Asthma in children and young people (CYP)

Under 16 years of age

A guide for South East London General Practice©

Key Messages

- Treat all patients with an inhaled corticosteroid (ICS) to reduce airway inflammation[1].
- The SABA-free pathway reduces the risk of exacerbation, prevents SABA overuse and is suitable for many CYP after assessment.[2]
- Check adherence, inhaler technique and update personal asthma action plan (PAAP) at least annually.[3]
- Document your reasons for diagnosing asthma or suspected asthma.[1]

Adult Asthma Guide available **here**

Always work within your knowledge and competency

July 2025 (review within 18 months of publication, or earlier if required)

CONTENTS

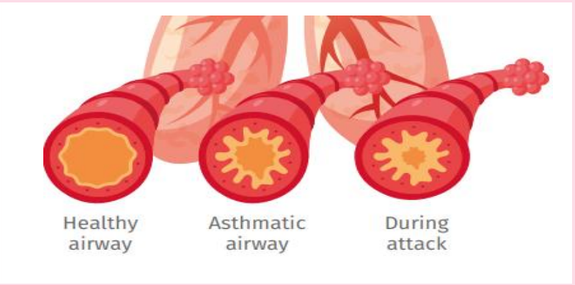
This guide covers the care of children and young people with asthma or suspected asthma from pre-school to 16 years.
Use the links on this contents page to help you navigate to the section you need and use the age icons to highlight content relevant to different age groups. Links throughout the guide interconnect sections of the guide and supporting information.

Why focus on Asthma?[1]

The South East London picture

Diagnosis can be improved

Asthma is a high prevalence condition in South East London (SEL)[1].
Incorrect diagnosis of asthma is common[2] and may lead to unnecessary treatment.



Asthma is not evenly spread, with higher rates in[3]:

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

Asthma is dangerous

In SEL we have higher than national average hospital admissions for young people with asthma[2].

Every year there are asthma deaths in SEL, including adults and children and young people, and many more near misses.

Asthma deaths[2, 5]

- are largely attributable to avoidable factors.
- often occur before hospital admission.
- 30% occur in patients who report infrequent symptoms.
- have adverse psychosocial factors recorded in most cases.

What's new in asthma care?

Dangers of prescribing SABA without an ICS [2,5]

Using SABA alone increases the risk of exacerbations, mortality, and can lead to an overuse cycle. Using more than 2 SABA inhalers per year is associated with increased exacerbation risk.

See the SABA-free treatment pathway on page 10.

MHRA alert

All patients should be on an ICS to treat their airway inflammation, to reduce symptoms and reduce the risk of exacerbation[6].

The Climate Emergency

Look out for the **green leaf** throughout this guide to support environmentally friendly asthma care.

Why do we need this guide?

A one-stop guide for busy clinicians, summarizing key points from evidence-based asthma guidelines and local pathways (e.g., NICE, PCRS, GINA).

This guide aligns with SEL medicines guidance and will be updated when new guidance and new local services become available.

The guide is a foundation tool for integrated neighbourhood teams to deliver holistic asthma to improve outcomes in their communities.

The question mark icon throughout the guide reminds us to ask for help when we are not sure.

Asthma diagnosis for CYP aged 5-16 years [1, 2, local specialist input]

TREATMENT SHOULD NOT BE DELAYED IF OBJECTIVE TESTS ARE DELAYED OR NOT AVAILABLE. A TRIAL OF ICS IS SAFE IN CYP AND WILL AID DIAGNOSIS.

Do not confirm asthma without a suggestive clinical history and a supportive objective test. Code as suspected asthma until diagnosis is confirmed.

History suggestive of asthma

- Reported wheeze, noisy breathing, cough, breathlessness, chest tightness.
- Variation: worse during night or early morning, or seasonal.
- Personal and/or family history of asthma or allergic rhinitis.
- Triggers including exercise, URTI, laughter, crying, smoke, NSAID.

No → Consider alternative diagnosis

Examine and document any wheeze
Code as **suspected asthma**

- 5-16 years
- Under 5 → Code a suspected asthma. Treat as asthma, review regularly, attempt objectives test when 5.

Arrange OBJECTIVE TESTS (i.e. not self reported) – in this order - see page 5 for details and interpretation
If unable to do test try again every 6 to 12 months. Tests may be normal if effectively treated.

? NOT SURE?
Seek advice from asthma specialist GP, pharmacist or nurse, use Consultant Connect or Advice and Guidance on ERS or refer to integrated/community or secondary care team.

1
Blood eosinophil raised AND/OR FeNO ≥ 35ppb if available?
- No or not available → 2
- yes → DIAGNOSE AND CODE AS ASTHMA

2
Positive quality assured (QA) spirometry with bronchodilator reversibility?
Is there reversible airflow obstruction of ≥12% from baseline or ≥10% of predicted normal?
- No → 3
- Not available → 3
- yes → DIAGNOSE AND CODE AS ASTHMA

3
Peak Expiratory Flow Rate (PEFR) variability?
Is amplitude percentage mean of ≥ 20%?
Can be done in primary care.
- No → 4
- yes → DIAGNOSE AND CODE AS ASTHMA

4
Skin prick test shows sensitisation to house dust?
Refer for specialist assessment
- No → Consider alternative diagnoses
- yes → DIAGNOSE AND CODE AS ASTHMA

or

Total IgE level raised?
Order in primary care
- No → Consider alternative diagnoses
- yes →

Eosinophil count ≥ 0.5 x 10^9/l?
Order in primary care
- No → Refer
- yes → DIAGNOSE AND CODE AS ASTHMA

DIAGNOSE AND CODE AS ASTHMA

Confirm diagnosis with patient and carer. Ensure understanding.
Record basis on which diagnosis has been made.
Agree on a management/asthma action plan with patient and review date

Poor response to treatment or atypical features?

Check and address adherence and inhaler technique, review diagnosis, and consider referral. Refer any child with ≥2 A&E attendances or admissions for wheezy episode or asthma attack over a 12-month period.
See Page 15 for more details on referral.

Offer preventer (ICS) treatment in addition to rescue/reliever treatment for CYP acutely unwell at presentation.

Do not delay treatment while waiting for objective tests but note that objective tests may be normal when asthma is effectively treated.

Asthma diagnosis and QOF

QOF 25/26 AST012: patients with a new diagnosis of asthma after 1.4.25 with a record of an objective test within 3 months before or 3 months after diagnosis. Ardens asthma templates support accurate coding.

NOT ABLE TO PERFORM OBJECTIVES TESTS OR TESTS NOT AVAILABLE? CONSIDER ICS TRIAL

- ICS for 8-12 weeks and then withdraw.
- If symptoms resolve with treatment and then return when treatment is withdrawn asthma is more likely. Natural resolution of symptoms is common in CYP.
- Try objective tests again every 6 to 12 months or when available, especially if symptomatic and responding well to treatment.
- Offer the same level of care for suspected asthma as confirmed asthma, with appropriate treatment and at least annual review
- Neurodiverse CYP may particularly struggle with performing some objective tests

The use of PEFR, blood eosinophils and a trial of ICS – all readily available, offer a pragmatic approach to diagnosis in CYP.

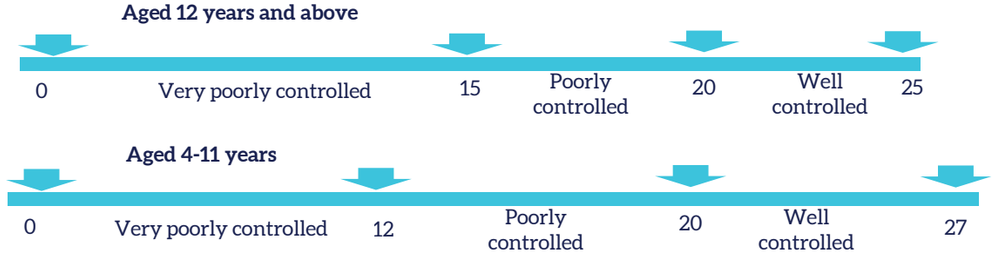
Objective tests for asthma aged 5-16 [1]

