Clinical Effectiveness
South East London

South East London Integrated Care System

NHS

Asthma in children and young people (CYP)

Preschool to 17 years

A guide for South East London General Practice©

Key Messages

- All patients should be treated with an inhaled corticosteroid (ICS) to reduce airway inflammation.
- Short acting beta agonists (SABA) provide short term relief only and should always be used alongside a regular ICS. SABA overuse risks exacerbations.
- Check adherence, inhaler technique and update personal asthma action plan (PAAP) at least annually.
- Document your reasons for diagnosing asthma or suspected asthma.

Adult Asthma Guide available **here**

Always work within your knowledge and competency

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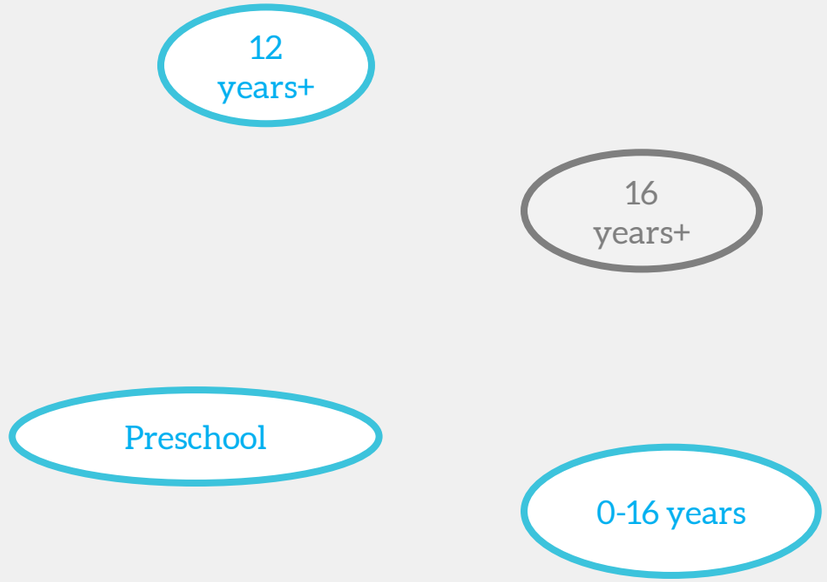


This guide covers the care of children and young people with asthma or suspected asthma from pre-school to 17 years.
Use the links on this contents page to help you navigate to the section you need and use the age icons to highlight content relevant to different age groups. Links throughout the guide interconnect sections of the guide and supporting information.

Why focus on Asthma?[1]

The South East London picture

Diagnosis can be improved

Asthma is the 3rd most prevalent condition in South East London but our captured prevalence is lower than national average, suggesting we have not coded or diagnosed all cases and that there is unmet need. (Recorded SEL prevalence 4.9% compared to 6.4% nationally).[1,2]

Incorrect diagnosis of asthma is common and leads to unnecessary treatment.[3]

Asthma is not evenly spread, with higher rates in[4]:

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

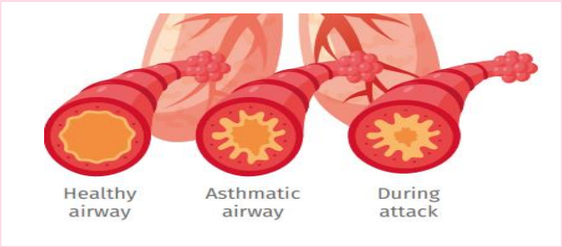
Asthma is dangerous

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

There are over 20 asthma deaths across South East London every year, 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% are in patients with infrequent symptoms,
- adverse psychosocial factors are recorded in most asthma deaths.



What's new in asthma care?

Dangers of prescribing SABA without an ICS [6,7]

SABA alone increases the risk of exacerbations and mortality and can lead to an overuse cycle. The use of 3 SABA inhalers over a 12-month period is associated with an increased risk of exacerbation compared to use of 1-2 SABA inhalers.
See the new SABA free treatment pathway option for older CYP on page 10 of this guide.

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

Patients USING more than 3-6 short acting relievers e.g.. salbutamol, in previous 12 months should be invited for review.

The Climate Emergency

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

Improved Diagnostics

High quality spirometry supports accurate diagnosis. This means a move to **spirometry in a respiratory service** e.g. community respiratory hub.

Why do we need this guide?

This is a **one stop guide** for busy clinicians. It synthesises and highlights the most relevant content of the multiple evidence-based asthma guidelines available (including NICE, BTS/SIGN, PCRS, GINA – see references) combined with local pathways.

