ASTHMA INHALER PRESCRIBING GUIDELINE

(Adults and young people – 16 years and over)

NHS
Bath and North East Somerset, Swindon and Wiltshire
Integrated Care Board

This guideline should be read in conjunction with NICE/BTS/SIGN asthma guideline [NG245], 2024[1]

Diagnosis

A diagnosis of asthma is made by performing a clinical assessment backed up by objective tests.

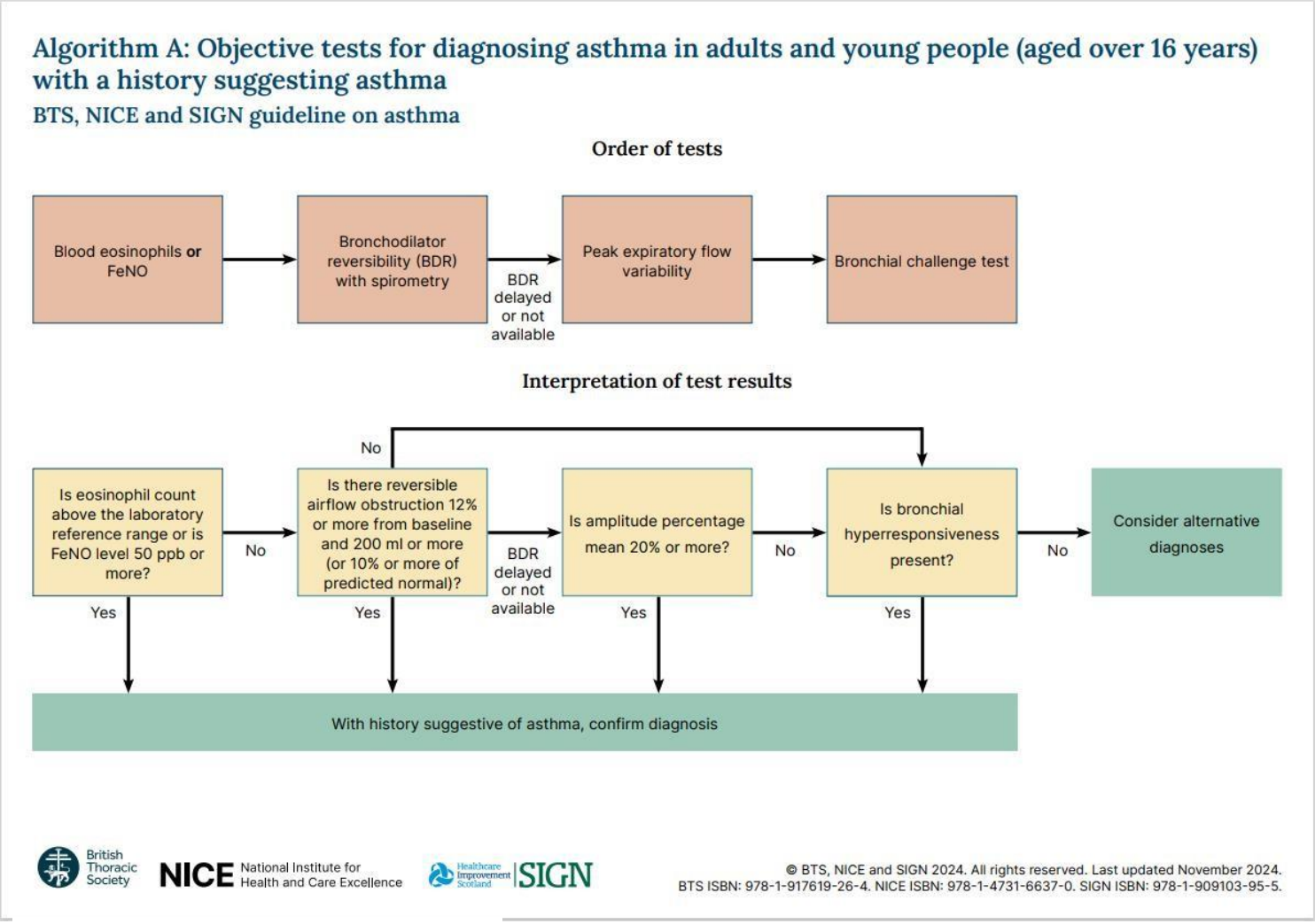
A history of episodic symptoms, including one or more of wheeze, breathlessness, chest tightness and cough, with evidence of diurnal variability.
Physical examination is recommended to assess for audible wheeze; this may only be present if the patient is symptomatic.
There may be a personal or family history of atopy.
It is important to rule out symptoms or signs that may suggest an alternative diagnosis.