Objective test Links for patient information	Fractional exhaled nitric oxide (FeNO)	Quality Assured Spirometry With bronchodilator reversibility (BDR)		Peak Expiratory Flow Rate (PEFR) variability	Skin prick test	Blood eosinophils	Total IgE[2]
What does it test?	Nitric oxide (NO) present on exhalation demonstrates inflammation.	Obstruction and reversibility		Reversibility	Allergic response to certain specific allergens (e.g. house dust mite).	Sensitisation	Increased in atopic conditions
Where is it done?	Can be offered by GP teams respiratory hubs or secondary care.	Offered by community respiratory hub, diagnostic centre or secondary care Spirometry should only be done by those on National Register of Certified Professionals and Operators (ARTP Spirometry)		GP Teams	Specialist (secondary care) settings	Blood test (IgE and FBC) available to GP teams	
Positive threshold for diagnosis	≥35ppb	Reversible airflow obstruction ≥200mls **AND** ≥12% from baseline (or ≥10% of predicted normal)		Variability ≥20%		Eosinophil count ≥0.5 x 10^9 per litre Ranges available from Synnovis	Ranges available from Synnovis on request
Notes	Prior to FeNO testing avoid: -exertion, smoking, hot drinks, caffeine and within 1 hour of testing. -leafy green vegetables and beetroot within 3 hours of testing Raised FeNO in uncontrolled asthma may indicate poor adherence or the need for an increased ICS dose. NHSE FeNO explained	Avoid: - Smoking on the day - Alcohol ≥4 hours - Heavy meal ≥2 hours - Vigorous exercise ≥30 mins Wear loose clothing Refrain from using bronchodilators unless instructed to do so *see table below for bronchodilator 'wash-out' periods.	Some patients will need a SABA or MART inhaler prescribed for the reversibility testing only. This should not be confused with ongoing management. **Normal spirometry does not exclude asthma,** Link for more details including contraindications. There is limited availability of spirometry for CYP in SEL.	Twice daily for 2 weeks. Use charts and check patients can plot correctly, available from: Asthma and Lung UK. Watch this short video for help calculating PEFR variability or use this A&L UK calculator.		**Eosinophils** Can be elevated for other reasons e.g. other allergies. Ideally test eosinophil levels while the patient is symptomatic. Historical raised eosinophils supports an asthma diagnosis.	**IgE** Include date of bleed and when posted on requests as results can be affected by transit time.

Both symptoms and objective tests have significant false positive and false negative rates. Tests are more likely to be positive when a patient is symptomatic.
Ideally objective test for asthma should be done **before ICS treatment is started** as this may impact on results, but do not delay treatment in symptomatic patients if objective tests are not available or there is a long wait.
Tests not available: use exception reporting on Ardens Asthma Review Template – FeNo and/or spirometry not available.

ASTHMA CONTROL TEST[3]

ACT™ takes time, and can be done ahead of appointments via text, email or filling in a paper questionnaire which can be obtained on the GSK supported website



Recommended timeframes for withholding inhaler treatment prior to spirometry and BDR

Bronchodilator medication	Withholding timeframe
SABA (e.g. Salbutamol/Salamol/Airomir/Bricanyl)	4-6 hours
SAMA (e.g. Ipratropium/Atrovent)	12 hours
ICS/LABAs (e.g. Fostair, Symbicort)	24 hours
ICS/Ultra-LABAs (e.g. Relvar)	36 hours

Children and Young People (CYP) with Asthma[1]

Diagnosing asthma in CYP

An accurate asthma diagnosis in CYP is important as uncontrolled asthma leads to reduced quality of life and poor lung health which has implications for lung health in adulthood. When available, objective tests make a valuable part of the clinical assessment for asthma in CYP. There is currently limited availability of objective tests for CYP in SEL. Consider a diagnosis of asthma in CYP if there is a high probability or suspicion of asthma:

- and objective tests are not available or
- the CYP is not able to perform objective tests or
- the tests have been done but are negative

Treatment should not be delayed if objective tests are not available or there is a wait. A trial of ICS is safe in CYP.

NOT SURE?

Seek advice from asthma specialist GP, pharmacist or nurse, use Consultant Connect, or Advice and Guidance on ERS or refer to integrated/community or secondary care team.

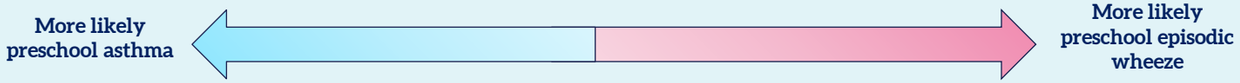
Objective test are most accurate in the presence of active symptoms and when the tests are positive. A negative result does not exclude asthma. A peak flow diary showing (PEFR) variability is a useful diagnostic tool, especially in combination with FeNO and spirometry and is suitable for most children over 5. See 'Asthma diagnosis' and 'Objective tests for asthma' .

Asthma or pre-school wheeze[2]

Differentiating between asthma and pre-school wheeze is a subjective, clinical assessment based on symptoms. Asthma is more likely if:

- Symptoms occur 2-3 times a week or once a week at night.
- Patients experience 3 attacks each season, fewer if attacks are severe.

YES	Does the child have interval symptoms when they do not have a viral infection?	NO
YES	Are the exacerbations severe and/or frequent?	NO
YES	Are any of the following markers present? • Atopy - personal or 1st degree relative • Eosinophilic inflammation e.g. blood test or FeNO • Sensitisation (IgE/skin prick test)	NO



Consider treatment with an ICS in both scenarios. Review after 8-12 weeks, stop treatment trial and see if symptoms return - if they do, continue treatment and review 6 monthly. Code as asthma or suspected asthma. Refer if no improvement or diagnosis in doubt.

Changing needs of CYP with asthma[3]

Transitioning from parent/carer led care to autonomous care

As CYP become more autonomous it is important to increasingly involve them in their asthma care.

Ensure CYP understand

- Their asthma needs daily attention.
- They should aim for **no** symptoms and full participation in all activities.
- How to use their asthma treatment.
- The importance of adherence to medication.
- When to seek advice.
- CYP under specialist care should have a transition plan in place in preparation for when they reach 16.

Transitioning from Propellant to Non-Propellant Inhalers

Non-propellant inhalers i.e. dry powder inhalers (DPI) and soft mist inhalers (SMI), offer a lower carbon footprint compared to propellant-based metered dose inhalers (pMDIs). With appropriate support, many children and young people (CYP) can effectively use a DPI. This allows them to transition to the SABA-free pathway (see below and pages 10-11), reducing their exacerbation risk with the convenience of a single inhaler without the need for a spacer device.
DPI use can be challenging for younger CYP or those with coordination difficulties.
Use the annual asthma review as an opportunity to explore DPI use.
While environmental benefits are important, the choice of inhaler should always prioritize what is most appropriate for the individual. Ultimately, well-controlled asthma results in the lowest environmental impact.

Transitioning to a SABA-free Pathway

A combined ICS/LABA inhaler used in the SABA-free pathway lowers the risk of exacerbations and SABA overuse compared to separate SABA and ICS inhalers. In the 5–11-year age band, the evidence supporting the SABA-free pathway is based on DPI use, so CYP in the age range need to be able to use a DPI to receive their asthma treatment on the SABA-free pathway. CYP asthma review should include a discussion about the benefits of the SABA-free pathway and assessment and support for using a DPI. See SABA MHRA alert.

Self-care

Education

Help patients understand their condition and treatment (see here for patient resources).

Personalised asthma action plans (PAAP)

Collaboratively agree a PAAPs and update regularly.
PAAP can be uploaded into Digital Health Passport – Digital Health Passport.

Smoking, passive smoking and e-cigarettes/vaping

Offer tobacco dependence advice and treatment for those with asthma, including asking about vaping. Nicorette is licensed for vaping for CYP ≥ 12 and their carers, see How to quit vaping - Better Health – NHS.

Adherence and technique

Nonadherence plays a large role in poorly controlled asthma and exacerbations.

Exercise

Ensure good asthma control to benefit from regular exercise.

Comorbidities

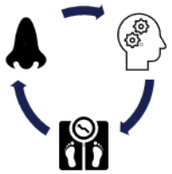
Obesity

Weight management support for overweight patients will support good asthma control.

Atopic conditions

Hay fever and rhinitis: Use low dose steroid nasal spray and ensure correct technique. Optimise eczema care.

Managing co-morbidities is an important aspect of asthma care.



Depression and anxiety

Adverse asthma outcomes are associated with depression and panic disorder. Always ask, consider treatment and signpost to support.

'Asthma is not just an acute condition that only needs treating when it's bad. It's a long-term chronic condition that needs to be treated even when it's ok and patients feel good.'

Nurse specialist, south London

Asthma control

Well controlled asthma has the lowest carbon footprint.