Use the index page links and links throughout the guide to take you the parts you need.

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

Resources, references and abbreviations can be found at the end of this guide.

New NICE/BTS/SIGN guidance is due in 2024 – watch this space

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.

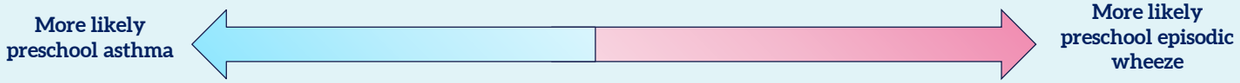
Objective test are most accurate in the presence of active symptoms and when the tests are positive. A negative result does not exclude asthma. A peak flow diary showing (PEFR) variability is a useful diagnostic tool, especially in combination with FeNO and spirometry and is suitable for most children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

Asthma or pre-school wheeze[4]

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/RAST/skin prick test)	NO



<u>Consider treatment with an ICS in both scenarios</u>. Review after 6-8 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[8]

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.

Transitioning from propellant to non-propellant inhalers

Non-propellant inhalers include dry powder inhalers (DPI) and soft mist inhalers (SMI), and have a lower carbon footprint than propellant metered dose inhalers (pMDI). A DPI can be challenging for younger children to use, especially in exacerbations. If considering a DPI in an older child offer support for effective inhaler technique over several contacts and provide a pMDI with spacer device for use in emergencies. Environmental considerations should not take precedence over choosing the most appropriate inhalers for the CYP. Well controlled asthma has the lowest carbon footprint.

Transitioning from SABA to SABA-free pathway

Using a SABA inhaler alone, without an ICS, increases the risk of exacerbations and guidance[7] is moving towards using combination ICS/LABA inhalers in a <u>SABA-free pathway</u> to reduce this risk. Specialist are increasingly starting older CYP on a SABA-free pathway.

New NICE/BTS/SIGN guidance is expected in 2024 and this guide will be updated accordingly.

Transitioning from CYP to adult services

CYP under specialist care should have a transition plan in place in preparation for when they reach 16.

Asthma diagnosis[9,10]

THERE IS LIMITED AVAILABILITY OF OBJECTIVE TESTS FOR CYP ACROSS SEL

From 6 years+

See asthma or pre-school wheeze for younger children

There is not a single, definitive test for asthma. Asthma diagnosis should be made based on history and ideally supported by objective tests. There is variable availability of objective tests across SEL. See here for local referral pathways.

6/6 features = high probability of asthma

1-5/6 features = intermediate probability of asthma

Features to support asthma diagnosis

1	2	3	4	5	6
Recurrent episodes of cough, wheeze, chest tightness and shortness of breath.	Symptom variation e.g., throughout the day and between seasons.	Absence of symptoms suggestive of an alternative diagnosis (exclude red flags).	Recorded clinical observation of wheeze. Opportunistically check and record this whenever possible.	Personal/family history of atopy +/- raised eosinophils as indicator of atopy.	Positive PEFR monitoring or FEV1 variance. See here.

Features may occur over time, and so recording each one when they occur in patient notes is important.

Presence of ≥ 1 feature to support asthma diagnosis?

NO → Consider alternative diagnosis

YES

Objective tests available and patient suitable?

NO → **PEFR monitoring and trial with ICS**

Undertake PEFR monitoring and if positive a trial with ICS over 6-8 weeks assessed using the Asthma Control Test™ and ideally FEV1 and/or serial PEFR

YES

DO NOT DELAY TREATMENT IF YOU HAVE A HIGH CLINICAL SUSPICION OF ASTHMA AND OBJECTIVE TESTS ARE NOT AVAILABLE OR THERE IS A DELAY IN ACCESS.

Positive result

Negative or uncertain result

Asthma diagnosis supported by

Quality Assured Spirometry
Fractional exhaled nitric oxide (FeNO)
Bronchodilator reversibility
Peak Expiratory Flow Rate (PEFR) monitoring
Direct Bronchial Challenge Test

Asthma diagnosis in the absence of objective tests

Asthma diagnosis is a clinical decision based on high asthma probability and positive outcome of trial with ICS.

Uncertain?

Only a few features to support diagnosis of asthma?
Negative or uncertain response to ICS trial?
Undertake an ICS trial and then withdrawal of treatment.
If symptoms resolve with treatment and then return when treatment is withdrawn asthma is more likely. Natural resolution of symptoms is more common in CYP than adults.

