

Asthma Guideline for adults aged 18 years and over

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Asthma Guideline for adults aged 18 years and over

- diagnosis, monitoring and chronic asthma management
- 18 years and over

A guide for NHS Buckinghamshire, Oxfordshire and Berkshire West Integrated Care Board (BOB ICB).

This is a summary of the new collaborative guideline developed jointly by the British Thoracic Society (BTS), National Institute for Health and Care Excellence (NICE) and Scottish Intercollegiate Guidelines Network (SIGN), 27 November 2024 in line with the BOB ICB respiratory prescribing group guidelines and formulary.

Key messages:

- [New order of objective tests for diagnosing asthma in adults aged 18 years and over.](#)
- [The new pharmacological guidelines which moves away from the use of short acting beta-agonists \(SABA\) and introduces the use of an inhaled corticosteroid plus long acting beta agonist \(ICS/LABA\) from step 1 of treatment.](#)
- Importance of checking adherence, inhaler technique and updating personal asthma action plan ([PAAP](#)) at least annually.
- [Guidance on when to refer to secondary/tertiary specialist care.](#)

This summary guideline covers diagnosing, monitoring and managing asthma in adults. It aims to improve the accuracy of diagnosis, help people to control their asthma and reduce the risk of asthma attacks.

This document does not cover:

- Diagnosing, monitoring and managing asthma in young people and children.
- Managing severe asthma or acute asthma attacks.

These guidelines are not intended to, and should not be used to, support or justify a change in asthma therapy which is not clinically indicated. All changes in treatment should be made through shared decision making with the patient/service user.

Always work within your knowledge, competency and capability.

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Introduction

The Buckinghamshire, Oxfordshire and Berkshire West (BOB) ICB Picture

Asthma is the 3rd most prevalent condition in BOB ICB, affecting over 117,000 patients. However, the captured prevalence is lower than national average, suggesting not all cases have been coded or diagnosed and that there is unmet need. ([BOB ICB prevalence 6.25% compared to 6.53% nationally \(2023-24\)](#)).

Asthma is not evenly spread, with higher rates noted in the following communities:

- African, Caribbean and Asian families,
- People living in deprivation,
- People living close to major roads.

Asthma is dangerous. According to the charity Asthma and Lung UK, over 12,000 people in the UK have died from asthma attacks since the publication of the landmark report '[National Review of Asthma Deaths \(NRAD\): Confidential enquiry report](#)' in 2014 which found that the majority of asthma deaths are preventable. Four people die from asthma every day and many more continue to be at risk, with tens of thousands admitted to hospital for life-threatening asthma attacks each year. Ten years on from National Review of Asthma Deaths, the annual asthma death toll has risen by a quarter, and complacency around asthma has led to thousands of preventable deaths.

Asthma deaths are largely attributable to avoidable factors, including misdiagnosis, poor adherence to preventative medication and psychological factors.

Incorrect diagnosis of asthma is common and leads to unnecessary treatment.

This document aims to improve the accuracy of diagnosis, help people to control their asthma and reduce the risk of asthma attacks. It does not cover managing severe asthma or acute asthma attacks. This guidance is intended to assist clinicians in selecting the most appropriate evidence-based treatment for their patients whilst considering the environmental impact of the different types of inhalers and ensuring cost effectiveness.

It should always be remembered that people have the right to be involved in discussions and make informed decisions about their care, as described in the National Institute for Health Care and Excellence (NICE) document [information on making decisions about your care](#). Information about decision making is also available from the NICE document [Realistic medicine](#).

Making decisions using NICE guidelines explains how we use words to show the certainty of our recommendations, information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

What is new in asthma care and management?

The integrated 'Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN)' document ([NICE guideline \[NG245\]](#)) was published in November, 2024.

The aim of the management of asthma in adults (aged 18 years and over) in these new guidelines is to move away from the use of short acting beta-agonists (SABA) in the initial three pharmaceutical steps of treatment and is in line with the latest [Medicine and Healthcare products Regulatory Agency \(MRHA\) drug safety update](#) published in April 2025 - Short-acting beta 2 agonists (SABA) (salbutamol and terbutaline): reminder of the risks from overuse in asthma and to be aware of changes in the SABA prescribing guidelines

Dangers of prescribing short-acting beta-agonists (SABA) without an inhaled corticosteroid (ICS).

Despite the availability of effective controller treatments, [SABA overuse remains a problem](#). Compared with appropriate use, [inappropriate use of SABA](#) (excessive SABA plus underuse of ICS) has been shown to be associated with increased risk of exacerbations and mortality.

The international asthma guideline from [Global Initiative for Asthma \(GINA\) 2024](#) does not recommend treatment of asthma in adults with SABA alone. Starting treatment of asthma with SABA reliever only dates back more than 50 years, to when asthma was thought of primarily as a disease of bronchoconstriction. However, airway inflammation is found in most patients with asthma, even in those with intermittent or infrequent symptoms, and patients with apparently mild asthma can still have severe life-threatening or fatal asthma exacerbations. These risks are substantially reduced by adding in inhaled corticosteroids (ICS).

SABA-only treatment is associated with increased risk of exacerbations and lower lung function, and of asthma-related death.

Regular use of SABA increases allergic responses and airway inflammation, and reduces the bronchodilator response to SABA when it is needed.

Over-use of SABA inhalers (e.g. more than 3 x 200-dose canisters used in a year) is associated with an increased risk of severe exacerbations. Use of more than 12 SABA inhalers in a year is associated with increased risk of asthma-related death.

Why should ICS-containing medication be commenced from the time of diagnosis?

For the best outcomes, ICS-containing treatment should be initiated when (or as soon as possible after) the diagnosis of asthma is made. All patients should also be provided with a reliever inhaler for quick symptom relief, [preferably anti-inflammatory reliever \(AIR\)](#).

The [Global Initiative for Asthma \(GINA\) 2024](#) report recommends ICS-containing medication from diagnosis for several reasons:

- As-needed low dose ICS-formoterol reduces the risk of severe exacerbations and emergency department visits or hospitalisation by 65% compared with SABA-only treatment. This anti-inflammatory reliever regimen (AIR-only) significantly reduced severe exacerbations regardless of the patient's baseline symptom frequency, lung function, exacerbation history.
- Starting treatment with SABA alone trains the patients to regard it as their main asthma treatment, and increases the risk of poor adherence when daily ICS is subsequently prescribed.
- Early initiation of low-dose ICS in patients with asthma leads to a greater improvement in lung function than if symptoms have been present for more than 2 – 4 years.
- Patients not taking ICS who experience a severe exacerbation have a greater long-term decline in lung function than those who are taking ICS.