Access to healthcare

General Practice regular review

Patients should be reviewed in general practice at least annually, after dose changes and exacerbations to optimise control and reduce exacerbation risk.

Continuity

Continuity within a practice team helps build relationships and trust and improve asthma care.

Vaccination

Offer flu vaccination annually + other vaccinations as required e.g. COVID.

Emergency care

PAAP should include details of when and where to access urgent care. Review in general practice or with community asthma team within 48 hours of an A&E visit or hospital discharge.

Specialist care

Specialist referral is indicated when

- ≥2 or more attacks/year
- asthma is not controlled despite treatment
- asthma is worse at work
- asthma **and** COPD overlap

Consider a safeguarding review for families of children who do not respond to repeated invites for review.

Environment

Outdoor Pollution

Avoid busy roads and vigorous outdoor exercise on high pollutions days. See Breathe London for daily air quality.

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 reduce asthma triggers.

Triggers

Triggers include pollen, cigarettes, emotion, weather changes and pets.

Inhalers

Correct use of inhalers 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.
Used inhalers should be returned to the pharmacy to be recycled or environmentally friendly disposal.

Asthma and suspected asthma review [1,2,3]

For abbreviations see here

A general practice asthma review should be offered at least once a year (QOF), after dose changes and within 48 hours of a hospital attendance or admission.

Asthma reviews should be undertaken by a clinician with expertise in asthma care.

Review planning at practice/PCN level	**Call/recall planning:** include all patients coded for asthma or suspected asthma. Review notes of patients prescribed inhalers without a diagnosis of asthma or COPD as this may be uncoded asthma. **Consultations type:** telephone consultations may be helpful for low-risk patients and those who find it difficult to attend the practice. Face-to-face contacts better suit a personalised care approach, allow for checking and demonstrating inhaler technique and are more suitable for patients with poor control and/or complex needs, when changing treatment and after exacerbations. Patients value being offered a range of appointment types and times, including outside of work hours.	Contact CESEL team for advice and information on searches and quality improvement support
Pre-patient review	The ACT™ and exacerbation recording can be done up to one month before the review. Ask patients and their carer to bring all inhalers and spacer devices to their review appointment.	Text/email /AccurxFlorey /ACT™
Aims of the review	• **To improve quality of life:** NO daytime symptoms or limitations on activity, NO disturbed sleep, MINIMAL side effects from medication. • **To minimise the risk of exacerbations**: optimal control, recognising and mitigating triggers, recognising and managing exacerbations and referring those at high risk.	
Safeguarding	Consider a safeguarding review for CYP who are not brought to appointments, these CYP are at risk of poor control and poorly managed exacerbations.	See this short film.
1. ASSESS CONTROL AND SEVERITY		
Control test (QOF)	Review and record the validated ACT™ result with patient and carer to help inform management.	
Inhaler ratio	Review how many inhalers have been ordered and ask how many have been used. Patients should have at least 75% of their expected ICS use. Use Test of Adherence to Inhalers to support conversations with your patients who may be poorly adherent to ICS. If fewer than 4 ICS (suboptimal adherence) or ICS./LABA inhalers, or more than 3 SABA (SABA over reliance) in a 12-month period – this suggests poor adherence or control. Use the Asthma Slide Rule or the Reliever Reliance Test to support a conversations for patients who may be over reliant on their SABA inhaler.	
Exacerbations: reduce risk (QOF)	Optimise disease control, avoid triggers, appropriate management of exacerbations and identifying and referring those at high risk into specialist care, to available specialist services within your borough.	
PEFR	Review PEFR measurements if available. Record PEFR, document best PEFR in include in notes and action plan (PAAP). Record height and weight to support calculating the predicted peak flow rate.	
2. REVIEW		
Diagnosis	Ensure the reason for asthma or suspected asthma diagnosis is recorded in the notes. If any uncertainty revisit diagnostic page and refer for objective tests as appropriate/where available.	
Understanding	Check patient and carer's understanding of what asthma is and how it is treated.	
Inhaler technique (QOF)	Suboptimal inhaler technique is linked to poorer asthma outcomes. Check inhaler and spacer technique at every review and reinforce correct technique, offer inhaler specific training videos. If a spacer is being used, reinforce the benefits for drug delivery, importance of technique, spacer care and when to replace. More information on page 13.	
Adherence	Poor ICS adherence may explain poor control, ask about inhaler use and address any adherence issues.	
Smoking status (QOF)	Offer tobacco dependance support for patients and carers. NCSCT Very Brief Advice training module.	
Triggers	Identify triggers, including indoor triggers such as mould, and consider ways to reduce and mitigate exposure. Consider a housing letter or referral to Social Prescribing Link Worker for support.	
Co-morbidities	Identify and manage co-morbidities. This includes exploring low mood and anxiety and signposting to support, and optimising hay fever treatment.	
Medication	If asthma is poorly controlled despite good ICS adherence and technique, consider a step up their management. If stable for 3 or more months and low risk of exacerbations, consider a step down in treatment. Give your patient and their carer the option of switching to a lower carbon inhaler where appropriate. Check and address any SABA over reliance. Provide written material and signpost to training videos. Update asthma medication review in notes.	
Vaccination	Review vaccination status and offer flu and COVID vaccinations as appropriate.	
3. COLLABORATE: Explore ideas, concerns and expectations, share relevant information, discuss risks and benefits of treatment and importance of self-management..		
PAAP (QOF)	Co-create a personalised asthma management plan in collaboration with the patient and their carer to support self-management. Update annually. Use the link in the Ardens template or here.	
Goals	Review previous goals and consider new goals e.g. weight loss, reduce SABA use.	

Follow up: At least annually and 8-12 weeks after any medication changes. More frequent follow ups may be necessary for patients with poor disease control or those with severe asthma.
There is lots of information to share in an asthma review and shorter and more frequent appointments may reduce the risk of information overload. Consider group consultations.

Use Ardens asthma template to ensure correct coding.

In addition, consider creating/using EMIS hashtag proformas to add to asthma review to ensure information given and recorded e.g.

1 – ICS – patient and carer informed

- ICS treats underlying airway inflammation as opposed to the blue inhaler only rescue/short-term opens the airways
- ICS takes 4-8 weeks to start working, up to 12 weeks for full effect.
- Overuse of SABA and its effects discussed e.g. increases risk of exacerbations, fixed airways disease.
- If, after 8-12 weeks of using the preventer inhaler, still symptomatic/waking at night/using the blue inhaler 3x per week this is a sign of poor asthma control and increased risk of an asthma attack and needs review

2 – Spacers – patient and carer informed

- Importance of spacer for drug delivery to the airways
- SMS sent with link to video on correct spacer technique.
- Discussed spacer care and replacement.
- If hears spacer whistle when breathing in is breathing in too fast and needs to breathe more slowly so no whistle is heard.
- Leave 30-60s between each puff.
- Rince mouth after ICS

To create EMIS hashtag proformas: (video here)
Go to 'CR configuration' on the tap at the top → click on 'Quick codes and test' under 'Organisation Options' (top left) → click 'Add' → Give the item a name → type in the text above e.g. #asthmareview

Asthma and Lung UK Training Videos

Encourage your patients to use Digital Health Passport – Digital Health Passport

Managing asthma in CYP Under 5 years with suggested inhalers [1, 2, 3] local expert advice

For abbreviations see here

TRIAL OF ICS for 8-12 weeks

Symptoms + history or family history of atopy and/or episodes of breathlessness +/- wheeze especially if needing oral steroids.
See page 6 for table comparing asthma and pre-school wheeze.

REGULAR PAEDIATRIC LOW DOSE ICS WITH SABA AS NEEDED

ICS	As needed SABA Only use SABA in combination with ICS. See MHRA alert	
Clenil Modulite 50 pMDI 2 puffs twice a day	Salamol pMDI 1 puff every 30-60 seconds up to 10 puffs	Airomir pMDI 1 puff every 30-60 seconds up to 10 puffs

Outcome of ICS trial at 8-12 weeks

SYMPTOMS RESOLVED EVEN WHEN ICS TREATMENT STOPPED
If symptoms resolve and do not recur when treatment stopped no further treatment is needed. Natural resolution of symptoms is common in CYP.
REVIEW IF SYMPTOMS RECUR.

SYMPTOMS RECUR WHEN ICS TREATMENT STOPPED
Review at 3 months without treatment, if symptoms recur with no ICS
MOVE TO ASTHMA MANAGEMENT PATHWAY.

