been checked and optimised</u> and other conditions causing their symptoms have been treated or excluded, the following should trigger a referral to secondary care:

- Over the previous 12 months (any of):
 - ≥2 courses of oral corticosteroids for asthma
 - ≥1 hospital admission/ED attendance for asthma
 - ≥6 SABA used despite compliance with preventer
 - Poor symptom control (as assessed by validated questionnaire)
- On maintenance oral corticosteroids for asthma
- Diagnostic uncertainty

There are other medications licenced for use in asthma that are not covered in this guideline, including oral theophylline and LAMA inhaler therapy, in a separate inhaler or in combination with ICS/LABA as a triple inhaler. Although these are green on <u>BSW formulary</u>, please seek advice from or refer to secondary care before initiating these medications.⁶

References:

- BTS/SIGN Guideline for the management of asthma 2019. (Available from: https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/) [accessed January 2023]
- 2. Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2020. (Available from: https://ginasthma.org/gina-reports/) [accessed January 2023]
- 3. NICE Guideline NG80, 2020. Asthma: diagnosis, monitoring and chronic asthma management. (Available from: https://www.nice.org.uk/guidance/ng80) [accessed January 2023]
- Royal College of Physicians. Why asthma still kills: the National Review of Asthma Deaths (NRAD) Confidential Enquiry report. London: RCP, 2014. (Available from: https://www.asthma.org.uk/globalassets/campaigns/nrad-full-report.pdf) [accessed January 2023]
- RightBreathe Inhaler Prescribing Information. (Available from: https://www.rightbreathe.com/ [accessed January 2023]
- Oxford Academic Health Science Network. Consensus pathway for management of uncontrolled asthma in adults (Available from: https://www.oxfordahsn.org/our-work/asthma-biologics-toolkit/aac-consensus-pathway-for-management-of-uncontrolled-asthma-in-adults/ [accessed January 2023]
- NHS England National Patient Safety Alert Steroid Emergency Card to support early recognition and treatment of adrenal crisis in adults https://www.england.nhs.uk/2020/08/steroid-emergency-card-to-support-early-recognition-and-treatment-of-adrenal-crisis-in-adults/ [accessed January 2023]