Initial clinical and physical assessment

Obtain a structured clinical history in people with suspected asthma. Specifically, check for:

1	2	3	4
• Reported wheeze, noisy breathing cough, breathlessness or chest tightness, and any variation (e.g. worse at night or early morning, or seasonal) in these symptoms	• Any triggers which make symptoms worse	• A personal or family history of asthma or allergic rhinitis	• Symptoms to suggest alternative diagnosis (see table below)

- Do not confirm a diagnosis of asthma without a suggestive clinical history and a supporting objective test.
- People with **suspected** asthma should be examined to identify expiratory polyphonic wheeze and signs of other causes of respiratory symptoms but be aware that even if examination results are normal, the person may still have asthma.

Alternative diagnoses in adults

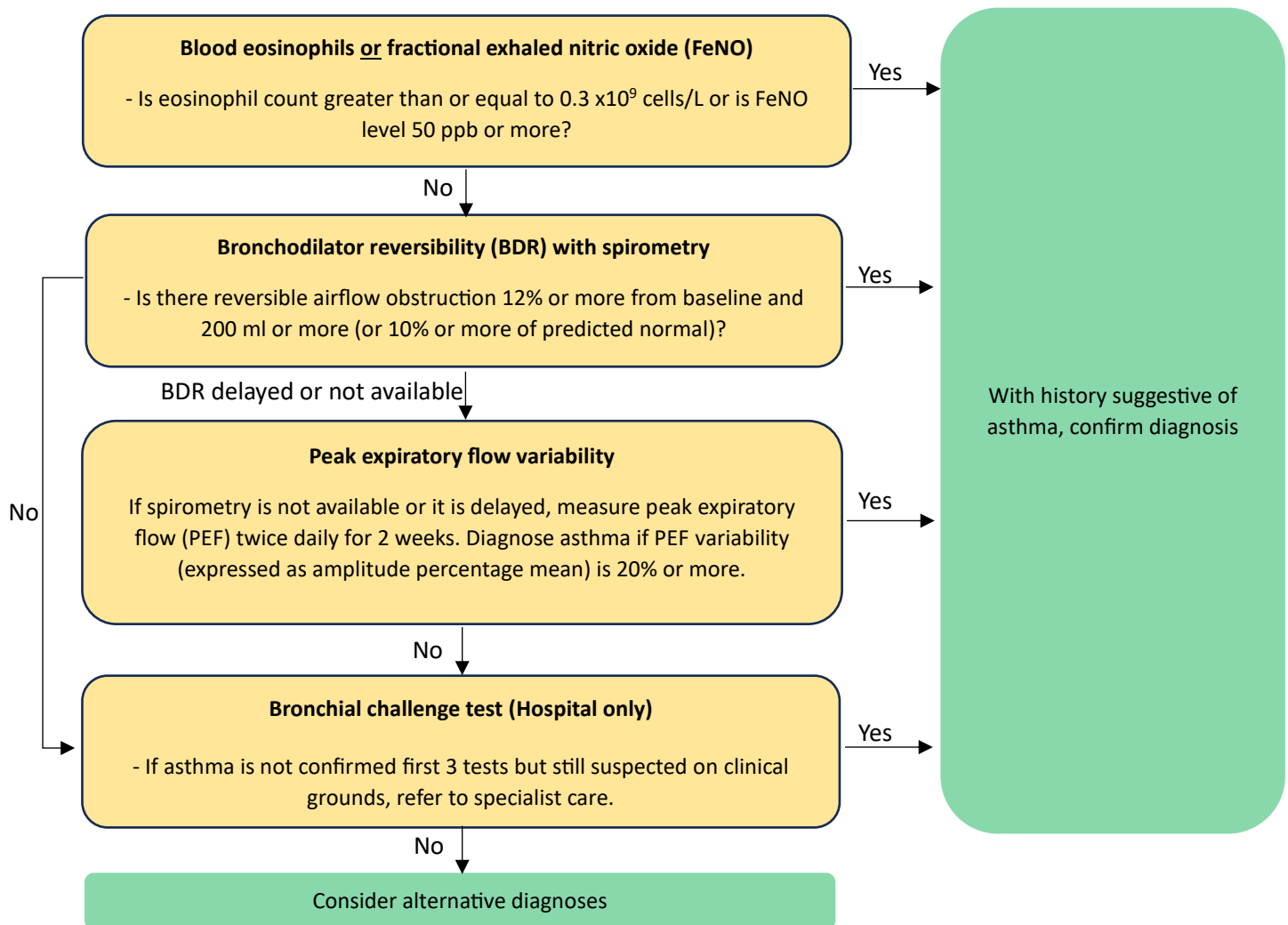
Clinical clue	Possible diagnosis
Without airflow obstruction	
Predominant cough without lung function abnormalities	Chronic cough syndromes; pertussis
Prominent dizziness, light headedness, peripheral tingling	Dysfunctional breathing
Recurrent severe 'asthma attacks' without objective confirmatory evidence	Vocal chord dysfunction
Predominant nasal symptoms without lung function abnormalities	Rhinitis
Postural and food-related symptoms, predominant cough	Gastro-oesophageal reflux
Orthopnoea, paroxysmal nocturnal dyspnoea, peripheral oedema, pre-existing cardiac disease	Cardiac failure
Crackles in auscultation	Pulmonary fibrosis
With airflow obstruction	
Significant smoking history (ie, >30 pack-years), age of onset >35 years	COPD
Chronic productive cough in the absence of wheeze or breathlessness	Bronchiectasis*; inhaled foreign body*; obliterative bronchiolitis; large airway stenosis
New onset in smoker, systemic symptoms, weight loss, haemoptysis	Lung cancer*; sarcoidosis*

*may also be associated with non-obstructive spirometry

Reference: [Alternative diagnoses in adults | Right Decisions](#)

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 test is available. If these objective tests cannot be done immediately, carry them out when acute symptoms have been controlled, and advise people to contact their healthcare professional immediately if they become unwell while waiting to have objective tests.

Order of objective tests for diagnosing asthma in adults (aged 18 years and over) with a [history](#) suggestive of asthma, and interpretation of test results



NB: 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).

Diagnosing occupational asthma

In people with adult-onset asthma, poorly controlled established asthma, or reappearance of childhood asthma, check for a possible occupational component by asking the following:

- Are symptoms the same, better or worse on days away from work?
- Are symptoms the same, better or worse when on holiday (time away from work, longer than usual breaks, at weekends or between shifts)?

Ensure all answers are recorded for later review and refer people with suspected occupational asthma to an occupational asthma specialist.