SYMPTOMS PERSIST WITH ICS TREATMENT
despite ICS treatment, good inhaler technique and removal of triggers and no other clear diagnosis to explain symptoms
REFER FOR SPECIALIST ASSESSMENT

ASTHMA MANAGEMENT PATHWAY

Improving symptoms and no exacerbations

Review 8-12 weeks after treatment changes. Ask about and address modifiable triggers and other pathology before stepping up.

If symptoms controlled and no wheezy episodes consider a trial without treatment again in the 1st 12 months as symptoms may resolve without treatment.

REGULAR PAEDIATRIC LOW DOSE ICS WITH SABA AS NEEDED

ICS	As needed SABA Only use SABA in combination with ICS.	
Clenil Modulite 50 pMDI 1-2 puffs twice a day	Salamol pMDI 1 puff every 30-60 seconds up to 10 puffs	Airomir pMDI 1 puff every 30-60 seconds up to 10 puffs

REGULAR PAEDIATRIC MODERATE DOSE ICS WITH SABA AS NEEDED

ICS		As needed SABA Only use SABA in combination with ICS.	
Clenil Modulite 100 pMDI 2 puffs twice a day	Flixotide 50 pMDI 2 puffs twice a day	Salamol pMDI 1 puff every 30-60 seconds up to 10 puffs	Airomir pMDI 1 puff every 30-60 seconds up to 10 puffs

While waiting for specialist input consider trial of adding montelukast (LRTA) for 8-12 weeks.
Stop if ineffective or side effects, continue if effective.
6 months to 5 years Montelukast (off-label)* 4mg daily, taken in the evening.

Worsening symptoms or exacerbations

Seek advice from asthma specialist GP, pharmacist or nurse, or refer to integrated/community or secondary care team.

DPI is not suitable for children under 5.
Always use an age-appropriate spacer device with a pMDI.
Spacer training video links: with mask, without mask.

? NOT SURE?
Seek advice from asthma specialist GP, pharmacist or nurse, use Consultant Connect or Advice and Guidance on ERS or refer to integrated/community or secondary care team.

Uncontrolled asthma =
- exacerbation requiring oral corticosteroids
or
- frequent regular symptoms e.g. reliever use ≥3 a week or nighttime waking ≥1 a week

Medium dose steroid?
Issue steroid card
SEL Guidance PIL

Continue specialist-initiated management plans which may differ from this guide.

*Support for prescribing off license

Montelukast alert.
Montelukast is useful especially for those with atopy and allergic rhinitis. Weigh benefits against neuropsychiatric risk e.g. sleep disorders, hallucinations, anxiety, depression, behaviour changes..
Montelukast: risk of neuropsychiatric reactions - GOV.Uk

SABA: short-acting beta agonist
ICS – inhaler corticosteroid
DPI – dry powder inhaler
pMDI – pressurised metered dose inhaler
AIR – anti-inflammatory reliever therapy
LTRA – leukotriene receptor antagonist

Managing asthma in CYP 5-11 years [1, 2, 3, local expert]

For abbreviations see here

Medium dose steroid?
Issue steroid card
SEL Guidance PIL

Continue specialist-initiated management plans which may differ from this guide.

Exclude modifiable triggers and other pathology before stepping up

Montelukast alert.
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Uncontrolled asthma =
- exacerbation requiring oral corticosteroids
or
- frequent regular symptoms e.g. reliver use ≥3 a week or nighttime waking ≥1 a week

NOT SURE?
Seek advice.

SABA: short-acting beta agonist
LABA – long-acting beta agonist
ICS – inhaler corticosteroid
DPI – dry powder inhaler therapy
MART – maintenance and reliever therapy
AIR – Anti-inflammatory reliever therapy
LRTA – long-acting muscarinic antagonist
pMDI – pressurised metered dose inhaler

Improving symptoms and no exacerbations

Review 8-12 weeks after treatment changes. Seek urgent medical advice if symptoms not controlled with maximum rescue doses.
Ask about and address modifiable triggers and other pathology before stepping up.

Worsening symptoms or exacerbations

TRADITIONAL PATHWAY

PAEDIATRIC LOW DOSE ICS WITH SABA AS NEEDED

ICS	As needed SABA Only use SABA in combination with ICS. See MHRA alert
Clenil Modulite 50 pMDI 2 puffs twice a day to initiate, if well controlled can consider reducing to 1 puff twice a day	Salamol pMDI 1 puff every 30-60 seconds up to 10 puffs Airomir pMDI 1 puff every 30-60 seconds up to 10 puffs

Assessed as using DPI effectively? After discussion patient/carer agree to move to SABA-free MART pathway?

NO – continue traditional pathway

YES

TRADITIONAL PATHWAY

Montelukast trial

Consider adding for trial period of 8-12 weeks: Stop if ineffective or side effects, continue if effective.
4mg once daily age 5 (off-label)*, 5mg once daily aged 6-14 years (off label)*, Taken in the evening.
Chewable tablet 4mg or 5mg OR Granules 4mg sachet available.

Paediatric low dose ICS/LABA

Seretide Evohaler 50/25 pMDI
1 puff twice a day

As needed SABA: Seek medical advice if symptoms are not controlled one dose every 30-60 seconds up to 10 puffs.
If using more than 3 SABA puffs a week step up.

Paediatric moderate dose ICS/LABA

Seretide Evohaler 50/25 pMDI
2 puffs twice a day

As needed SABA: Seek medical advice if symptoms are not controlled one dose every 30-60 seconds up to 10 puffs.
If using more than 3 SABA puffs a week step up.

SABA-FREE /MART PATHWAY

pMDI is not recommended for this pathway in primary care.

Paediatric low dose ICS MART

Symbicort Turbohaler 100/6 *
1-2 puffs twice a day as maintenance and an additional 1 puff when necessary for relief

Rescue: 4 puffs on single occasion, 8 puffs over 24 hours in an emergency as per asthma plan

Paediatric moderate dose ICS MART

Not advised for initiation in primary care.
Seek specialist advice.

Seek advice from asthma specialist GP, pharmacist or nurse, or referral to integrated/community or secondary care team

Always use an age-appropriate spacer device with a pMDI Spacer training video links: with mask, without mask.

DPI use in in Children aged 5–11 Years

CYP must be assessed for DPI use to ensure they have adequate inspiratory flow – use the In-Check™ device to help.
Supporting the use of a DPI may take several sessions, but has the convenience of a single inhaler, no need for a spacer device, reduced risk of exacerbations and a lower carbon footprint. DPI use may be more challenging for younger CYP and those with coordination problems.

SABA-free/MART Pathway in Children Aged 5–11 Years

There is limited evidence regarding the effectiveness and safety of the AIR approach in this age group and so it is not recommended:
Consensus statement:for MART in CYP

Existing evidence for the MART pathway in children aged 5–11 is for DPI only, pMDIs are **not** recommended.
Before initiating MART, confirm the CYP can use a DPI effectively.
Children on the MART pathway require more frequent monitoring compared to those on traditional treatment routes. This is to ensure correct inhaler technique, assess treatment effectiveness, and monitor for potential side effects.
**Currently no MART regimens are licensed for use in this age group. Refer to guidance on prescribing off-license.*
See Support for prescribing off license.

*Off license indication
Support for prescribing off license

Managing asthma in CYP 12-15 years [1, 2, 3, 4 local expert advice]

For abbreviations see here

Traditional SABA pathway with suggested inhalers

Recommend patients to move to SABA-free pathway

Only use SABA in combination with ICS. See MHRA alert

For patients using SABA only, move to SABA-free Pathway – AIR

DPI	pMDI – always with spacer
Bricanyl 500 Turbohaler	Salamol pMDI 100
Salbutamol Easyhaler	Airomir pMDI 100

REGULAR LOW DOSE ICS

DPI	pMDI – always with spacer
Pulmicort 100 Turbohaler 1-2 puffs twice a day	Flixotide pMDI 50 2 puffs twice daily
Budesonide Easyhaler 100 1-2 puffs twice a day	Clenil Modulite 100 2 puffs twice a day

As needed SABA: Seek medical advice if symptoms are not controlled one dose every 30-60 seconds up to 10 puffs.
If using more than 3 SABA puffs a week step up.