Objective tests indicate a positive diagnosis → **ASTHMA**

Objective tests indicate an uncertain diagnosis → **SUSPECTED ASTHMA**

Clinical decision → **ASTHMA**

The benefits of a confirmed asthma diagnosis may outweigh the risks of uncertainty of suspected asthma for patients and their carers.

Clinical decision → **SUSPECTED ASTHMA**

ASTHMA

Confirm asthma or suspected diagnosis with patient. Ensure understanding. Code diagnosis using Ardens template. Record basis on which diagnosis has been made. Agree on a management/asthma action plan with patient/relatives/carers and review date

SUSPECTED ASTHMA

Offer the same level of care as those with confirmed asthma, with appropriate treatment and at least annual review. Consider objective tests again or when available, especially if symptomatic.

POOR RESPONSE TO TREATMENT OR ATYPICAL FEATURES?

Check adherence and inhaler technique, review diagnosis, and consider referral

Objective tests for asthma[11, 12, 13]

Objective test: Use links for patient information	Peak Expiratory Flow Rate (PEFR) monitoring (6 years +)	Quality Assured Spirometry*Z	Bronchodilator reversibility (BDR) $ß_2$agonist or corticosteroid	Fractional exhaled nitric oxide (FeNO) (FeNO 4-5 years +)
What does it test?	Reversibility	Obstruction	Reversibility	Inflammation
Where is it done?	Can be offered by GP teams	Offered by community respiratory hub or secondary care Spirometry should only be done by those on National Register of Certified Professionals and Operators (ARTP Spirometry)		
Positive threshold for diagnosis in CYP	Variability> 20%	Children: < the lower limit of normal (Z score -1.64 – included in spirometry reports) % cut off varies with age	FEV1 increase ≥ of 12%	CYP < 20ppb = normal 20-35ppb = intermediate >35ppb = raised
Notes	Each reading best of 3 hard and fast blows. Twice daily or more for at least 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	Take all inhalers to test. Before tests stop SABA for 4-6 hours, LABA for 36 hours,,continue ICS. Before test avoid smoking for 24 hours, large meal or exercise. Wear loose clothing **Normal spirometry does not exclude asthma** Spirometry is less reliable at age extremes Spirometry and BDR usually offered together More details including contraindications Patient info; Spirometry - NHS (www.nhs.uk)		Results may be affected by steroid use, smoking, URTI and allergen exposure. **Link: NHSE patient FeNO information**

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 controller 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.

For detailed NICE diagnostic summary click here

ASTHMA CONTROL TEST

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

Adult and over 12 years

Aged 4-11 years

WHICH TEST?

Ideally all asthma diagnosis should be supported by positive spirometry with BDR +/- positive FeNO.
Asthma initial diagnosis and QOF: AST011 coding

New diagnoses or newly registered from April 2023 require **quality-assured spirometry** PLUS either **FeNO** or **Peak expiratory variability** or **bronchodilator reversibility,** 3/12 before or 6/12 after diagnosis

If QA spirometry and/or FeNO is not available, the following codes can be used: (QOF = 6 years+)
QOF (Quality and Outcomes Framework) diagnostic spirometry service not available
QOF (Quality and Outcomes Framework) - FeNO (fractional exhaled nitric oxide) test service not available
Ardens template supports accurate coding

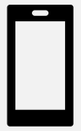
Self-care

Education

Understanding asthma and how the treatment works is an important aspect of care (see here for resources for patients and carers)

Personalised asthma action plans (PAAP)

PAAPs should be collaboratively agreed, regularly updated to include daily management and when and where to seek advice. PAAP can be uploaded into Digital Health Passport – Digital Health Passport



Smoking, passive smoking, E cigarettes &vapes, drugs

Offer tobacco and drug dependence advice and treatment for those with asthma, their parents and carers

Adherence and technique

Non-adherence plays a large role in poorly controlled asthma and exacerbations. Review adherence by asking and checking inhaler prescriptions ordered and support good technique with education and resources.

Exercise

Exercise is good for asthma, ensure good asthma control to benefit from regular exercise

Access to healthcare

General Practice regular review

Patients who are reviewed regularly have a lower risk of asthma attack. Patients should be reviewed in general practice at least annually, after dose changes and exacerbations.