Monitoring asthma control

Monitor asthma control at every review. In addition to asking about symptoms, check:

- Time off work or school due to asthma
- Amount of reliever used, including a check of the prescription record
- Number of courses of oral corticosteroids
- Any admissions to hospital or attendance to an emergency department due to asthma

If control is suboptimal, take into account and try to address the possible reasons for uncontrolled asthma before starting or adjusting medicines for asthma in adults.

Consider using a validated symptom questionnaire (for example, the [Asthma Control Test](#) (ACT) or [Asthma Quality of Life Questionnaire](#) (AQLQ)).

Do not use regular peak expiratory flow (PEF) monitoring to assess asthma control unless there are person-specific reasons for doing so (for example, when PEF measurement is part of the [personalised asthma action plan \(PAAP\)](#)).

Consider [fractional exhaled nitric oxide](#) (FeNO) monitoring for adults with asthma:

- at their regular annual review, and
- before and after changing their asthma therapy.

Remember to give the patient a [patient information leaflet](#) before FeNO is carried out.

Principles of pharmaceutical treatment

Licensed indications for asthma inhalers vary between different medicines, different doses and different devices. Not all inhalers in this guideline are licensed for use in asthma however this is standard practice in line with [Asthma: diagnosis, monitoring and chronic asthma management \(BTS, NICE, SIGN\)' 2024 document](#).

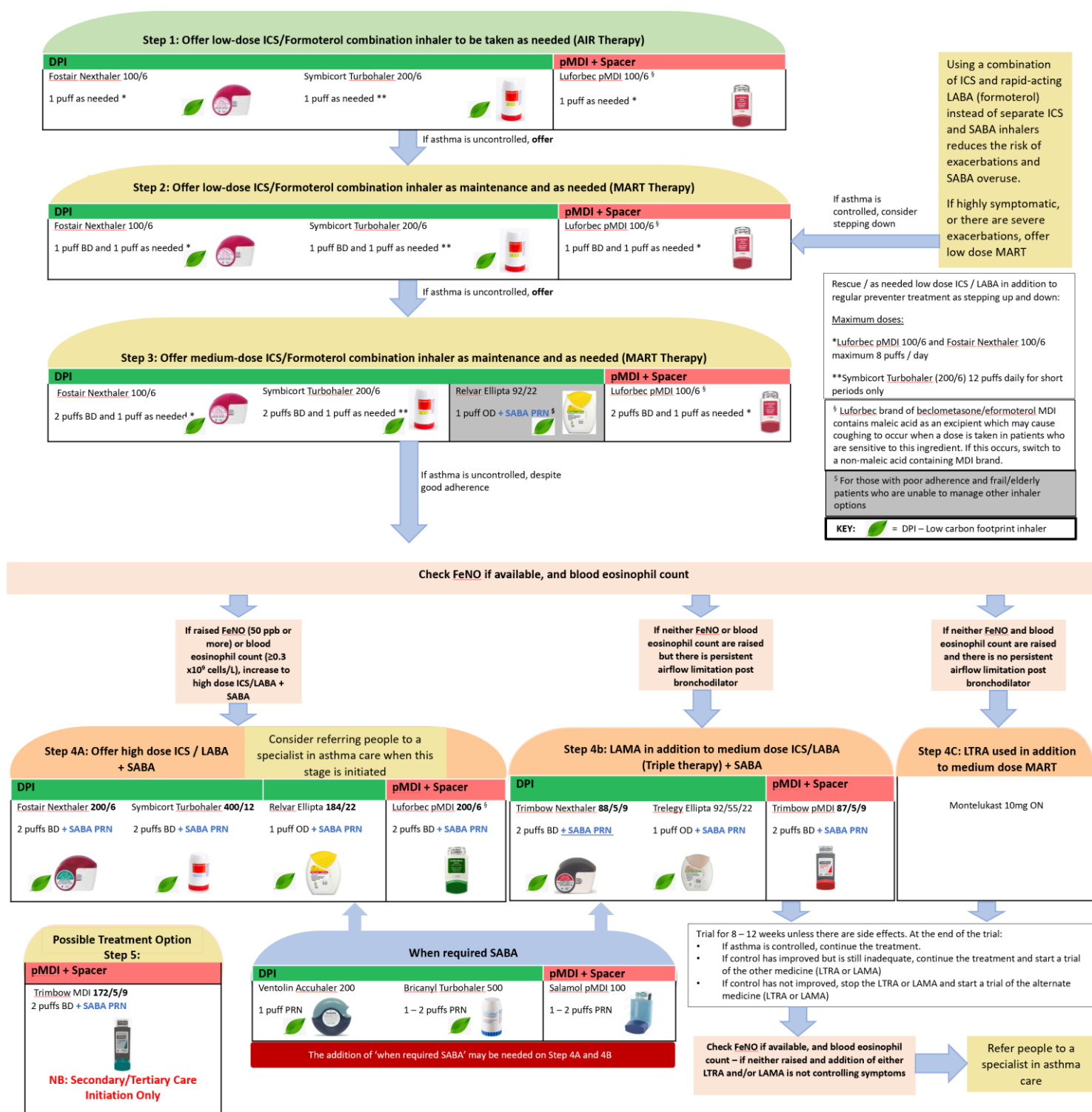
Take into account and try to address the possible reasons for uncontrolled asthma before starting or adjusting medicines for asthma in adults. These may include:

- alternative diagnoses or comorbidities
- suboptimal adherence
- suboptimal inhaler technique
- smoking (active or passive), including vaping using e-cigarettes
- occupational exposures
- psychosocial factors (for example, anxiety and depression, relationships and social networks)
- seasonal factors
- environmental factors

If possible, check the FeNO level when asthma is uncontrolled. If it is raised this may indicate poor adherence to treatment or the need for an increased dose of inhaled corticosteroid.

After starting or adjusting medicines for asthma, review the response to treatment in 8 to 12 weeks.

Pharmaceutical Asthma Management for Patients aged 18 Years and Over – Core Management Algorithm



The NICE/SIGN Guidelines (2024) make reference to following steps 1-3 ([NG245 Asthma: Algorithm C 27/11/2024](#)) before recommending onward referral to specialist care, however this document has introduced a fourth step to direct primary care clinicians when to refer to the respiratory specialist services and to ensure the individuals are provided with some form of effective management/treatment options prior to them being assessed within secondary/tertiary care services (NB: SABA has been reintroduced in this stage for this small quota of patients).

Decreasing maintenance therapy

At annual review discuss with the person with asthma (or their family or carer, if appropriate) the potential risks and benefits of decreasing their maintenance therapy when their asthma has been well controlled on their current maintenance therapy.