REGULAR MODERATE DOSE ICS/LABA

DPI	pMDI – always with spacer
Symbicort DPI 200/6 1-2 puffs twice a day	Seretide Evohaler 125/25 2 puffs twice a day
Seretide Accuhaler 100* 2 puffs twice a day	Symbicort pMDI 100/3 4 puffs twice a day

As needed SABA: Seek medical advice if symptoms are not controlled one dose every 30-60 seconds up to 10 puffs.
If using more than 3 SABA puffs a week step up.

SABA: short-acting beta agonist
LABA – long-acting beta agonist
ICS – inhaler corticosteroid
DPI – dry powder inhaler therapy
LAMA – long-acting muscarinic antagonist
MART – maintenance and reliever
LRTA – long-acting muscarinic antagonist
pMDI – pressurised metered dose inhaler
AIR – anti-inflammatory reliever therapy

Medium or high dose steroid?
Issue steroid card
SEL Guidance PIL

Continue specialist-initiated management plans which may differ from this guide

NOT SURE?
Seek advice

MOVE

Recommended

Recommended

Symptoms not controlled

SABA-free pathway with suggested inhalers

For all newly diagnosed patients assessed and able to use a DPI– combined ICS with rapid acting LABA (formoterol)

AIR: As needed combination low dose ICS with rapid acting LABA

DPI	pMDI – always with spacer
Symbicort Turbohaler 200/6 1 puff as needed. No regular inhaler.	Symbicort pMDI 100/3* 2 puffs as needed no regular inhaler*
Rescue: 6 puffs on single occasion,, 12 puffs over 24 hours in an emergency as per asthma plan.	Rescue: 12 puffs on single occasion, 16-24 puffs over 24 hours in an emergency as per asthma plan. 24 puffs a day for 2 days only.

MART
Regular combination low dose ICS + rapid-acting LABA

DPI	pMDI – always with spacer
Symbicort Turbohaler 200/6 1 puff twice daily **and** 1 puff as needed.	Symbicort pMDI 100/3 2 puffs twice a day **and** as needed.
Rescue: 6 puffs on single occasion,, 12 puffs daily over 24 hours in an emergency as per asthma plan.	Rescue: 12 puffs on single occasion, 24 puffs over 24 hours in an emergency as per asthma plan. 24 puffs a day for 2 days only.

MART
Regular moderate-dose ICS + rapid acting LABA

DPI	pMDI – always with spacer
Symbicort Turbohaler 200/6: 2 puffs twice daily **and** additional 1 puff as needed.	Symbicort pMDI 100/3 4 puffs twice a day **and** as 2 puffs needed.
Rescue: 6 puffs on single occasion,, 12 puffs daily over 24 hours in an emergency as per asthma plan.	Rescue: 12 puffs on single occasion, 24 puffs over 24 hours in an emergency as per asthma plan. 24 puffs a day for 2 days only.

Symptoms not controlled despite good ICS adherence and technique?
Check for inflammation with either raised eosinophils and/or FeNO and seek advice from asthma specialist GP, pharmacist or nurse, or referral to integrated/community or secondary care team.

Raised eosinophils +/- Raised FeNO suggests persistent inflammation. These patients are high risk and are likely to benefit from prompt specialist assessment and increased ICS dose.

Normal eosinophils +/- Normal FeNO – suggests no persistent inflammation

While waiting for a specialist assessment consider an 8-12 week trial of either Montelukast or Spiriva (LAMA).
Montelukast may be better suited to CYP with a history or allergic rhinitis.

LAMA - Spiriva Respimat 2.5mcg
Once daily

Montelukast (LRTA)
5mg once daily aged 6-14 years (off label)*, 10mg once daily 15 years and older

Good response: continue treatment and plan review

Partial response: add in the other medicines i.e. Spiriva or montelukast together

No response: change to the other medicines i.e. Spiriva to montelukast or vice versa

Improving symptoms & no exacerbations

Review 8-12 weeks after treatment changes. Seek urgent medical advice if symptoms not controlled with maximum rescue doses. Ask about and address modifiable triggers and other pathology before stepping up.

Worsening symptoms or exacerbations

DPI use in in Children aged 12-15

Most CYP in this age group are suitable for a DPI but must be assessed to ensure they have adequate inspiratory flow – use the In-Check™ device to help.
Supporting the use of a DPI may take several sessions, but has the convenience of a single inhaler, no need for a spacer device, reduced risk of exacerbations and a lower carbon footprint. DPI use may be more challenging for younger CYP and those with coordination problems.

SABA-free/MART Pathway in CYP 12-15 years

This is the recommended pathway in SEL as it is associated with 64% reduction in exacerbations compared to the traditional pathway[2]
Children on the AIR/MART pathway require more frequent monitoring compared to those on traditional treatment routes. This is to ensure correct inhaler technique, assess treatment effectiveness, and monitor for potential side effects.
Consensus statement for MART in CYP

*See Support for prescribing off license for some of the recommended inhalers in this pathway.

Uncontrolled asthma=
- exacerbation requiring oral corticosteroids OR
- frequent regular symptoms e.g. reliever use ≥3 a week or nighttime waking ≥1 a week

*Off license indication
Support for prescribing off license

Montelukast alert.
Montelukast is useful especially for those with atopy and allergic rhinitis. Weigh benefits against neuropsychiatric risk e.g. sleep disorders, hallucinations, anxiety, depression, behaviour changes..
Montelukast: risk of neuropsychiatric reactions -GOV.Uk

Suggested inhalers for CYP: includes BNF for Children recommended age range and recommended pathway

For abbreviations refer to here

	Non propellant inhalers		Propellant containing metered dose inhalers How to use an pMDI training video		
SABA Short acting beta agonist	 **Bricanyl Turbohaler 500** *Terbutaline 500 micrograms/dose*	 **Salbutamol Easyhaler** *Salbutamol 100 micrograms/dose*	 **Salamol pMDI 100** *Salbutamol 100 micrograms/dose*	 **Airomir pMDI 100** *Salbutamol 100 micrograms/dose*	
ICS Inhaled corticosteroid (see: NICE educational aid on ICS doses)	 **Pulmicort 100 Turbohaler** *Budesonide 100 micrograms/dose*	 **Budesonide 100 Easyhaler** *Budesonide 100 micrograms/dose*	 **Clenil Modulite 50 pMDI** *Beclomethasone 50 micrograms /dose*	 **Clenil Modulite 100 pMDI** *Beclomethasone 100 micrograms/dose*	 **Flixotide pMDI 50** *Fluticasone 50 micrograms/dose*
ICS/LABA Combined ICS +long acting beta agonist	NOT rapid-release LABA		Rapid-release LABA (formoterol)		NOT rapid-release LABA		Rapid-release LABA (formoterol)
	 **Seretide 100 Accuhaler** *Fluticasone propionate 100micrograms/dose Salmeterol 25 micrograms/dose*	 **Relvar Ellipta** *Fluticasone furoate 92 micrograms/dose Vilanterol 22micrograms/dose*	 **Symbicort 100/6 Turbohaler** *Budesonide 100micrograms/dose Formoterol 6 micrograms/dose*	 **Symbicort 200/6 Turbohaler** *Budesonide 200micrograms/dose Formoterol 6 micrograms/dose*	 **Seretide Evohaler 50/25** *Fluticasone 50micrograms/dose Salmeterol 25 micrograms/dose*	 **Seretide Evohaler 125/25** *Fluticasone 125 micrograms/dose Salmeterol 25 micrograms/dose*	 **Symbicort 100/3 pMDI** *Budesonide 100 micrograms/dose Formoterol 3 micrograms/dose*
LAMA long acting muscarinic antagonist	 **Spiriva Respimat** *Tiotropium bromide 2.5 micrograms/dose*				**SPACERS with pMDI** All pMDIs must be used with compatible spacer device. Use Rightbreathe or links on the 'Inhaler and Spacers' page for compatible spacer devices for each inhaler		

AVOID SABA OVERUSE
See MHRA alert
Prescribe only one SABA at a time to reduce overuse risk.

TRAINING VIDEOS
Click on the inhaler links on this page for Asthma and Lung UK patient training videos, share these with patient via email or text.

