#AskAboutAsthma

Clinical Update

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ROYAL BROMPTON DIFFICULT ASTHMA SERVICE

Conflict of interest disclosure

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All fees paid directly to my institution

One year on from the NCMD report: how can we prevent asthma deaths?

- Asthma deaths in children should be “never events”
- End complacency about asthma attacks
- Stop treating asthma as a series of acute events
- Recognise and address risk factors
- Focus on long term management
  - Accurate and timely diagnosis
  - Optimise medications
  - Monitoring and risk stratification
  - Addressing modifiable factors
- Appropriate systems in place

NICE National Institute for Health and Care Excellence

British Thoracic Society

Healthcare Improvement Scotland | SIGN

NICE guideline

Asthma pathway (BTS, NICE, SIGN)

NICE guideline
Published: 27 November 2024

www.nice.org.uk/guidance/ng244

GLOBAL INITIATIVE FOR ASTHMA®

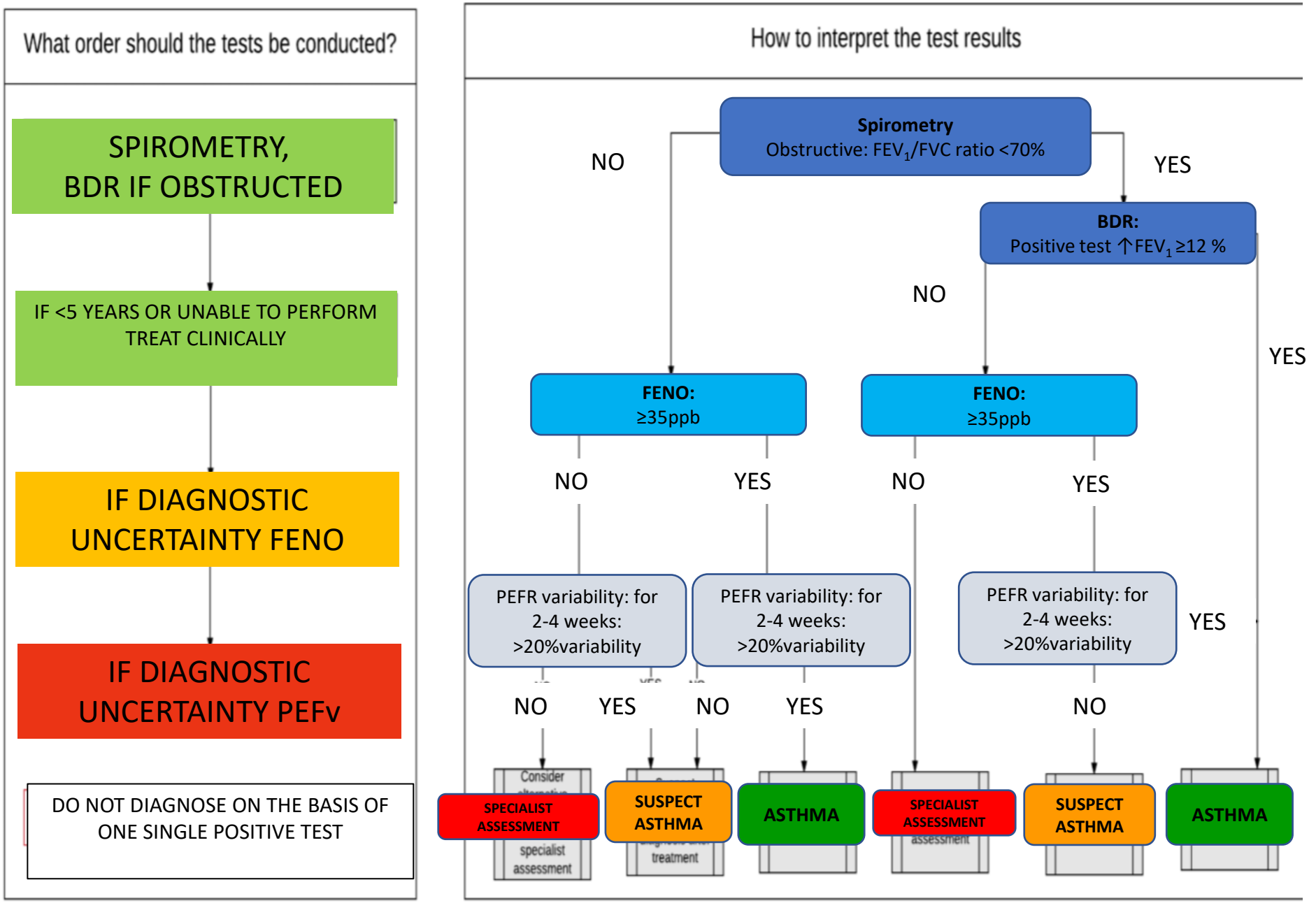
2025

Global Strategy for Asthma Management and Prevention

Updated 2025

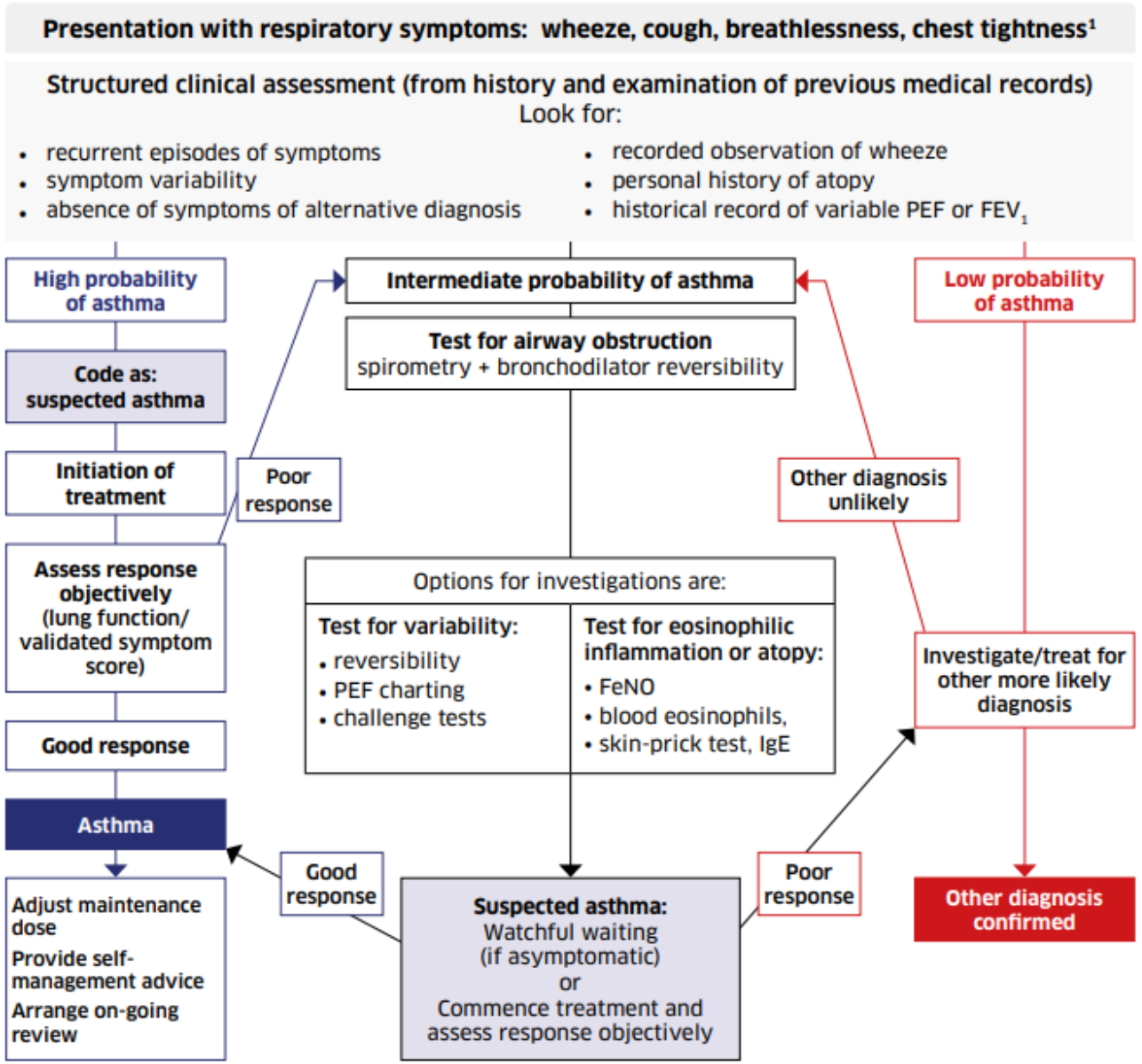
Diagnosis

Algorithm B: Objective tests for children and young people aged 5 to 16



NICE Guideline 2017

Figure 1: Diagnostic algorithm



[1] In children under 5 years and others unable to undertake spirometry in whom there is a high or intermediate probability of asthma, the