Continuity

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

Flu vaccination

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

Emergency care

Asthma plans 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 referral is indicated when

- more than 2 attacks/year
- asthma is not controlled despite treatment

Safeguarding

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

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

Comorbidities

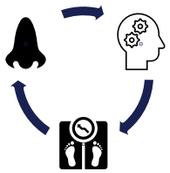
Obesity

Weight management support for overweight patients can contribute to good asthma control

Managing co-morbidities is an important aspect of asthma care

Atopic conditions

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



Depression and anxiety

Adverse asthma outcomes are associated with depression and panic disorder, always ask, consider treatment and signpost to support, to CYP and their parents and carers.

Environment

Outdoor Pollution

People with asthma should try to avoid busy roads and vigorous outdoor exercise on high pollutions days.

Indoor pollution

Electricity is cleanest home energy source,
Damp and mould issues, burning wood, candles and incense adversely affect asthma. T 'Chemical free' or 'allergy friendly' household and personal products to limit asthma triggers.

Triggers

Triggers include pollen, cigarettes, emotion, weather changes and pets.
Recognising and mitigating triggers will reduce risk of attacks and improve control

Asthma control

Well controlled asthma has the lowest carbon imprint.

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 by older children and young people. They require a greater respiratory effort than pMDIs so may not be suitable for all younger children. Aim for an inhaler the patient can and will use.
Used inhalers should be returned to the pharmacy to be recycled or environmentally friendly disposal.
SEL support for prescribing sustainably

Asthma and suspected asthma review [13, 14, 15]

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 as this may be uncoded asthma. **Consultations type:** telephone consultations are 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 school hours.	Contact CESEL team for advice and information on searches and quality improvement support
Pre-patient review	For QOF purposes the ACT™ and exacerbation recording can be done up to one month before the review. Ask patients 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 minimize the risk of exacerbations:** optimal control, recognizing and mitigating triggers, recognizing and managing exacerbations and referring those at high risk.	
1. ASSESS CONTROL AND SEVERITY		Use Ardens asthma template to ensure correct coding. **Consider creating/using EMIS proformas** to add to asthma review to ensure information given and recorded: **1 – ICS – patient 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 4-6 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 informed** -Importance of spacer for drug deliver 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. #asthmarev Asthma and Lung UK Training Videos Encourage your patients to use Digital Health Passport – Digital Health Passport
Control test (QOF)	Review and record the validated ACT™ result with patient to help inform management.	
Inhaler ratio	Review how many inhalers have been ordered and ask how many have been used. If fewer than 4 ICS (suboptimal adherence) or ICS./LABA inhalers, or more than 3-6 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's 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 12.	
Adherence	Poor adherence to ICS may explain poor control. (Complete the adherence training module Modifying non-adherence to medicines in asthma - Pulse 365 (Pulse registration needed)	
Smoking/Vaping status (QOF)	Offer tobacco and drug dependance support for patients and carers. NCSCT Very Brief Advice training module. Smokers may need higher dose ICS due to impact of smoking on ICS efficacy.	
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 obesity 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 (see page 9 and 10. Give your patients 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 influenza, pneumococcal 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 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, SABA use.	
Follow up: At least annually, and 4-6 weeks after any medication changes. More frequent follow ups may be necessary for those asthma 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.		

Managing asthma in Children and Young People 5 years and under and 6 to 11 years 9, 18, local practice

For abbreviations refer to here

1 Choose between propellant and non-propellant inhalers

Propellant inhalers
Metered – dose inhaler (pMDI)

Non-propellant inhaler
Dry Powder inhaler (DPI)

Younger children may struggle to use non-propellant low carbon footprint inhalers due to the inhaler technique required. For most younger CYP it is preferable to use a pMDI with an age-appropriate spacer device than struggle with a DPI which may impact on control. If considering a DPI offer several sessions to support good technique and ensure not impacting on control. If using DPI prescribe pMDI SABA + spacer device for emergency use.

2 SABA (traditional) Pathway for most CYP under 12

Regular ICS + As needed short acting beta agonist (SABA)

pMDI must be prescribed with an age-and development appropriate spacer device.. Children under 5 usually need a facemask.

3 Choose step: starting at Step 1

Step up if symptoms are not controlled despite good adherence and technique.
Step down if symptoms well controlled and not at risk of exacerbations.
Review 6-8 weeks after a change.

4 Choose inhaler

Some steps offer a range of inhalers. Support patient choice using the table on this page and for inhaler information here.