SEL Paediatric Formulary
Access via Clinibee website or download the App – Paediatric Formulary – hosted by Evelina/Guys and St Thomas' NHS Foundation Trust (need to register)

Inhaler and Spacer Use and Care [1,2]

For abbreviations refer to here

Inhaler Choice: prescribe by brand

	DPI	Soft Mist	pMDI
Inspiratory technique	Quick and deep inhalation over 2-3 seconds	Slow and gentle inhalation	Slow and steady inhalation over 3-5 seconds
Spacer	Spacer not required	Can be used via spacer (off-label)	Must be used with a spacer
Inspiratory effort	Some people may not have sufficient inspiratory effort to use DPIs effectively	Minimal respiratory effort	Minimal inspiratory effort
Dexterity	Most patients find DPIs easy to use	May not be suitable for those with dexterity issues	pMDI plus spacer may be more appropriate for those with dexterity/co-ordination problems
Dose counter	Built-in dose-counter	Built-in dose-counter	May not have a built-in dose counter
Carbon footprint	Low	Low, refillable cartridges	High
Taste	Strong after-taste (mitigated by advising patient to rinse mouth after use)	Slow moving mist more likely to irritate throat or cause cough	
Lactose	Most DPIs contain lactose – care with lactose intolerance		

Inspiratory technique required by patient when using inhaler device

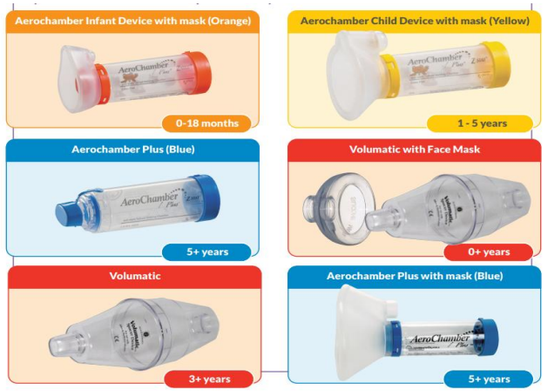
pMDI — **DPI**

Slow and steady — Fast and deep

USEFUL QUESTIONS TO ASK:

- How has your previous experience with inhalers been?
- Do you prefer once or twice daily regime?
- Can you take a quick, deep breath in?

Ensure the right size spacer device and face mask



- Children usually need a face mask until they are 3-years-old, personalise to need e.g. for neurodiversity and learning disability.
- Ensure face masks are well fitting and when progressing to a mouthpiece, there is good technique.
- Use videos to support education.
  - Rightbreathe
  - Asthma and Lung UK
  - Spacer training video links:
    - with mask,
    - with no mask

Thanks to Dudley Respiratory Group for the spacer diagram

Refer patients to Community Pharmacist for New Medicines Service when starting a new inhale to reinforce inhaler technique & to support adherence

Looking after inhalers

Follow instructions in the box of inhaler

- **MDI (Aerosol) -** Wipe mouthpiece weekly with dry cloth.
- **DPI -** Wipe mouthpiece weekly with dry cloth. Never use water on a DPI.
- Keep cap on when not using/storing.

Looking after spacers

- Soak in warm water for 15 minutes and gently clean using a detergent (e.g. washing up liquid) .
- Not all dishwasher safe – check the instructions on the label .
- Do not scrub the inside, okay to scrub mouthpiece and outside
- Air-dry and store in a safe place.
- Replace at least annually if used daily, or when opaque.

Inhaler technique: [1]

There are seven steps in common with all inhaler/spacer devices:

1. Prepare the inhaler/spacer device.
2. Prepare or load the dose.
3. Breathe out, fully and gently, but not into the inhaler/spacer.
4. Tilt the chin up slightly and place the inhaler/spacer mouthpiece in the mouth, sealing the lips around the mouthpiece.
5. Breathe in:
   - Aerosol e.g. pMDI via spacer = slow and steady
   - 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
   - Younger children are usually better with 5 tidal breaths via spacer than a single breath and hold

Incheck© is a device that can be helpful to assess and coach for effective inhaler use.

How do I know if my inhaler is empty?

Using an empty inhaler is a risk, especially during exacerbations.
Most DPIs have a dose counter.
pMDI usually do **not** have a dose counter and difficult to know if empty as continue to expel propellant when active medicine is finished. Encourage patients to count numbers of puffs used and not have too many inhalers as difficult to keep track.
Always check expiry date, especially if used infrequently.

Sustainability[2]

The issues

- Well controlled asthma has the lowest carbon footprint.
- The UK has a high carbon footprint from inhalers due to an over-reliance on pMDIs, both for rescue and ICS treatment.
- Non-propellent DPI and SMI have a substantially lower carbon footprint than pMDIs as they do not contain hydrofluorocarbons. DPIs may be challenging for younger children who have difficulty with the inspiratory technique required. DPIs may be more expensive than some pMDIs.
- Reduced use of pMDIs supports sustainability as well as clinical outcomes.
- SEL Position Statement: Environmental Impact of Inhalers

The solutions

- SEL support for prescribing sustainably.
- Ensure asthma diagnosis is correct.
- Provide information to support low carbon alternatives whenever possible and suitable
  - Environmental Impact of Inhalers: Patient Information SEL
  - Asthma inhalers and climate change: Patient decision aid
- Look out for SABA over reliance.
- Optimise inhaler technique.
- Prescribe refills when available e.g. Respimat.
- Encourage patients to return used inhalers to their pharmacy for recycling or environmentally friendly disposal, there is a SEL scheme: Inhaler return and recycling - South East London ICS.
- Encourage patient to use inhalers until they are finished, this is easier with inhalers with dose counters.
- Ensure patients are not reducing their inhaler use due to environmental concerns.

Practice Resources: Placebo Inhalers

Placebo inhalers can be ordered for your practice from individual pharmaceutical manufactures.

Management of acute asthma in CYP [1,2,3]

Management of asthma in adults – see adult guide insert link

Many asthma deaths are preventable. Treatment delays can be fatal. Lower threshold for admission late in the day, history of exacerbations, concern re social circumstances.
CHILDREN WITH SEVERE ASTHMA MAY NOT APPEAR DISTRESSED
Include management of exacerbations and when to seek advice in all action plans. What to do in an asthma attack – patient resource

Arrange follow up within 48 hours in general practice or with community asthma team for all patients who have been seen in an emergency setting for an asthma attack should include:

- Check asthma is responding to treatment.
- Continue prednisolone – minimum 5-7 days.
- Explore avoidable triggers' - ensure correct inhaler, technique and adherence.
- Update PAAP.
- Code all asthma attacks managed in general practice and hospital settings using Ardens template Asthma Exacerbation page and refer to specialist care if ≥2 in 12 months.
- CYP may be discharged on asthma weaning plans, but these are increasingly being phased out. London-wide recommendation on use of salbutamol post-acute asthma attack is available here.

Assess and record		Moderate acute		Severe acute	Life-threatening
Speak in sentences		Able to talk		Too breathless to talk	Too breathless to talk
SpO_2		SpO_2 ≥92%		SpO_2 < 92%	SpO_2 < 92%
PEFR best or predicted children >5 only use precited if best PEFR within last 2 years is unknown		<50%		33-50%	<33%
Heart Rate	1-5 years	≤140/minute		>140/minute	Any of the following
	> 5 years	≤125/minute		>125/minute	
Respiratory rate	1-5 years	≤40/minute		>40/minute, use of accessory neck muscles	• Silent chest • Poor respiratory effort • Agitation • Confusion • Cyanosis
	>5 years	≤30/minute		>30/minute, use of accessory neck muscles	
Where to manage?		Arrange admission if poor response to treatment		If poor response repeat ß2 bronchodilator and arrange admission. Stay with patient until ambulance arrives.	Repeat ß2 bronchodilator via oxygen driven nebuliser whist **arranging immediate admission.** Stay with patient until ambulance arrives.
Treatment: children under 2 years with acute asthma should be managed in a hospital setting.					
SABA pathway $ß_2$ BRONCHODILATOR i.e. salbutamol	2-5 years	Via spacer +/- face mask Continue as needed but not more than 4 hourly	All patient should be offered salbutamol for severe acute and life-threatening asthma	2.5mg salbutamol via nebuliser, ideally oxygen driven Assess after 15 minutes	2.5mg salbutamol via nebuliser every 20 minutes ideally oxygen driven. Via spacer if no nebuliser. Repeat with + 0.25mg of ipratropium if poor response to salbutamol alone,.
	>5 years	Via spacer one puff at a time, inhaled separately using tidal breathing, one puff every 60 seconds, up to 10 puffs. Continue as needed but not more than 4 hourly		5mg salbutamol via nebuliser, ideally oxygen driven Assess after 15 minutes	With ipratropium: 5mg salbutamol + 0.25mg of ipratropium via nebuliser every 20 minutes ideally oxygen driven. Via spacer if no nebuliser.
SABA-free pathway $ß_2$ BRONCHODILATOR: Use combination LABA (formoterol)+ ICS (AIR/MART)	5-11 years	Symbicort Turbohaler 100/6 If symptoms not controlled on one puffs every 1-3 minutes, up to 6 puffs, call 999. Continue MART therapy until ambulance arrives as per PAAP.			
	12-15 years	ICS/LABA (formoterol): If symptoms not controlled on one puffs every 1-3 minutes, up to 6 puffs, call 999. Continue with maintenance dose therapy until ambulance arrives as per PAAP.			
PREDNISOLONE Use plain, white prednisolone, these can be CRUSHED and DISSOLVED in small amount of water.	2-5 years	Consider PO prednisolone 20mg (minimum 3-5 days)		PO prednisolone 20mg	PO prednisolone 20mg (IV hydrocortisone 50mg if vomiting)
	>5 years	Consider PO prednisolone 30-40mg (minimum 3-5 days)		PO prednisolone 30-40mg	PO prednisolone 30-40mg (or IV hydrocortisone 100mg if vomiting)
Oxygen		**High flow oxygen via tight-fitting face mask or nasal cannula should be given to all children with life-threatening acute asthma or SpO_2 <94% to achieve normal saturations of 94-98%.**			