If asthma is suspected, the NICE guideline diagram below shows the recommended order in which objective tests should be performed to help confirm or refute a diagnosis of asthma.

Treat people immediately if they are acutely unwell or highly symptomatic at presentation and perform objective tests that may help support a diagnosis of asthma if the equipment is available.[1]

If objective tests cannot be done immediately, carry them out when acute symptoms have been controlled.[1]

Be aware that the results of spirometry and FeNO tests may be affected in people who have been treated with inhaled corticosteroids (the test results are more likely to be normal).[1]



NG245 Asthma: Algorithm A 27/11/2024

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Asthma is caused by inflammation of the airways. The use of bronchodilators without inhaled corticosteroid (ICS) has been associated with increased mortality regardless of asthma severity.[2] The new NICE/BTS/SIGN asthma guideline[1] recommends SABA free pathways to reduce risks associated with SABA overuse. These are **anti-inflammatory reliever (AIR)** and **maintenance and reliever therapy (MART)** which use a combination of **ICS/formoterol** (a fast-acting LABA). When patients are exacerbating, they will use more bronchodilator therapy and more ICS, resulting in reduction in active inflammation and severity/longevity of an exacerbation.[2]

DO NOT PRESCRIBE SABA INHALERS for PATIENTS on AIR or MART REGIMES.

Inhaler Prescribing Principles

- Match the device type to the patient's inspiratory flow rate.
- Use DPIs first-line if suitable.
- Only use MDIs in patients unsuitable for DPI. Please add a spacer!
- Check inhaler technique at every review and before treatment escalation.

Inhaler selection

Can the patient inhale quickly and deeply? (NICE Patient decision aid)

Yes → **Follow DPI pathway (preferred)**

No → Can patient inhale slow and steady over four to five seconds?

Yes → Follow MDI pathway (provide and encourage spacer use with MDIs)

Start at the lowest appropriate step and move fluidly between stages

Abbreviations: **ICS**, inhaled corticosteroid; **LABA**, long-acting beta2 agonist; **LAMA**, long-acting muscarinic receptor antagonist; **LTRA**, leukotriene receptor antagonist; **MART**, maintenance and reliever therapy (using ICS/formoterol combination inhalers); **SABA**, short-acting beta2 agonist; **AIR**, anti-inflammatory reliever; **MDI**, metered dose inhaler; **DPI**, dry powder inhaler; **SMI**, soft mist inhaler.

Greener Inhaler Prescribing

- The NHS aims to be the world's first net zero national health service[3].
- 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 (around 3% of all NHS emissions).
- Therefore, if a patient is able to use both MDI and DPI, they should be given a DPI.
- 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 How to use your inhaler | Asthma + Lung UK[4]

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.
- Please see BSW formulary for recommended spacer devices for adults and young people over 16 years old.

Asthma Formulary

Please note that the button called "Asthma Formulary" in the Ardens template leads to the Ardens Asthma Formulary and this is not always reflecting the locally agreed products of choice. When prescribing, please follow BSW formulary and the local guidance.

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This guideline states the BSW Formulary recommended first choice inhalers. 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.
For posology and method of administration, including recommended and maximum daily doses please refer to the relevant **SmPC** (summary of product characteristics) available from Home - electronic medicines compendium (emc).

Newly diagnosed asthma in people aged 16 years and over

If highly symptomatic at diagnosis or there are severe exacerbations, offer low-dose MART