Personalise devices to individual needs and capabilities e.g.. neurodiversity or learning disability.

Spacer training video links: with mask, with no mask

Improving symptoms

Review and correct inhaler technique and confirm adherence to treatment before considering a step up in treatment.
Consider step down once good asthma control has been maintained for 3 months

Worsening symptoms

Under 5 years

Step 1
Very low dose ICS

Clenil Modulite 50 pMDI
2 puffs bd

Step 2
Add leukotriene receptor antagonist (LRTA)

Consider adding LRTA for 4-8 weeks trial.
Continue if helpful, stop if no effect or not tolerated.
Montelukast 4mg - for CYP 6 months to 5 years, in the evening.
Patient information on montelukast - includes details on side effects including diarrhoea, stomach-ache and sore throat and less commonly sleep disturbance and mental distress.

Step 3
Low dose ICS

Clenil Modulite 100 pMDI
2 puffs bd

Still not controlled? Seek specialist advice/ Refer

As needed/rescue SABA Salamol pMDI, Airomir pMDI

6-11 years

Step 1
Very low dose ICS

Clenil Modulite 50 pMDI
2 puffs bd

Step 2
Low dose ICS

Clenil Modulite 100 pMDI
2 puffs bd

Flixotide 50 pMDI
2 puffs bd

Step 3
Low dose ICS +LABA

If suboptimal response :to low dose ICS ☛ **Low dose ICS + LABA**

Seretide Evohaler 50/25 2 puffs bd

Step 4
Low dose ICS + LABA +/- LRTA
LRTA especially helpful for those who have allergic rhinitis

If suboptimal response to low dose ICS +LABA ☛**Low dose ICS + LABA + consider trial of LRTA.**
Continue if helpful, stop if no effect or not tolerated.
Patient information on montelukast - includes details on side effects including diarrhoea, stomach-ache and sore throat and less commonly sleep disturbance and mental distress.

Seretide Evohaler 50/25 2 puffs bd + montelukast 5mg in the evening

Still not controlled? Seek specialist advice/ Refer

As needed/rescue SABA Salamol pMDI, Airomir pMDI

Managing asthma in CYP 12-17 years [16,17,18,local practice]

For abbreviations refer to here

1 Choose between propellant and non-propellant inhalers

Propellant inhalers
Metered – dose inhaler (pMDI)

pMDI –must be used with an age-appropriate spacer device Use the inhaler links of this page to find the right spacer for each device.

Non-propellant inhaler
Dry powder inhaler (DPI) and soft mist inhalers (SMI)

DPI /SMI have a lower carbon footprint than propellant based, pressured metered dose inhalers (pMDI), Older CYP can usually manage a DPI with support for technique over several sessions. If using DPI prescribe pMDI SABA + spacer device for emergency use.

2 Choose between SABA and SABA-free Pathways

SABA-Free Pathway
NEW
PREFERRED
Step 1 and 2 only

Specialists are increasingly starting older CYP on SABA-Free pathway. A combined ICS and rapid-action LABA (formoterol) inhaler reduces the risk of exacerbation and SABA over-use. Start with AIR (As Needed Anti-Inflammatory reliver therapy) and progress to MART (Maintenance and Reliever Therapy) – use as needed ICS/rapid action LABA (formoterol) and in exacerbations.
SABA-Free at step 1 and 2 only as additional/as needed ICS/LABA use exceeds recommended ICS dose at Step 3 and 4. If moving to Step 3, consider specialist input and move to SABA pathway.

SABA Pathway
Traditional

Separate ICS and SABA inhalers .Regular ICS/preventer + SABA as needed and in exacerbations. There is a wider choice of ICS/LABA in this pathway as it is not restricted to rapid acting LABA - formoterol.

3 Choose step: starting at Step 1

Step up if symptoms are not controlled despite good adherence and technique. Step down if symptoms well controlled and not at risk of exacerbations.
Review 6-8 weeks after a change.

4 Choose inhaler

Some steps offer a range of inhalers. Support patient choice using the table on page 11 for inhaler information see page 12..