When decreasing maintenance therapy:

- Stop or reduce dose of medicines in an order that takes into account the clinical effectiveness when introduced, side effects and the person's preference.
- Allow at least 8 to 12 weeks before considering a further treatment reduction.
- If considering step-down treatment for adults aged 18 and over who are using low-dose maintenance inhaled corticosteroid (ICS) plus a short-acting beta2 agonist (SABA) as needed or low-dose MART (maintenance and reliever therapy) (Step 2 to Step 1), step down to low-dose ICS/formoterol combination inhaler as needed (as-needed AIR therapy – Step 1b).
- Agree with the person (or their family or carer if appropriate) how the effects of decreasing maintenance therapy will be monitored and reviewed, including self-monitoring and follow-up with a healthcare professional.
- Review and update the person's asthma action plan when decreasing maintenance therapy.

Inhalers

This guidance favours the use of [DPI's](#) in preference to pMDIs because of:

1. A lower risk of [critical use errors](#) with DPI's and
2. A significantly [lower carbon footprint](#) with DPI's

Base the choice of inhaler(s) for asthma on:

- an assessment of correct technique including inspiratory flow
- the preference of the person receiving the treatment
- the lowest environmental impact among suitable devices
- the presence of an integral dose counter.

Inhaler choice is important to achieve control.

- The choice of treatment should be individualised to the patient and should take into account patient preference (e.g. dose frequency, inhaler device) and practical issues (e.g. manual dexterity) [See Appendix 1](#).
- Above all else, choose the treatment which is best suited to the patient so that they are able to take their therapy regularly as prescribed in the long term.
- [Lower carbon footprint inhalers \(DPIs\)](#) should be used where clinically appropriate and suitable for the patient.
- Higher carbon footprint inhalers (pMDIs) can be used if the patient finds it easier or more manageable to use. A spacer should be prescribed for use with a metered dose.

Give people with asthma information on their inhaler treatments. This should include the medicines they contain, how they work, when they should be taken and the correct technique to use for each device.

Prescribing inhalers

Prescribe by:

- Brand
- Device
- A consistent device type for all inhalers if possible

Prescribe combination inhalers where possible.

Consider patient's ability to use:

- Once or twice daily dosing.
- Environmental considerations - most adults can use the more sustainable, non-propellant (DPI) inhalers with training.
- Patients with special needs and/or neurodiversity may manage a pMDI with a spacer better than a DPI.
- The use of the In-check© device [Guiding Inspiratory Flow: Development of the In-Check DIAL G16, a Tool for Improving Inhaler Technique - PMC](#), [In-Check DIAL | Alliance Tech Medical](#) or placebo devices can help inform inhaler choice. (Placebo inhalers can be ordered for your practice from individual pharmaceutical manufactures.)

Changes to inhaler devices should only be made after discussion and agreement with the patient.

- Offer a face-to-face contact for support using a new inhalers
- Use [Rightbreathe](#) and [How to use your inhaler | Asthma + Lung UK resources](#) to support inhaler and spacer choice, technique and care.
Patients can also be referred to community pharmacists for [NHS New Medicine Service](#) (NMS) when starting a new inhaler to reinforce inhaler technique and support adherence.
- Ongoing inhaler technique reviews should be assessed and optimised with standardised seven step checks based on UK inhaler Group Standards by a competent HPC. www.ukinhalergroup.co.uk

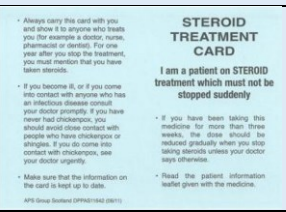
Encourage people to take their used or expired inhalers to their pharmacy for disposal.

Spacers

Provide patients with a spacer that is compatible with their pMDI. Patients can be referred to their community pharmacy for further advice and support.

For spacer training materials for patients, and spacer care and replacement advice see [Asthma UK](#).

Steroid safety cards

	Steroid TREATMENT card	Steroid EMERGENCY card
	 STERIOD TREATMENT CARD I am a patient on STEROID treatment which must not be stopped suddenly • Always carry this card with you and show it to anyone who treats you (for example a doctor, nurse, pharmacist or dentist). For one year after you stop the treatment, you must mention that you have taken steroids. • If you become ill, or if you come into contact with anyone who has an infectious disease, consult your doctor promptly. If you have never had chickenpox, you should avoid close contact with people who have chickenpox or shingles. If you do come into contact with chickenpox, see your doctor urgently. • Make sure that the information on the card is kept up to date. • Read the patient information leaflet given with the medicine. • If you have been taking this medicine for more than three weeks, the dose should be reduced gradually when you stop taking steroids unless your doctor says otherwise. NPS Group Document (SPS)002-1042 (2017)	 Steroid Emergency Card (Adult) IMPORTANT MEDICAL INFORMATION FOR HEALTHCARE STAFF THIS MEDICINE IS ESSENTIAL FOR YOUR PATIENT'S SURVIVAL. IT MUST BE GIVEN AS PRESCRIBED AND NEVER STOPPED OR DECREASED WITHOUT YOUR PATIENT'S DOCTOR'S INSTRUCTIONS. PATIENTS NOT ON DAILY STEROID THERAPY OR WITH A HISTORY OF STEROID USAGE MAY ALSO REQUIRE EMERGENCY TREATMENT. Name: _____ Date of Birth: _____ NHS Number: _____ Why steroid prescribed: _____ Emergency Contact: _____ When calling 999 or 111, emphasise this is a likely adrenal insufficiency/Addison's/Addisonian crisis or emergency AND describe symptoms (vomiting, diarrhoea, dehydration, injury/shock). Emergency treatment of adrenal crisis 1) Immediate 100mg Hydrocortisone i.v. or i.m. injection. Followed by 24 hr continuous i.v. infusion of 200mg Hydrocortisone in Glucose 5% OR 50mg Hydrocortisone i.v. or i.m. qds (100mg if severely ill). 2) Rapid rehydration with Sodium Chloride 0.9%. 3) Liaise with endocrinology team. Scan here for further information or search https://www.endocfellowship.org.uk/medialibrary
Purpose	To make patients aware of the risks involved with high-dose or prolonged courses of corticosteroids and to record details of the prescriber, drug, dosage, and duration. This should be provided by the initiating clinician/centre but check on every patient contact that the patient has a treatment card.	For patients with or at risk of developing adrenal insufficiency from exogenous steroids for whom missed doses, illness or surgery put them at risk of adrenal crisis. This should be provided by the prescribing clinician, and the dispensing pharmacist should check that the patient has an emergency card
When to provide a steroid safety card	Supply a steroid treatment card to patients on: • High dose ICS (greater than or equal to 800micrograms BDP/day equivalence) • Oral corticosteroids for more than 3 weeks or more than 4 short courses in one year Consider supplying a steroid treatment card to patients on medium dose ICS (greater than or equal to 400micrograms to less than 1000micrograms BDP equivalence). Risks increase with concomitant use of intranasal and/or topical corticosteroids, or with medicines that inhibit metabolism of corticosteroids (cytochrome p450 inhibitors, such as ritonavir, itraconazole or ketoconazole).	Supply a steroid emergency card to patients: • On high dose ICS (greater than or equal to 800micrograms BDP/day equivalence) • On prednisolone 5mg/day or equivalent for 4 weeks or more across all administration routes (oral, inhaled, topical or intranasal) • Patients taking more than 40mg prednisolone or equivalent for more than 1 week or repeated courses of short oral doses • Patients taking an oral glucocorticoid within 1 year of stopping long term therapy • Patients with established or suspected primary adrenal insufficiency (e.g., Addison's disease, congenital adrenal hyperplasia etc.) • Patients with established or suspected diagnosis of adrenal insufficiency due to hypothalamo-pituitary disease who are on permanent glucocorticoid replacement therapy or require glucocorticoids during illness or stress such as surgery. See more information via the NPSA alert and advice from SPS/Society for Endocrinology.
How to obtain	Primary care: PCSE online portal Secondary care can order from the Xerox online portal	Primary care: PCSE online portal Secondary care can order from the Xerox online portal Online printable PDF