AIR (Anti-Inflammatory Reliever) therapy Low-dose ICS/formoterol combination inhaler to be taken as needed	
Fobumix Easyhaler® 160/4.5 - ONE dose PRN (Budesonide/Formoterol) Licensed **Symbicort Turbohaler®** 200/6 ONE dose PRN (Budesonide/Formoterol) Licensed **WockAir®** 160/4.5 – ONE dose PRN (Budesonide/Formoterol) Licensed	**Luforbec® MDI** 100/6 – ONE dose PRN (Beclometasone dipropionate/formoterol) Extra fine particle Off label use 18y+
If asthma is uncontrolled, offer:	
Low dose MART **Low-dose ICS/formoterol combination inhaler used as a maintenance and reliever**	
Fobumix Easyhaler® 160/4.5 - ONE dose BD and PRN (Budesonide/Formoterol) Licensed **Symbicort Turbohaler®** 200/6 ONE dose BD and PRN (Budesonide/Formoterol) Licensed **WockAir®** 160/4.5 – ONE dose BD and PRN (Budesonide/Formoterol) Licensed	**Luforbec® MDI** 100/6 – ONE dose BD and PRN (Beclometasone dipropionate/formoterol) Extra fine particle Licensed 18+
If asthma is uncontrolled, offer:	
Moderate dose MART **Moderate dose ICS/formoterol combination inhaler used as a maintenance and reliever**	
Fobumix Easyhaler® 160/4.5 - TWO doses BD and PRN (Budesonide/Formoterol) Licensed **Symbicort Turbohaler®** 200/6 TWO doses BD and PRN (Budesonide/Formoterol) Licensed **WockAir® DPI** 160/4.5 – TWO doses BD and PRN (Budesonide/Formoterol) Licensed	**Luforbec® pMDI** 100/6 – TWO doses BD and PRN (Beclometasone dipropionate/formoterol) Extra fine particle Licensed 18+
If asthma is still uncontrolled on moderate dose MART, check FeNO level, if available, and blood eosinophil count. **If either is raised** **(FeNO ≥50ppb, Eosinophil count ≥ 0.5 x 10^9 per litre)** **refer to a specialist in asthma care.**	
If neither is raised, consider add-on therapy as below:	
Either: Add Long-Acting Muscarinic Antagonist (LAMA)	**Or: Add Leukotriene Receptor Antagonist (LTRA)**
Spiriva Respimat® 2.5mcg SMI – TWO doses OD (Tiotropium) Licensed	**Montelukast** 10mg ONCE daily (at night) can be particularly beneficial in patients with allergic asthma, rhinitis or exercise-induced asthma.
If no benefit from LAMA after 8-12 weeks – STOP can trial alternative add-on therapy (LTRA)	**If no benefit from LTRA after 8-12 weeks – STOP** can trial alternative add-on therapy (LAMA)
If some benefit from LAMA but not full control of symptoms, consider adding LTRA	If some benefit from LTRA but not full control of symptoms, consider adding LAMA
Continued poor asthma control despite good compliance and inhaler technique: Refer to Specialist	

Management and treatment of people with an existing diagnosis of asthma

Identify adults and young people 16+ who could be transferred to **SABA free treatment**, particularly where asthma is **not controlled**. Prioritise groups with uncontrolled asthma - where there is evidence of **any exacerbation requiring oral corticosteroids** or patients that **remain symptomatic** on their current treatment plan (**reliever use 3 or more days a week** or **night-time waking** 1 or more times a week).

At their next review, initiate a discussion with the patient about switching their treatment regime.

Patients who are **NOT symptomatic** and are happy on their current treatment pathway, **can continue** with **current treatment** and are not recommended to switch.

Current treatment	Switch
SABA only	Low-dose ICS/formoterol PRN (AIR) **and STOP SABA!**
Regular low dose ICS +SABA PRN	Low-dose MART **and STOP SABA!** Consider whether to stop or continue the supplementary therapy (LAMA and/or LTRA) based on the degree of benefit achieved when first introduced.
Regular low-dose ICS/LABA + SABA PRN	
Regular low-dose ICS + LTRA and/or LAMA + SABA PRN	
Regular low-dose ICS/LABA + LTRA and/or LAMA + SABA PRN	
Regular moderate-dose ICS +SABA PRN	Moderate-dose MART **and STOP SABA!** Consider whether to stop or continue the supplementary therapy (LAMA and/or LTRA) based on the degree of benefit achieved when first introduced.
Regular moderate-dose ICS/LABA + SABA PRN	
Regular moderate-dose ICS + LTRA and/or LAMA + SABA PRN	
Regular moderate-dose ICS/LABA + LTRA and/or LAMA + SABA PRN	
High dose ICS containing regime	Refer to specialist asthma care

Fobumix Easyhaler®	**Symbicort Turbohaler®**	**WockAIR®**	**Luforbec®**	**Spiriva Respimat®**
				
DPI	**DPI**	**DPI**	**Fine particle pMDI**	**SMI**
ICS/LABA	ICS/LABA	ICS/LABA	ICS/LABA	LAMA
Budesonide/Formoterol	Budesonide/Formoterol	Budesonide/Formoterol	Beclometasone/Formoterol	Tiotropium
160mcg/4.5mcg delivered dose*	200mcg/6mcg metered dose*	160mcg/4.5mcg delivered dose*	100mcg/6mcg delivered dose*	2.5mcg delivered dose*
SmPC	SmPC	SmPC	SmPC	SmPC
Inhaler technique	Inhaler technique	Inhaler technique	Inhaler technique + spacer	Inhaler technique

***Licensing requirements now require inhaler devices to be named by their **delivered dose** rather than **metered dose** which was the process when some inhalers were first licensed. In case of Budesonide/Formoterol inhalers 200mcg/6mcg metered dose is equivalent to 160mcg/4.5mcg delivered dose.