options are monitored initiation of treatment or watchful waiting according to the assessed probabilityof asthma.

BTS/ SIGN 2019

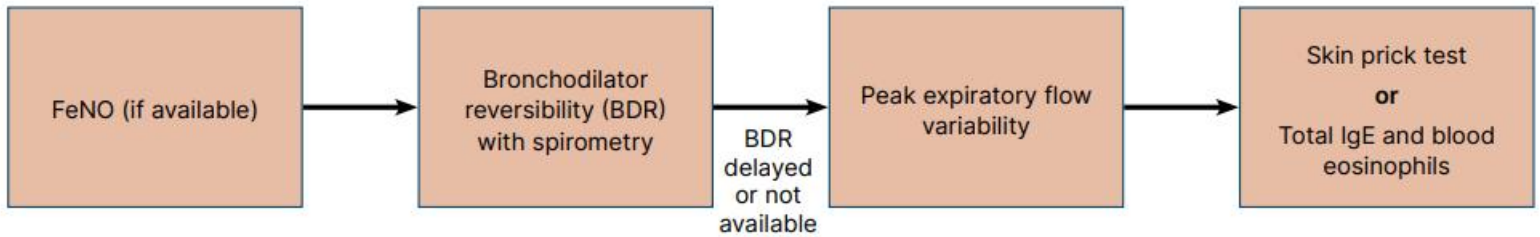
Issues with Previous Algorithms

- Despite recommendation to measure spirometry and FENO in children access to quality assured paediatric spirometry remains poor
- Increasingly complex and conflicting algorithms cause confusion
- Reluctance to diagnose asthma in primary care
  - Increasing pressure on secondary care
  - Lack of diagnosis = delay in treatment and appropriate reviews

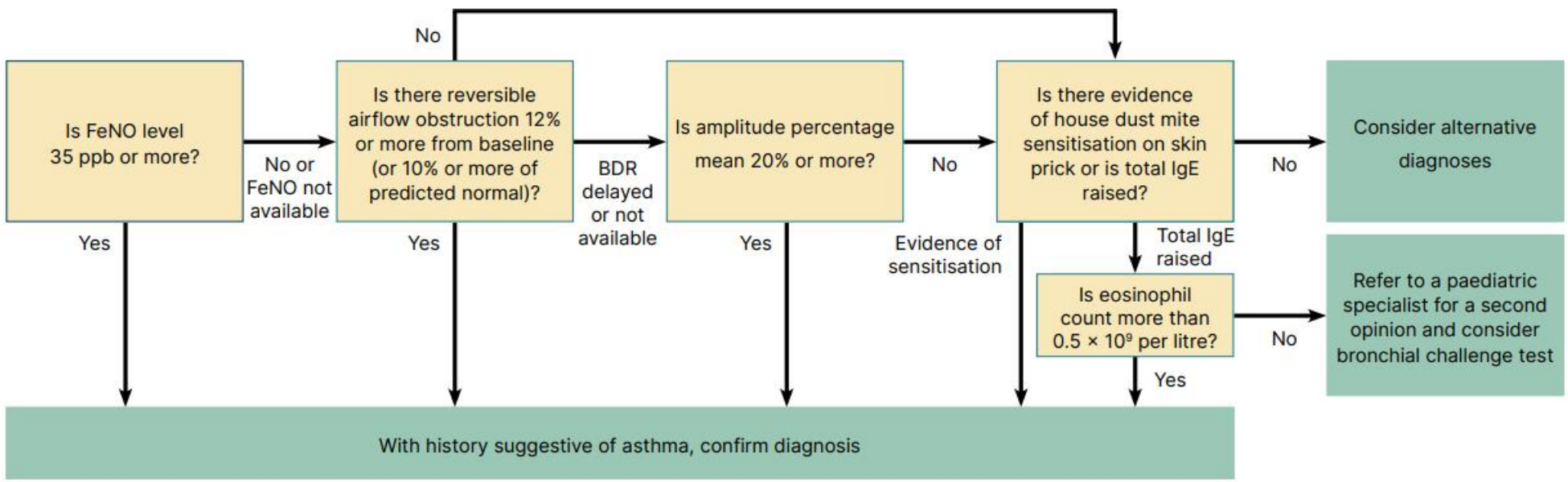
Algorithm B: Objective tests for diagnosing asthma in children aged 5 to 16 with a history suggesting asthma