Refer to [Appendix 2](#) to determine if the prescribed inhaler requires one of the steroid safety cards to be provided.

Environmental impact of inhalers

The NHS has committed to reducing its carbon footprint by 51% by 2025 to meet the target in the [Climate Change Act 2008](#), including a shift to dry powdered inhalers (DPI) to deliver a reduction of 4%.

Pressurised metered dose inhalers (pMDI) use a propellant, which is a greenhouse gas that contributes to global warming. Dry powder inhalers (DPI), which use no propellant, are less harmful to the environment. However, DPIs require people to have an adequate inspiratory flow rate for effective delivery of the medicine. The NHS aims to use more dry powdered inhalers, where clinically appropriate.

However, treatment with inhalers should only be initiated or changed when it is clinically warranted and with appropriate training. It is important that patients have good inhaler technique and adherence to treatment in order to achieve good asthma control.

NICE has produced an [inhaler decision aid](#) to facilitate discussion about inhaler options in adult patients.

Patients should be encouraged to reduce inhaler waste by not over-ordering their inhalers, looking after their inhalers, and returning used or unwanted inhalers to their pharmacy for environmentally safe disposal. Further information: [Reducing-Carbon-Footprint-of-Inhaler-Prescribing-v3.3.2.pdf](#).

Self-management and adherence

This aspect of asthma management is multifaceted and can be split into five domains: Self-care, comorbidities, access to healthcare, environment and lifestyle.

Self-care	
Education	Understanding asthma and how the treatment works is an important aspect of care. See Appendix 3 link for clinician and patient resources.
Personalised asthma action plan (PAAP)	PAAPs should be collaboratively agreed, regularly updated and include daily management and when and where to seek advice. PAAP can be uploaded into Digital Health Passport.
Smoking, passive smoking and e-cigarettes/vaping	Offer tobacco dependence advice and treatment for those with asthma, including asking about vaping. Use the following link for resources: Stop smoking aids, Vaping and e-cigarettes Asthma + Lung UK, How Does Smoking And Secondhand Smoke Affect Asthma?, Cigarettes and asthma Asthma + Lung UK, and signpost to local primary care smoking cessation services and community pharmacies.
Adherence and technique	Patient adherence to asthma management plans is a critical challenge. Non-adherence plays a large role in poorly controlled asthma and exacerbations, contributing to worse patient health and substantial costs to the NHS. Review adherence by asking and checking number of inhaler prescriptions ordered in 12 months and support good technique with education and resources. Overview Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence Guidance NICE For further information, use the following links: New publication shows interventions aimed at improving asthma treatment adherence could lead to significant health benefits and cost savings for the NHS - ARC, Asthma Medication Adherence Severe Asthma Toolkit, How to use your inhaler – Asthma and lung UK
Exercise	Exercise is good for asthma. Ensure good asthma control to benefit from regular exercise. For further information, use the following links: Exercise, physical activity and asthma Asthma + Lung UK, Understanding Physical Activity, Asthma and Exercise Severe Asthma Reference: Experiences of exercise in patients with asthma: a qualitative analysis of discussions in a UK asthma online community BJGP Open Please also be wary of exercise-induced asthma issues: The Connection Between Exercise and Asthma Symptoms

Comorbidities	
Comorbidities in severe asthma are common and can affect both management and patient outcome. Comorbidities often interact, contribute to poor disease control and mimic asthma symptoms, as well as potentially leading to increased treatment costs and overtreatment. It is therefore recommended that comorbidities be addressed in severe asthma (Chung et al. 2014).	
Obesity	Weight management support for overweight patients can contribute to good asthma control. For further information, use the following links: Healthy eating and weight Asthma + Lung UK, Understanding Asthma and Obesity Severe Asthma Toolkit
Atopic conditions	These can lead to; poor asthma control; impaired quality of life, and; increased exacerbations. For hay fever and rhinitis, it is recommended to use low steroid nasal spray and ensure correct technique. Optimise eczema care. For further information, use the following links: Asthma and other health conditions Asthma + Lung UK, Chronic Rhinosinusitis and Severe Asthma Severe Asthma Toolkit, Non Allergic and Allergic Rhinitis in Severe Asthma Severe Asthma Toolkit For technique advice, please use the following link: How To Use Nasal Spray How To Use Nasal Spray Properly Nasal Spray Technique (2018)
Dysfunctional breathing	Dysfunctional breathing refers to times when a person's breathing pattern and/or their sensation of breathing difficulty can be the main cause of their breathing distress. For further information, use the following links: How can I manage my breathlessness? Asthma + Lung UK, Dysfunctional Breathing Severe Asthma Toolkit
Sleep apnoea	Sleep apnoea affects: poor asthma control; increased healthcare utilisation; increased medication use, and; impaired quality of life. For further information, use the following links: Obstructive sleep apnoea (OSA) Asthma + Lung UK, Obstructive Sleep Apnoea Severe Asthma Toolkit
Acid reflux and heartburn	Heartburn and acid reflux can worsen asthma symptoms. This is because stomach acid can irritate and inflame the airways. For further information, use the following links: Asthma and other health conditions Asthma + Lung UK, Gastro-oesophageal Reflux Disease (GORD) Severe Asthma Toolkit
Psychological factors	Adverse asthma outcomes are associated with depression, anxiety and panic disorder which impacts: poor asthma control, impaired quality of life, reduced lung function, impaired functional outcomes, and; increased healthcare utilisation. Always ask, consider treatment and signpost to support. For further information, use the following links: Mental health and wellbeing Asthma + Lung UK, Impact and Management of Asthma and Anxiety and Depression, What Is Mental Health? Asthma.net, How Can Stress, Strong Emotions, and Depression Affect Asthma?
COPD	Clinical evidence shows that many patients with asthma have features of COPD and vice versa. For further information, use the following