Improving symptoms

Review and correct inhaler technique and confirm adherence to treatment before considering a step up in treatment.
Consider step down once good asthma control has been maintained for 3 months

Worsening symptoms

Support for prescribing off license

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

New joint guidance from NICE/BTS/SIGN is due in 2024. Watch this space

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

SABA-FREE PATHWAY PREFERRED

Step 1: Low dose ICS + bronchodilator

AIR	DPI	Symbicort Turbohaler 200/6 1 puff as needed, no regular inhaler	
	pMDI	Symbicort pMDI 100/3 2 puffs as needed no regular inhaler Off license for this indication	
MART	DPI	Symbicort Turbohaler 100/6 1-2 puffs BD **and** as needed.	
	pMDI	Symbicort pMDI 100/3* 1-2 puffs bd ***and*** as needed	

Step 2: Moderate dose ICS/LABA

DPI	pMDI
Symbicort Turbohaler 200/6 1 puffs BD and as needed	Symbicort 100/3 pMDI 2 puffs BD and as needed

Continue with as needed low dose ICS/LABA in addition to regular preventer treatment as stepping up and down: Symbicort Turbohaler, Symbicort pMDI
Maximum doses : **Symbicort Turbohaler** (200/6) 6 puffs on a single occasion, 12 puffs daily for short periods only, **Fostair pMDI** and **Nexthaler** maximum 8 puffs a day

Optional Step Leukotriene Reuptake Inhibitor (LRTA)

Consider LRTA if suboptimal response to moderate dose LAMA/LABA: trial for 4-6 weeks, withdraw if not tolerated or effective
Especially for CYP with atopy.

Montelukast
5mg once daily aged 6-14 years, 10mg once daily 15 years and old

Patient information on montelukast
Includes details on side effects including diarrhoea, stomach-ache and sore throat and less commonly sleep disturbance and mental distress

Before prescribing high ICS dose in CYP seek specialist advice, refer to integrated/community services where available or secondary care

Step 3: High dose ICS/LABA or Moderate dose ICS/LABA/LAMA

SEEK ADVICE before stepping up to Step 3

DPI/SMI	pMDI/SMI

High dose ICS/LABA

Symbicort Turbohaler 200/6 2 puffs BD	Seretide Evohaler 125/25 2 puffs BD
Relvar Ellipta 92/22 1 puff OD	Symbicort 100/3 pMDI 2 puffs bd

Moderate dose ICS/LABA/LAMA

Symbicort Turbohaler 200/6 2 puffs BD **PLUS** Spiriva Respimat SMI 2 puffs OD	Seretide Evohaler 125 1 puffs BD **PLUS** Spiriva Respimat SMI 2 puffs OD

SABA PATHWAY

Regular ICS	DPI	Pulmicort 100 Turbohaler 1-2 puffs BD	
		Budesonide Easyhaler 100 1-2 puffs BD	
	pMDI	Flixotide pMDI 50 2 puffs BD	
		Clenil Modulite 100 2 puffs BD	
As needed SABA	DPI	Bricanyl 500 Turbohaler as needed	
		Salbutamol Easyhaler as needed	
	pMDI	Salamol pMDI 100 as needed	
		Airomir pMDI 100 as needed	

DPI	pMDI
Seretide Accuhaler 100 1 puffs BD	Seretide Evohaler 125/25 1 puffs BD
Symicort Turbohaler 200/6 1 puffs BD	Symbicort pMDI 100/3 2 puffs BD

Continue with as needed/rescue SABA in addition to regular preventer treatment as stepping up and down: Bricanyl Turbohaler, Salamol pMDI, Airomir pMDI, Salbutamol Easyhaler