BTS, NICE and SIGN guideline on asthma

Order of tests



Interpretation of test results



BTS ISBN: 978-1-917619-27-1. NICE ISBN: 978-1-4731-6638-7. SIGN ISBN: 978-1-909103-96-2.

Clarity

- The algorithm is clear and easy to follow
- Emphasises the importance of a suggestive clinical history in combination with at least one objective test
- Makes provision for delayed access to tests, including coding for “suspected asthma” whilst awaiting testing
- FeNO and POC (blood eos) can easily be carried out at the initial consultation with no need for onward referral to a diagnostic hub

Consistency and Standardisation

- **Structured Algorithm**: The guideline provides a clear stepwise algorithm for clinicians, leading to more consistent practices across healthcare settings.
- **Minimises Variation**: Objective criteria, with clear thresholds avoids clinicians applying different thresholds for diagnosis, leading to variability in care.

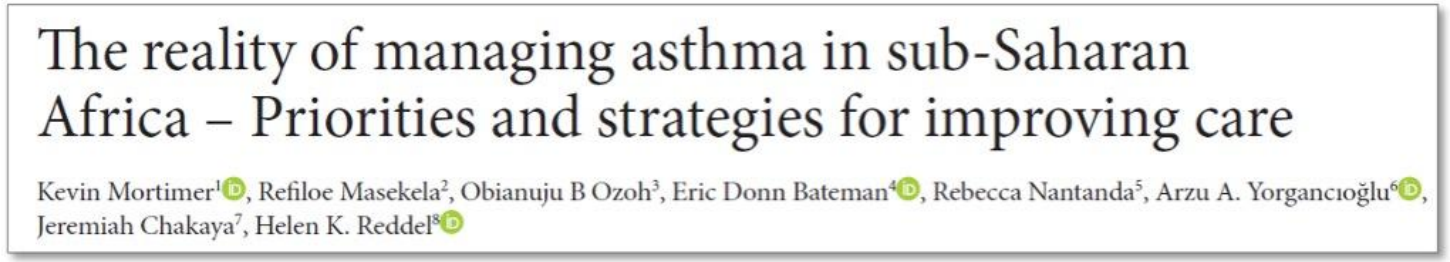
Order of Tests

- HDM sensitisation and total IgE show high sensitivity ie rule out tests
- Therefore by placing FENO at the start and HDM sensitisation and IgE at the end, the strategy takes a rule in-rule-out approach
- Higher specificity at beginning of algorithm and high sensitivity at the end

Diagnosis of asthma

- Over-diagnosis and under-diagnosis of asthma are common
- Respiratory symptoms are often non-specific
  - Multiple differential diagnoses for dyspnea and cough
- Globally, most clinicians do not have (timely) access to (quality) spirometry
  - Including in high-income countries
- Peak expiratory flow (PEF) is less reliable than spirometry, but better than nothing
  - PEF meters included in WHO-PEN Package of Essential Noncommunicable disease interventions