	links: bob-icb-chronic-obstructive-pulmonary-disease-prescribing-guideline.pdf, COPD (chronic obstructive pulmonary disease) Asthma + Lung UK, Chronic Obstructive Pulmonary Disease (COPD) Severe Asthma Toolkit
Vocal cord dysfunction (VCD)	VCD usually occurs during inspiration, but may also occur during expiration, which refers to involuntary and episodic closure of the vocal folds during inspiration which leads to symptoms of dyspnea, cough, dysphonia, and stridor. For further information, use the following links: What's the Connection with Vocal Cord Dysfunction and Asthma?, Vocal Cord Dysfunction (VCD) Severe Asthma Toolkit
Cardiovascular and metabolic conditions	Individual risk factors (e.g. age, hypertension, obesity, and cigarette smoke exposure) primarily determine the presence of cardiovascular and metabolic disease in people with severe asthma. There is evidence suggesting metabolic syndrome (Alberti et al. 2009) is associated with an increased risk of developing asthma over the next 11 years (Brumpton et al. 2013), and that a diagnosis of asthma is associated with atherosclerotic artery changes (Tuleta et al. 2017) and an increased risk of co-existent cardiovascular disease, diabetes mellitus, dyslipidaemia, and hypertension (Cazzola et al. 2011, Su et al. 2016, Heck et al. 2017). Similarly, insulin resistance is associated with worse lung function in overweight or obese adolescents (Forno et al. 2015) and people with asthma are twice as likely to have diabetes as the general population (Brumpton et al. 2013, Kauppi et al. 2015). Cardiovascular and metabolic conditions can lead to increased hospitalisation and an increase in healthcare costs for an individual living with a diagnosis of asthma. For further information, use the following links: Asthma and Cardiovascular Disease Severe Asthma Toolkit, The Relationship Between Asthma and Cardiovascular Disease: An Examination of the Framingham Offspring Study - PMC, Asthma and Cardiovascular Diseases: Navigating Mutual Pharmacological Interferences - PubMed, Coronary heart disease and heart failure in asthma, COPD and asthma-COPD overlap BMJ Open Respiratory Research Understanding the Link Between Adult Asthma and Coronary Artery Disease: A Narrative Review - PMC, Asthma and risk of cardiovascular disease or all-cause mortality: a meta-analysis - PMC, Asthma and incident coronary heart disease: an observational and Mendelian randomisation study - PubMed,

Access to healthcare	
General Practice (GP) regular review	Patients who are reviewed regularly have a lower risk of an asthma attack. Patients should be reviewed in general practice at least annually, after dose changes and exacerbations.
Continuity	Continuity (whereby an individual experiences an ongoing relationship with a clinician and the coordinated clinical care that progresses smoothly as the person moves between different parts of the health service within a practice team) helps build relationships and trust and improve asthma care. For further information on the benefits of continuity, use the following links: What is needed for continuity of care and how can we achieve it? – Perceptions among multiprofessionals on the chronic care trajectory - PMC, Modernising continuity: a new conceptual framework British Journal of General Practice, Continuity of care: About the toolkit RCGP Learning
Vaccinations	Offer 'flu vaccination annually and other vaccinations as required (e.g. COVID-19). For further information, use the following links: Flu vaccine - NHS, Vaccinations Asthma + Lung UK, Preventing COVID-19 Asthma + Lung UK, Viral Respiratory Infections Impact on Asthma
Emergency care	Asthma plans (PAAPs) should include details of when and where to access urgent care. Review in general practice or with community asthma team within 48 hours an A&E visit or hospital discharge.
Specialist care	Specialist referrals are indicated when an individual presents with any of the following: - 2 or more asthma attacks/year - asthma is not controlled despite treatment - asthma is worse at work - asthma and COPD overlap

Environment	
Outdoor pollution	People with asthma should try to avoid busy roads and vigorous outdoor exercise on high pollution days. For information on air quality, please visit: Daily Air Quality Index - Defra, UK. For further information, use the following links: Air pollution and asthma Asthma + Lung UK, Outdoor Asthma Triggers: Allergens, Pollutants and Weather,
Indoor pollution	Electricity is the cleanest home energy source. Damp and mould issues, burning wood, candles and incense adversely affect asthma. 'Chemical free' or 'allergy friendly' household and personal products limit asthma triggers. For further information, use the following links: Indoor air pollution and allergies Asthma + Lung UK, Asthma And Indoor Air Quality: Preventing And Controlling Mold
Triggers	An asthma trigger is anything that irritates the airways and makes asthma symptoms worse and can cause asthma attacks. Cold weather or dust mites are examples of asthma triggers as well as pollen, cigarettes, emotion, weather changes, stress and pets. Recognising and mitigating triggers will reduce risk of attacks and improve control. Further information can be found through these links: What are asthma triggers? Asthma + Lung UK, Asthma Triggers Education Severe Asthma Toolkit, The Most Common Asthma Triggers and How to Avoid Them
Inhalers	Using inhalers as prescribed and with the correct technique reduces waste, improves control and reduces need for unplanned medical care. Non-propellant (NP) inhalers such as DPIs, have a lower carbon footprint and can be used effectively by most people. They require a greater respiratory effort than pMDIs so may not be suitable for all patient groups, e.g. neurodiverse patients. Aim for an inhaler the patient can and will use. Used inhalers should be returned to the pharmacy to be recycled. BOB support prescribing sustainably. For further information regarding sustainability, please visit Greener NHS » Blog: Delivering high quality, low carbon respiratory care
Occupational asthma	If symptoms are worse at work, a referral for a specialist review is indicated. Further information is available via: Occupational asthma Asthma + Lung UK, Understanding Occupational Asthma Severe Asthma Toolkit