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

For abbreviations refer to here

	Propellant containing metered dose inhalers How to use an pMDI training video			Non propellant inhalers	
SABA Short acting beta agonist	 **Salamol pMDI 100** *Salbutamol 100 micrograms/dose* *From age one month* Recommended pathways: Under 5 years, 6-11years, 12-17 years	 **Airomir pMDI 100** *Salbutamol 100 micrograms/dose* *From age one month* Recommended pathways: 12-17 years		 **Bricanyl Turbohaler 500** *Terbutaline 500 micrograms/dose* *From 5 years* Recommended pathways: 12-17 years	 **Salbutamol Easyhaler** *Salbutamol 100 micrograms/dose* *From age one month* Recommended pathways: 12-17 years
ICS Inhaled corticosteroid	 **Clenil Modulite 50 pMDI** *Beclomethasone 50 micrograms /dose* *From 2 years* Recommended pathways: Under 5 years, 6-11years	 **Clenil Modulite 100 pMDI** *Beclomethasone 100 micrograms/dose* *From 2 years* Recommended pathways: Under 5 years, 6-11years, 12-17 years	 **Flixotide pMDI 50** *Fluticasone 50 micrograms/dose* *From 4 years* Recommended pathways: 12-17 years	 **Pulmicort 100 Turbohaler** *Budesonide 100 micrograms/dose* *From 6 years* Recommended pathways: 12-17 years	 **Budesonide 100 Easyhaler** *Budesonide 100 micrograms/dose* *From 6 years* Recommended pathways: 12-17 years
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 Evohaler 50/25** *Fluticasone 50micrograms/dose* *Salmeterol 25 micrograms/dose* *From 4 years* Recommended pathways: 6-11years	 **Seretide Evohaler 125/25** *Fluticasone 125 micrograms/dose* *Salmeterol 25 micrograms/dose* *From 12 years* Recommended pathways: 12-17 years	 **Symbicort 100/3 pMDI** *Budesonide 100 micrograms/dose* *Formoterol 3 micrograms/dose* *From 12 years* Recommended pathways: 12-17 years	 **Seretide 100 Accuhaler** *Fluticasone propionate 100micrograms/dose* *Salmeterol 25 micrograms/dose* *From 4 years* Recommended pathways: 12-17 years	 **Relvar Ellipta** *Fluticasone furoate 92 micrograms/dose* *Vilanterol 22micrograms/dose* *From 12 years* Recommended pathways: 12-17 years	 **Symbicort 200/6 Turbohaler** *Budesonide 200micrograms/dose* *Formoterol 6 micrograms/dose* *From 12 years* Recommended pathways: 12-17 years
LAMA long acting muscarinic antagonist	**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			 **Spiriva Respimat** *Tiotropium bromide 2.5 micrograms/dose* *From 6 years* Recommended pathways: 12-17 years	

AVOID SABA OVERUSE
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)

Inhalers and Spacers [3,12,15]

For abbreviations refer to here

Inhaler Choice: prescribe by brand

Consider patient's ability to use,
- Once (OD) or twice (BD) daily dosing
- Younger likely to children manage aerosol + spacer with facemask better than DPI
- Environmental considerations: older CYP can use non-propellant (DPI) inhalers with training
- Patients with special needs and/or neurodiversity may manage a pMDI better than a DPI
- Incheck© or placebo devices can help inform inhalers choice

Inspiratory technique required by patient when using inhaler device

pMDI — Slow and steady

DPI — 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?

- **Changing inhaler devices:**
  - only change after discussion and agreement with patients
  - offer a face-to-face contact for support using a new inhalers
- Use **Rightbreathe** website/app to support inhaler and spacer choice, technique and care and
- How to use your inhaler | Asthma + Lung UK

Ensure the right size spacer device and face mask

- Children usually need a face mask until they are 4-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

Inhaler technique: check before prescribing

- Steps common to all devices
  - Prepare inhaler device e.g. remove cap and prime
  - For pMDI put inhaler in spacer device +/- face mask
  - Load dose e.g. shake inhaler, insert and pierce capsule, click the lever
  - Breathe out as far as is comfortable
  - Put lips around mouthpiece to form a tight seal
  - Breathe correctly for the device type:
    - Aerosol device: slow + steady inspiration
    - Dry powder: quick + deep inspiration
  - Remove inhaler from mouth and hold breath for 5-10 seconds
  - Repeat as directed and finish
  - Younger children are usually better with 5 tidal breaths via spacer than a single breath and hold

Looking after spacers (more detailed information here)

- 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 mouth piece and outside
- Air-dry and store in a safe place
- Replace at least annually if used daily, or when opaque

Sustainability[19]

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
- 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, address any concerns and share the decisions on the most environmentally friendly treatment regime that suits them as an individual.

Practice Resources: Placebo Inhalers

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

Management of acute asthma in CYP [9, 20]

Management of asthma in adults – see adult guide insert link

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 3-5 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
- CYP may be discharged on asthma weaning plans, but these are increasingly being phased out. Londonwide recommendation on use of salbutamol post-acute asthma attack is available here (see page 3 of the document).