When to seek advice and/or refer for CYP? [1,2]

In an emergency

Asthma action plans should include details of when to seek urgent help.
See here for emergency management of asthma and when to call 999/refer to A&E.

Worrying Symptoms/'Red Flags'

- Failure to thrive
- Unexplained clinical findings e.g. focal neurological signs, dysphagia, stridor, abnormal voice or cry, crackles, clubbing, cyanosis, cardiac disease, monophonic wheeze
- Perinatal lung problems
- Persistent productive cough or chronic sputum production
- Excessive vomiting/posseting
- Severe upper respiratory tract infection
- Persistent productive cough
- Family history of unusual chest disease eg cystic fibrosis
- Nasal polyps
- Parental concern
- Failure to attend appointments

Patient 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 without consulting specialist.

Patients on biologics are not immunocompromised and do not have additional monitoring requirements. Inhaled medication dose change should only be made in consultation with specialist. More information

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

Complexity and Diagnostic uncertainty

Refer CYP with complex co-morbidity and/or poor response to treatment or diagnostic uncertainty, especially in very young children.

Uncontrolled asthma

It is important to distinguish between poorly controlled asthma and severe asthma.
Patients with uncontrolled symptoms or ≥ 2 exacerbations in 12 months, despite optimal treatment, should be referred. Before referring ensure the following have been optimised.

Inhaler technique
Does the patient have good inhaler technique? If not consider changing inhalers to best suit the patient. Ensure age-appropriate device.

Adherence?
Ask the patient if they are taking inhalers as prescribed. Check adherence using expected usage compared to actual usage.

Has treatment been optimised?
Are they at the high–end of treatment escalation according to treatment algorithm (see pages 9-11)?

Exclude other conditions
Are comorbidities being managed?

Psychosocial factors

Adverse asthma outcomes are associated with depression, anxiety, panic disorder and low socioeconomic status. Consider referring for support for patients or their primary carers to mental health workers, talking therapy, Social Prescribing Link Worker, community support and to community asthma nurses if available.

Safeguarding

Watch this short animation

Rethink 'Did Not Attend'

Poorly controlled asthma carries a high risk for death, hospital admission and school absence, compounded by difficult social circumstances e.g. poor housing and parent/carer mental health issues.

Highlight the benefits of good asthma control and the risks of non-engagement to parents/carers when inviting patients to appointments, that attending appointments increases opportunity for good asthma care – enabling people with asthma to lead full and active lives and reduces the risk of becoming very unwell and needing emergency hospital care.

Inform parents/carers of children who are not brought to appointments, that a safeguarding referral will be considered and act on this if necessary.

Ensure you have a clear 'child not brought' pathway and this is adhered to.

For inhaler technique and medicines advice

Refer to community pharmacy team, ask for New Medicines Service when changing inhalers.

If in doubt..

? NOT SURE?

Seek advice from asthma specialist GP, pharmacist or nurse, use Consultant Connect, or Advice and Guidance on ERS or refer to integrated/community or secondary care team.

Bexley

Bromley

Greenwich

Lambeth

Lewisham

Southwark

Before referring to secondary care:

- Check **adherence** & inhaler **technique**
- Look at 'when to refer' page
- Ask – is there a clinician with interest in respiratory within your primary care team or PCN?
- Consider **Advice & Guidance** via eRS or **Consultant Connect**

Health warning:
Services are constantly changing. There is work underway to improve provision of community respiratory hubs across SEL.
If you know of a new service, or a service listed is not correct, please let us know and we will update this information: clinicaleffectiveness@selondonics.nhs.uk

Bexley and Greenwich

Service	Objective Testing	Diagnostic & management support	Referral criteria	How to refer
Darent Valley Hospital (Dartford & Gravesham NHS Trust): Children's & Adolescent Services	No	Yes	Aged 15 & Under	Referral letter → eRS → Children's & Adolescent Services – Other Medical → Paediatric General – Children's Resource Centre – Dartford & Gravesham NHS Trust – RN7
Queen Mary's Hospital (Dartford & Gravesham NHS Trust): Children's & Adolescent Services	No	Yes	Aged 15 & Under	Referral letter → eRS → Children's & Adolescent Services – Other Medical → Paediatric General – Planned Care Centre, Queen Mary's Hospital, Sidcup RN7
Queen Elizabeth Hospital - (Lewisham and Greenwich NHS Trust): Children's & Adolescent Services	No	Yes	Aged 15 & under	Referral letter → eRS → Children's & Adolescent Services – Other Medical → Children's General RAS @ Queen Elizabeth Woolwich for Lewisham & Greenwich Trust - RJ2
Community CYP Respiratory Hub (Oxleas NHS Foundation Trust)	Yes	Yes	CYP > 6 years old CYP x2 ED attendances. CYP diagnosis of asthma but needing > 3 SABAs/yr CYP x1 hospital admission with diagnosis of asthma without previous confirmatory diagnostic testing. CYP > 2 course of steroids with diagnosis of asthma without previous confirmatory diagnostic testing.	Fill in the form 'SEL CYP Quality Assured Diagnostic Spirometry & FeNO referral form' found on DXS Email to: oxl-tr.ccnhah@nhs.net
Bexley Community Specialist Asthma Nurse Service, Bexley Community Children's Nursing and Hospital at Home Team (Oxleas NHS Foundation Trust)	No	Yes	Aged 2-16 Registered to a Bexley GP Already prescribed and using a preventer inhaler.	Request referral form via oxl-tr.ccnhah@nhs.net

Lewisham

Service	Objective Testing	Diagnostic & management support	Referral criteria	How to refer
Lewisham Community Children's Asthma Team	No	Asthma management only	Ages 2-16 registered with a Lewisham GP with a diagnosis of asthma or suspected (for details & criteria, see here)	Use the 'Lewisham Community Children's Asthma Team Referral Form' on DXS → email to lg.asthmanursespecialist@nhs.net
University Hospital Lewisham (Lewisham and Greenwich NHS Trust): Children and Young People	No	Yes	Aged 15 and under	Referral letter -> eRS-> Children's and Adolescents Services-Other Medical→ Children's Medicine RAS @ Lewisham Hospital for Lewisham & Greenwich NHS Trust-RJ2

Bromley

Service	Objective Testing	Diagnostic & management support	Referral criteria	How to refer
Princess Royal University Hospital (PRUH): Child & Adolescent – Paediatric General Medicine	No	Yes	Aged 15 & under	Referrals Optimisation Protocol (ROP) → Paediatrics Referral Menu → Hospital referral form Book via eRS → Children's & Adolescent Services – Other Medical → Child & Adolescent- Paediatric General Service for Kings @ PRUH- RJZ30
CYP Advice and Referrals	No	Yes	Aged 15 & Under	Each PCN in Bromley has a Bromley Child Health Integrated Partnership (BCHIP) team Please add the child to the ' BCHIP Triage List' on the EMIS PCN system, for discussion at the weekly triage meeting comprising of a Paediatrician, BCHIP GP Lead, GP assistant. Ensure you state the clinical question(s)/what you would like advice on. PRUH consultant paediatrician telephone advice: 01689864186 Monday to Friday 9:30 am to 4:30 pm