Lifestyle	
Food	Approximately 2% of adults with asthma have a problem with certain foods triggering their asthma symptoms. Food and asthma Asthma + Lung UK
Alcohol	Some find their asthma symptoms are triggered with any kind of alcohol, with others finding only certain alcoholic drinks cause issues. Wine (red and white) is the most common alcohol trigger. Beer and cider can also trigger symptoms for some. This is because wine, beer and cider contain higher levels of sulphites and histamines. Clear spirits (e.g. gin and vodka) contain lower levels of sulphites and histamines, however this does not mean they will be safe for everyone with a diagnosis of asthma. Also remember that soft drinks (e.g. fizzy drinks and juices) used as mixers with alcohol, can also contain sulphites and histamines. For further information, use the following links: Alcohol and asthma Asthma + Lung UK, Alcohol & Asthma: The Effect on Symptoms
Recreational/non-prescribed drugs	Abusing recreational drugs can also trigger asthma symptoms, increasing the risk of having a potentially life-threatening asthma attack. Further information is available via: Recreational drugs and asthma Asthma + Lung UK
Smoking, passive smoking and e-cigarettes/vaping	Offer tobacco dependence advice and treatment for those with asthma, including asking about vaping. Use the following links for resources: Stop smoking aids, Vaping and e-cigarettes Asthma + Lung UK, How Does Smoking And Secondhand Smoke Affect Asthma?, Cigarettes and asthma Asthma + Lung UK, and signpost to local primary care smoking cessation services and community pharmacies.

Uncontrolled asthma and when to refer to secondary / tertiary care (specialist care)

It is important to distinguish between poorly controlled asthma and severe asthma.

Indicators of uncontrolled asthma include:

- Frequent exacerbations (2 or more per year) requiring oral steroids, or serious exacerbations (1 or more per year) requiring hospitalisation or emergency department attendance.
- An exacerbation is defined as the use of systemic steroids for 3 or more consecutive days or an increase in systemic steroids (if on maintenance steroids) for 3 or more consecutive days.
- Poor symptom control despite treatment (frequent symptoms / reliever use, night waking due to asthma, activity limited by asthma).
- 6 or more SABA inhalers in a 12-month period – 6 or more SABA inhalers in 12 months has been demonstrated as an effective predictive marker of future risk for asthma exacerbations.

Referring patients with asthma symptoms despite optimal treatment.

Before referring, check the following:

1. On high intensity treatment? Is the patient at the high end of treatment escalation according to our [local pathway \(step 4\)](#)? Ensuring they are on step 4 treatment at point of referral may accelerate patient's pathway on to biologic treatment.
2. Adherence (check prescribing records for the previous 12 months).
3. Severe exacerbation(s): in the referral letter it is very helpful to document the number of courses of oral steroid in the past 12 months and the highest peripheral blood eosinophil count in the past 12 months: This may accelerate the patient's pathway onto biologic therapy.
4. Inhaler technique
5. Exclude [other conditions](#) which may be mimicking symptoms.

Patients under specialist care

Patients with asthma under specialist care including those receiving biologics, should receive the same level and access to general practice care as all patients with asthma or suspected asthma – this includes an annual review.

Do NOT reduce or stop ICS therapy without consultant specialist advice. Inhaled medication dose change should only be made in consultation with specialist input.

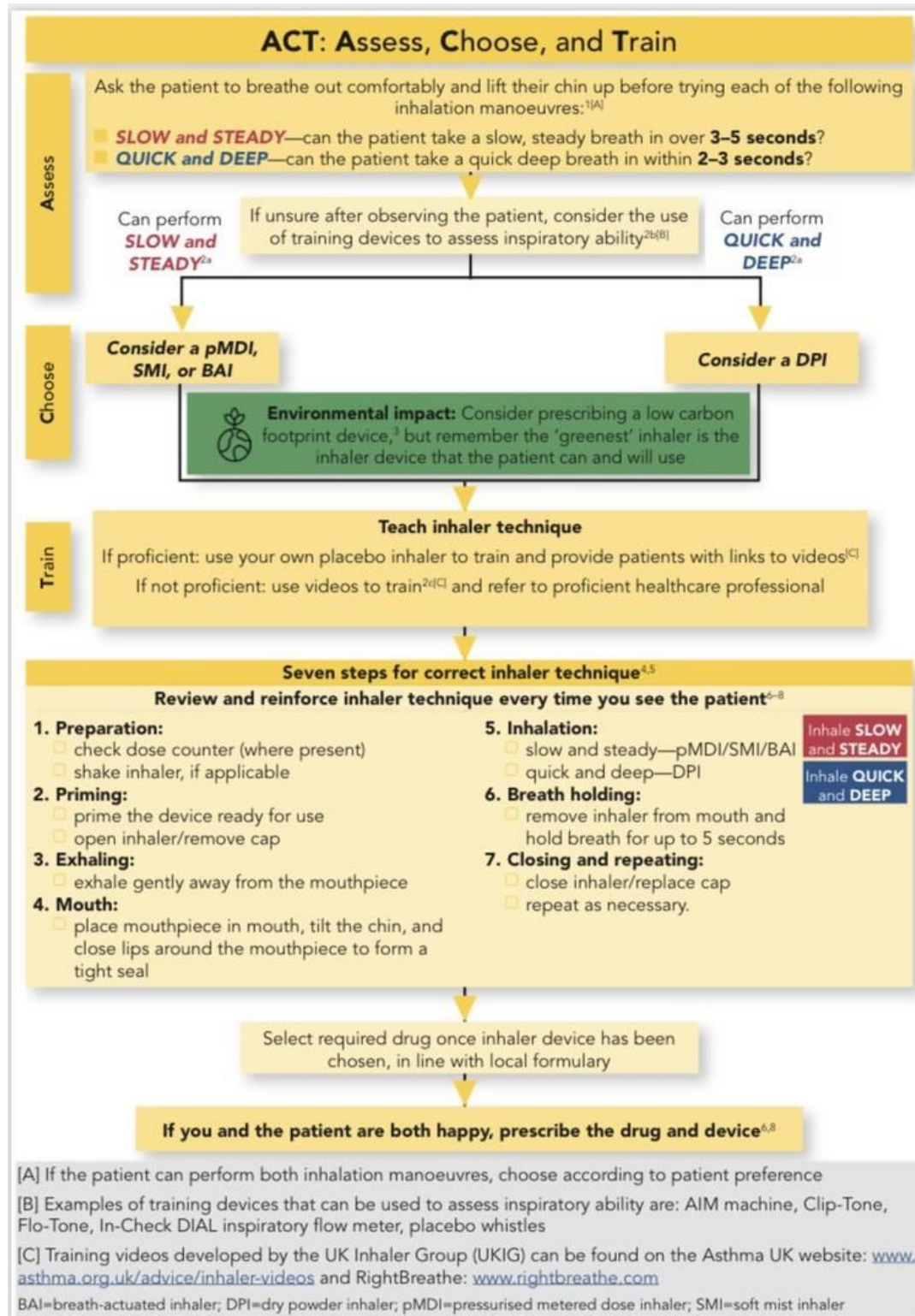
Patients on biologics for their asthma are not immunocompromised and do not have additional monitoring requirements. The exception is that due to a doubling of the risk of Shingles in patients on asthma biologics, it is recommended that the 2-dose [Shingrex®](#) vaccination is offered to individuals aged 50 years and over, with a period of between 8 weeks to 26 weeks between the doses. Shingrex® is not a live vaccination and is therefore safe in patients on biologics or on long term oral steroids.