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 - for children >5 only use precited if best PEFR within last 2 years is unknown		>50%	33-50%	<33%
Heart Rate	2-5 years	≤140/minute	>140/minute	Any of the following • Silent chest • Poor respiratory effort • Agitation • Confusion • Cyanosis
	> 5 years	≤125/minute	>125/minute	
Respiratory rate	2-5 years	≤40/minute	>40/minute Use of accessory neck muscles	
	>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 – for patients using DPI for daily management prescribe a pMDI SABA+ spacer device for emergency use: for SABA-free pathway - see adult guide here				
$ß_2$ BRONCHODILATOR	2-5 years	Via spacer +/- face mask Continue as needed but not more than 4 hourly	2.5mg salbutamol via nebuliser, ideally oxygen driven Assess after 15 minutes	With ipratropium: 2.5mg salbutamol + 0.25mg of ipratropium via nebuliser every 20 minutes ideally oxygen driven. Via spacer if no nebuliser.
	>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.
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 (or 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)

When to seek advice and/or refer for CYP? [21,22]

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'[9]

- Failure to thrive
- Unexplained clinical findings e.g. focal signs, dysphagia, abnormal voice or cry
- Perinatal lung problems
- Excessive vomiting/posseting
- Severe upper respiratory tract infection
- Persistent productive cough
- Family history of unusual chest disease
- Nasal polyps

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

Complex co-morbidity

Diagnostic uncertainty

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.
Refer patient with asthma symptoms despite optimal treatment but before referring check the following:

High Intensity Treatment?
Are they at the high–end of treatment escalation according to their age-appropriate algorithms?

Adherence?
Have you explored if taking meds as prescribed?
If fewer than 4 ICS or ICS/LABA inhalers, or more than 3- 6 SABA in a 12-month period – this suggests poor adherence or control.

Severe exacerbations?
Refer if ≥2 courses of PO steroids or admission in last year

Technique
Is their inhaler technique correct? Consider changing inhalers to best suit the patient. Ensure age-appropriate device.

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.
Consider a safeguarding review and possible referral to children who repeatedly miss appointments.

For inhaler technique and medicines advice

Refer to community pharmacy team

If in doubt..

1. Discuss with a clinician with interest in respiratory within your primary care team or PCN.
2. Consider seeking specialist advice via Consultant Connect or Advice & Guidance
3. May need referral to secondary care if the first 2 steps do not answer the clinical questions.

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 Medicine RAS @ Queen Elizabeth Woolwich for Lewisham & Greenwich Trust - RJ2

Bromley

Services Offered	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	Using Referrals Optimisation Protocol (ROP) -'All referrals relating to asthma in children should be made using the Referrals Optimisation Protocol (F12) by selecting 'Respiratory' from the main menu.

Services Offered	Objective Testing	Diagnostic & management support	Referral criteria	How to refer
One Health Lewisham	Yes	Yes	Registered at a Lewisham GP Aged 7+ Infection free for 6 weeks prior to spirometry testing Has had a CXR in the 12 months	Book directly via EMIS 'Cross-organisational' slots into age appropriate and presentation appropriate clinic • OHL Respiratory diagnostic paediatrics aged 7-15 years • OHL Respiratory diagnostics • OHL Respiratory Disease Deterioration
Community Respiratory Team (Lewisham and Greenwich NHS Trust): Adults	Yes	Yes	Registered with a Lewisham GP Aged 16+ Possible new diagnosis of asthma Deterioration of symptoms despite optimal treatment; unstable or difficult to control	Referral 'Spirometry and COPD Generic Referral Form' on DXS → email lg.respiratorynursingteam@nhs.net
Lewisham Community Children's Asthma Team	No	Yes	Ages 0-19 registered with a Lewisham GP with a diagnosis of asthma (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): Adults	No	Yes	Aged 16+ Relevant blood tests and CXR (attach report)	Referral letter → eRS → Respiratory General RAS @ Lewisham Hospital for Lewisham & Greenwich Trust - RJ2
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 at University Hospital Lewisham for Lewisham and Greenwich NHS Trust-RJ2

Services Offered	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

Asthma resources – Children & Young People

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.
SEL Training Hub: Asthma Training for Professionals Working with Children & Young People (CYP) with Asthma
Very Brief Advice training module (ncsct.co.uk) free e-Learning resource for smoking cessation advice
Modifying non-adherence to medicines in asthma - Pulse 365 (Pulse registration needed)

ENVIRONMENT

SEL support for prescribing sustainably
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

GUIDELINES

Global Initiative for Asthma (GINA) Pocket Guide 2023) – coming soon
GINA Global Strategy for asthma management and prevention, updated 2023
NICE Asthma NG80
SIGN/BTS Guide
*An integrated NICE/BTS/SIGN guidance is expected in 2024

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

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

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Abbreviations

A&E	Accident and Emergency
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
MART	Maintenance and reliever therapy
MDI	Metered dose inhaler
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