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Monitoring and self-management for all patients[5]

All adults and young people with diagnosed or suspected asthma must have:

- An asthma action plan which includes treatment regime, triggers, warning signs and who to contact when they need help.
- Regular (at least annual) **asthma reviews** which are conducted by appropriately trained healthcare professionals. Use proactive alerts to ensure routine reviews of asthma, involve the multidisciplinary team in asthma care and optimise the use of telephone, email and IT to support asthma management.
    - Consider using validated tools i.e. **Asthma Control Test** (**ACT** , available in the Ardens template)
    - Confirm **adherence** to prescribed treatment and **review inhaler technique**
    - Identify any risk associated with short-acting beta-agonist **(SABA) overuse**
    - Switch to **SABA-free pathways (AIR/MART)** as appropriate
    - Review/update of their **asthma action plan**
    - A review of **smoking /vaping status**, and referral to **smoking cessation** if appropriate **BSW stop smoking guidance**
    - Access to **education and self-management** programmes/information. This includes working alongside schools and community workers to ensure support in all settings

Stepping down:

- Consider **stepping down** therapy when asthma is **well controlled for three-months**
- **Discuss** the **potential risks and benefits** of decreasing therapy
- When reducing maintenance therapy consider **clinical effectiveness when introduced, side effects and the person's preference**
- If stepping down **in those using low dose ICS alone or low dose MART**, step down **to low dose ICS/formoterol PRN (AIR therapy)**
- Agree how the step down will be **(self-)monitored, reviewed, and followed-up**
- Review and update the person's **asthma action plan**

When to refer to secondary care?

Once **adherence and inhaler technique have been checked and optimised, asthma action plan put in place** and other conditions causing their symptoms (**treatable traits =** gastroesophageal reflux disease, anxiety/mental health, nasal polyps, high BMI, smoking, airflow obstruction, daily sputum, emphysema/COPD) **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
    - High dose ICS containing regimes (please provide steroid card[7])
    - Raised FeNO or Eosinophil level despite moderate dose MART
    - Poor symptom control (as assessed by validated questionnaire)
- On maintenance oral corticosteroids for asthma (please provide steroid card[7])
- Diagnostic uncertainty

Recommended maximum time for attempting optimisation before referral is six months. Refer patients to secondary care by six months or sooner if asthma remains uncontrolled.

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References:

1. NICE. Asthma: diagnosis, monitoring and chronic asthma management (BTS,NICE,SIGN) NICE guideline[NG245], 2024 (Available from: https://www.nice.org.uk/guidance/ng245/resources/asthma-diagnosis-monitoring-and-chronic-asthma-management-bts-nice-sign-pdf-66143958279109 and Tools and resources | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE) [Accessed November 2024]
2. Royal College of Physicians. Why asthma still kills: the National Review of Asthma Deaths (NRAD) Confidential Enquiry report. London: RCP, 2014. (Available from: Why asthma still kills | RCP London) [Accessed December 2024]
3. NHS England, Delivering a net zero NHS (available from Greener NHS) [Accessed December 2024]
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5. PCRS. New BTS/NICE/SIGN asthma guideline 2024. First steps to implement the guidance. (Available from New asthma guidelines infographic - FINAL) [Accessed November 2024]
6. 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 December 2024]
7. 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 December 2024]

Consultation schedule

Name and title of individual	Date consulted
Dr Sharon Sturney, Consultant Respiratory Physician, RUH Bath	January 2025
Veronika Oross MRPharms, Pharmacist, BSW ICB	January 2025
Rachel Hobson PhD, Lead Clinical Effectiveness Pharmacist, BSW ICB	January 2025
Dr Robert Allcock, Consultant Chest Physician, GWH Swindon	January 2025
Dr Catherine Thompson, Consultant in Respiratory Medicine, SFT Salisbury	January 2025
Issy Wyber, Pharmacist, RUH Bath	January 2025

The following people have submitted responses to the consultation process

Name and title of individual	Date responded
Dr Sharon Sturney, Consultant Respiratory Physician, RUH Bath	January 2025
Veronika Oross MRPharms, Pharmacist, BSW ICB	January 2025
Rachel Hobson PhD, Lead Clinical Effectiveness Pharmacist, BSW ICB	January 2025
Dr Robert Allcock, Consultant Chest Physician, GWH Swindon	January 2025
Dr Catherine Thompson, Consultant in Respiratory Medicine, SFT Salisbury	January 2025
Issy Wyber, Pharmacist, RUH Bath	January 2025