Communication between primary, secondary and community care is key to ensure patients receive consistent advice and support and have clear oversight of their care.

For further information regarding onward referrals to secondary/tertiary care, see [AAC-Pathway-16.9 FINAL-v.1.pdf](#).

Appendix 1: Assess, Choose and Train (ACT) protocol

Reference: Usmani, Omar & Capstick, Toby & Chowhan, H & Scullion, Jane. (2017). Choosing an appropriate inhaler device for the treatment of adults with asthma or COPD. MGP Guidelines.



Appendix 2: BOB inhaled corticosteroid table

Please note: [Steroid safety cards](#) should be provided to patients on high dose inhaled (highlighted in red on this table).

		Low Dose	Moderate Dose	High Dose
Beclomethasone dipropionate Containing Inhalers				
	Extra-Fine Particle CFC-free Inhalers	200 micrograms per day in 2 divided doses	400 micrograms per day in 2 divided doses	800 micrograms per day in 2 divided doses
Inhalers Used in Guidelines		Fostair® MDI 100/6 microgram 1 puff BD 	Fostair® MDI 100/6 microgram 2 puffs BD 	Fostair® MDI 200/6 microgram 2 puffs BD 
		Luforbec® MDI 100/6 microgram 1 puff BD 	Luforbec® MDI 100/6 microgram 2 puffs BD 	Luforbec® MDI 200/6 microgram 2 puffs BD 
		N/A	Trimbow® MDI 87/5/9 microgram 2 puffs BD 	Trimbow® MDI 172/5/9 microgram 2 puffs BD 
	Extra-Fine Particle Dry Powder Inhalers	200 micrograms per day in 2 divided doses	400 micrograms per day in 2 divided doses	800 micrograms per day in 2 divided doses
Inhalers Used in Guidelines		Fostair NEXThaler® 100/6 microgram 1 puff BD 	Fostair NEXThaler® 100/6 microgram 2 puffs BD 	Fostair NEXThaler® 200/6 microgram 2 puffs BD 
		N/A	Trimbow NEXThaler® 88/5/9 microgram 2 puffs BD 	N/A
Budesonide Containing Inhalers				
	Dry Powder Inhalers	400 micrograms per day in 2 divided doses	800 micrograms per day in 2 divided doses	1,600 micrograms per day in 2 divided doses
Inhalers Used in Guidelines		Symbicort Turbohaler® 200/6 micrograms 1 puff BD 	Symbicort Turbohaler® 200/6 micrograms 2 puffs BD 	Symbicort Turbohaler® 400/6 micrograms 2 puffs BD 
Fluticasone furoate Containing Inhalers				
	Dry Powder Inhaler	-	100 micrograms as a single daily dose	200 micrograms as a single daily dose
Inhalers Used in Guidelines		N/A	Relvar Ellipta® 92/22 microgram 1 puff OD 	Relvar Ellipta® 184/22 microgram 1 puff OD 
		N/A	Trelegy Ellipta® 92/55/22 microgram 1 puff OD 	N/A
Key:  = DPI – Low carbon footprint inhaler				

Appendix 3: Resources for further information

For clinicians

Topic	Link for further information
Guidelines	Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN): NICE guideline [NG245] Published: 27 November 2024 Global Initiative for Asthma (GINA) main report 2024
Asthma	Asthma and Lung UK health professional resources Asthma Right Care (ARC) Primary Care Respiratory Society (pcrs-uk.org) RightBreathe : Information and practical tips with videos on inhalers & spacers, for professionals and patients Primary Care Respiratory Society – resources include best practices and educational materials Oxford Academic Health Science Network: Asthma – includes toolkits, medication review templates
Education	e-Learning for Health: the Asthma programme . A range of free e-Learning modules on different aspects of asthma care. NCSCT - National Centre for Smoking Cessation and Training : free e-Learning resource for smoking cessation advice Training resources Modifying non-adherence to medicines in asthma - Pulse 365 (Pulse registration needed)) Steroid cards: Erskine D, Simpson H. Adrenal insufficiency and adrenal crisis- who is at risk and how should they be managed safely. Published March 10, 2021. https://www.endocrinology.org/media/4091/spssfe_supporting_sec_-final_10032021-1.pdf Simpson H, Tomlinson J, Wass J, Dean J, Arlt W. Guidance for the prevention and emergency management of adult patients with adrenal insufficiency. Clinical Medicine. 2020;20(4):371-378. doi:10.7861/clinmed.2019-0324 Royal College of General Practitioners, Royal College of Physicians, Society for Endocrinology. National Patient Safety Alert: Steroid Emergency Card to support early recognition and treatment of adrenal crisis in adults. NHS England » National Patient Safety Alert – Steroid Emergency Card to support early recognition and treatment of adrenal crisis in adults
Environment	Reducing-Carbon-Footprint-of-Inhaler-Prescribing-v3.3.2.pdf Greener Practice Asthma Care - clinician led network Clean Air Information Hub : Health Daily Air Quality Index - Defra, UK Blog: Delivering high quality, low carbon respiratory care London: Top Tips for Respiratory Prescribing and Sustainability ‘Greener’ asthma treatment: a golden opportunity or red flag? Free Open Access Medical Education The London Damp and Mould Checklist Global Action Knowledge Hub: Resources on clean air for Health Professionals

For adults (age 18+ years) living with a diagnosis of asthma

Topic	Link for further information
General	Asthma Right Care (ARC) Primary Care Respiratory Society (pcrs-uk.org) Rightbreathe – how to use and look after inhalers and spacers, including videos Asthma + Lung UK: • Inhaler choices (asthma and lung UK)– in multiple languages • How to use your inhalers (videos) • Peak flow Diary • Groups + Support
Asthma attacks	Asthma UK attack recovery plan
Pollution	Asthma + Lung UK: Air pollution
Staying Healthy	Asthma + Lung UK: Keeping active with a lung condition Digital Health Passport – Digital Health Passport
YouTube Videos	Asthma + Lung UK –YouTube