Lambeth & Southwark

Service	Objective Testing	Diagnostic & management support	Referral criteria	How to refer
Specialist Asthma Nursing Team	No	Yes	Ages 0-15 Registered with a GP in Southwark or Lambeth Diagnosed with asthma or suspected asthma	Either patient/family to fill in a health-check questionnaire includes a health support pack and/or a 1:1 specialist nurse assessment or Patch children's community nursing team | Evelina London
CYP advice and referrals	No	Yes	0-16 years	Each PCN in Lambeth and Southwark have a child health team. Please add the child to the 'PCN CYP Triage List' on the EMIS PCN system, for discussion at the weekly triage meeting comprising of a Paediatrician, CYP GP Lead, nurse from the Patch Children's Community Nursing team. Ensure you state the clinical question(s)/what you would like advice on. GSTT: Consultant paediatrician telephone advice: Monday to Friday 11am-7pm 07557 159092 KCH: TALK service 0203 299 6613 Monday-Friday 8.30am – midnight, weekends 8.30am-8pm Via eRS Paediatric clinic → kch-tr.chestunitadmin@nhs.net
Guys & St Thomas Respiratory Service		Yes	Children under 16 with Chronic (long term) or Acute (short term) respiratory conditions from GPs and from hospital consultants	Referral letter →eRS → Children's adolescent services → Respiratory → General Paediatrics Referral Assessment Service (RAS) – Evelina London Children's Hospital – RJ1 Referral letter → eRS- Children's adolescent services → Respiratory → VIDEO Children's specialist respiratory service, Evelina Hospital -St Thomas' site- RJ1 Tertiary referrals: Addressed to the children's respiratory service email gst-tr.ELCHPaedRespiratoryReferrals@nhs.net Phone: 020 7188 7188 ext. 58203 Post: Children's Respiratory Service, 3rd Floor Becket House, Evelina London Children's Hospital Westminster Bridge Road, London SE1 7EH In an emergency, please contact the paediatric registrar using the main hospital switchboard on 020 7188 7188 and ask for bleep 0339.

For clinicians

GENERAL

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
London Asthma Toolkit for Children and Young people
National Bundle of Care for Children and Young People with Asthma: Resource Pack

EDUCATIONAL

e-Learning for Health: the National Bundle of Care for Children & People with Asthma Programme
A range of free e-Learning modules on different aspects of asthma care.
Very Brief Advice training module (ncsct.co.uk) free e-Learning resource for smoking cessation advice.
See links on CESEL webpage to local webinar recordings.

ENVIRONMENT

Greener Practice Asthma Care - clinician led network
Daily Air Quality Index - Defra, UK
Blog: Delivering high quality, low carbon respiratory care
'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

GUIDELINES

Global Initiative for Asthma (GINA)-2025-Whats-New-Slides
GINA Global Strategy for asthma management and prevention
NICE Asthma diagnosis, monitoring and chronic asthma management. NG245
NICE Asthma, acute. Treatment Summary.

For patients and carers

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.org.uk) – in multiple languages
- How to use your inhalers (videos)
- Peak flow Diary
- Groups + Support

London Asthma Toolkit – parent and carer resources

ASTHMA AND SCHOOL

Asthma at school and nursery | Asthma + Lung UK (asthmaandlung.org.uk)

ASTHMA ATTACKS

Asthma UK attack recovery plan

POLLUTION

British Lung Foundation: Air pollution and your lungs
Asthma + Lung UK: Air pollution

STAYING HEALTHY WITH ASTHMA

Asthma + Lung UK: Keeping active with a lung condition
Asthma + Lung UK: Help your child stay active.
Digital Health Passport – Digital Health Passport

MEDICINES

Medicines for children: Information leaflets on asthma medicines for parents and carers

TRANSITIONING TO ADULT SERVICES

11-25 Hub, Helping young people move from youth services

YOU TUBE EDUCATION VIDEOS

Asthma + Lung UK - YouTube

References

Page no	Ref no	
1	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	Short-Acting Beta-2-Agonist Exposure and Severe Asthma Exacerbations: SABINA Findings From Europe and North America, 2022
	3	Quality Outcomes Framework 2025/26
3	1	Fingertips | Department of Health and Social Care
	2	GINA-2025-Whats-New-Slides.pptx
	3	National Bundle of Care for Children and Young People with Asthma Report template - NHSI website
	4	National Review of Asthma Deaths
	5	Short-Acting Beta-2-Agonist Exposure and Severe Asthma Exacerbations: SABINA Findings From Europe and North America, 2022
	6	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
4	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	Quality Outcomes Framework 2025/26
5	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	Immunoglobulin E concentration (IgE) | Synnovis
	3	GSK Asthma Control Test GSK
6	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	National Bundle of Care for Children and Young People with Asthma and Resource Pack
	3	Transitioning Asthma Care From Adolescents to Adults: Severe Asthma Series
8	1	Quality Outcomes Framework 2025/26
	2	The building blocks of a good asthma review in adults Primary Care Respiratory Society 15.
	3	Asthma reviews: an essential part of good care Practice Nursing 2022
9	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	Scenario: Acute exacerbation of asthma | Management | Asthma | CKS | NICE
	3	SEL Paediatric Formulary: access via Clinibee website or download the App – Paediatric Formulary – hosted by Evelina/Guys and St Thomas' NHS Foundation Trust (need to register)
10	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	Dry-powder inhaler use in primary school-aged children with asthma: a systematic review - PMC
	3	Consensus recommendations for the practical application of the Introduction NICE/BTS/SIGN 2024 asthma guidance on MART therapy in children and young people May 2025 – available here.
11	1	Overview | Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN) | Guidance | NICE
	2	Short-Acting Beta-2-Agonist Exposure and Severe Asthma Exacerbations: SABINA Findings From Europe and North America, 2022
	3	Consensus recommendations for the practical application of the Introduction NICE/BTS/SIGN 2024 asthma guidance on MART therapy in children and young people May 2025 – available here.
	4	SEL Paediatric Formulary: access via Clinibee website or download the App – Paediatric Formulary – hosted by Evelina/Guys and St Thomas' NHS Foundation Trust (need to register)
13	1	UK Inhaler Group: Inhaler Standards and Competency Document
	2	Towards net zero: asthma care, BMJ 2023
14	1	NICE, Clinical Knowledge Summaries, Acute Exacerbation of Asthma
	2	GINA: Global Strategy for Asthma Management and Prevention, 2025
	3	Asthma, acute | Treatment summaries | BNF | NICE
15	1	Poorly controlled and severe asthma: triggers for referral for adult or paediatric specialist care – a PCRS pragmatic guide
	2	NHS Recognising uncontrolled asthma in primary care

CESEL guides are co-developed by SEL primary care clinicians and SEL experts.

The guides go through a formal approval process including SEL Integrated Medicines Optimisation Committee (IMOC) for the medicines content. CESEL would like to thank all our colleagues who participated and fed-back during the guide development and consultation process.

Abbreviations

A&E	Accident and Emergency
AIR	Anti-inflammatory reliever
ACT™	Asthma control test™
BD	Twice a day
BDR	Bronchodilator reversibility
BTS	British Thoracic Society
CXR	Chest X-ray
CYP	Children and Young People
DPI	Dry powder inhaler
eRS	Electronic referral system
FeNO	Fractioned exhaled nitric oxide
FEV_1	Forced expiratory volume in one second
FH	Family history
FVC	Full vital capacity
HR	Heart rate
ICS	Inhaled corticosteroid
LABA	Long acting β agonist
LAMA	Long-acting muscarinic antagonist
LTRA	Leukotriene receptor antagonist
MART	Maintenance and reliever therapy
MDI	Metered dose inhaler
NSAID	Non-steroidal anti-inflammatory
NICE	National Institute for Health and Care Excellence
OD	Once a day
PAAP	Personalised asthma action plan
PCN	Primary care network
PEFR	Peak expiratory flow rate
pMDI	Powdered metered dose inhalers
PIL	Patient Information Leaflet
PO	By mouth
QOF	Quality and outcomes framework
RCP	Royal College of Physicians
RR	Respiratory rate
SABA	Short acting β agonist
SEL	South East London
SIGN	Scottish Intercollegiate Guidelines Network
SMI	Soft mist inhaler
$Sp0_2$	Peripheral capillary oxygen saturation
URTI	Upper respiratory tract infection
VBA	Very brief advice