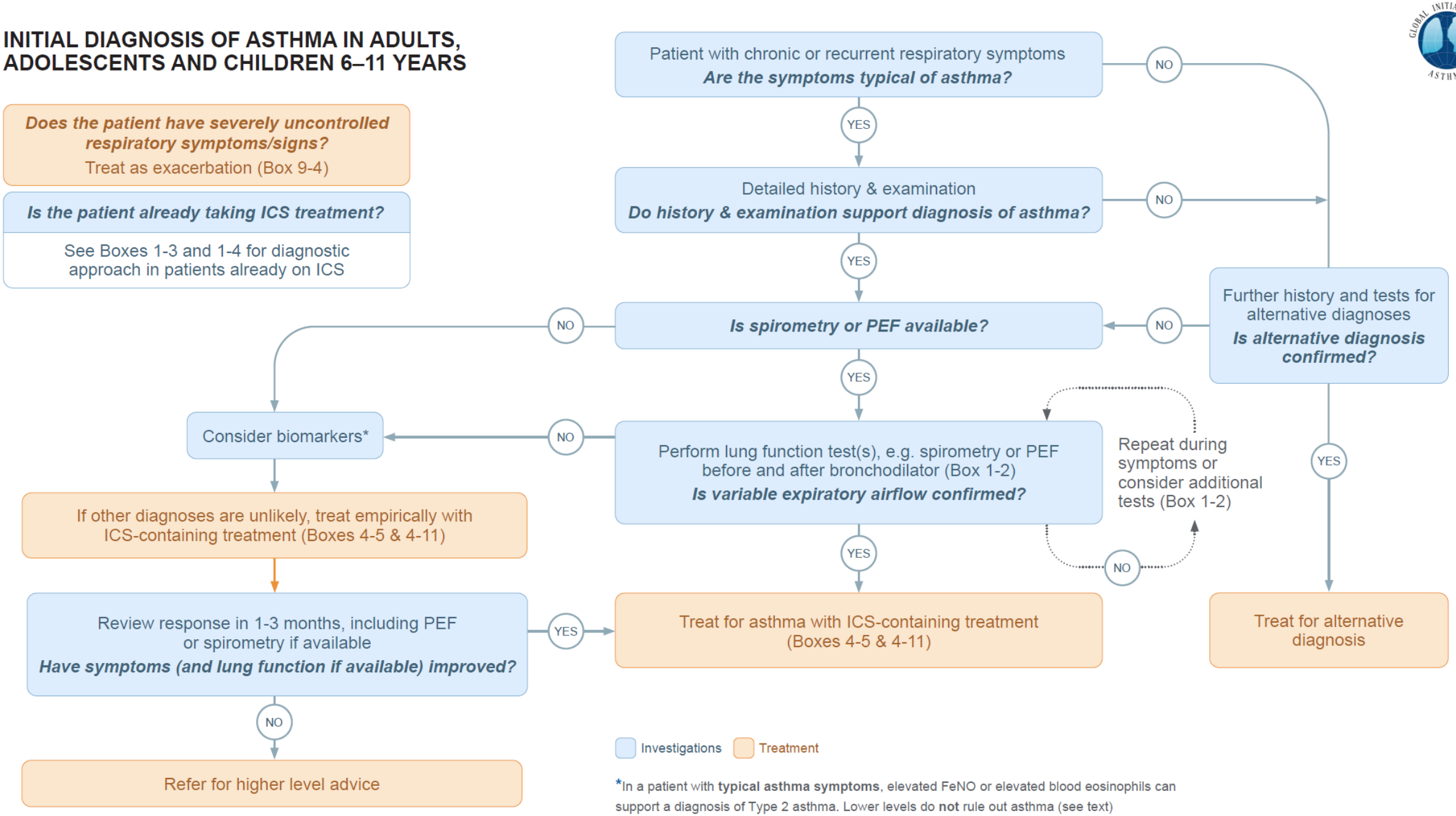
→ Use PEF if spirometry not available, while we continue to advocate for better diagnostic tools


The reality of managing asthma in sub-Saharan Africa – Priorities and strategies for improving care

Kevin Mortimer[1], Refiloe Masekela[2], Obianuju B Ozoh[3], Eric Donn Bateman[4], Rebecca Nantanda[5], Arzu A. Yorgancıoğlu[6], Jeremiah Chakaya[7], Helen K. Reddel[8]

Mortimer et al, JPATS 2022

INITIAL DIAGNOSIS OF ASTHMA IN ADULTS, ADOLESCENTS AND CHILDREN 6–11 YEARS



*In a patient with **typical asthma symptoms**, elevated FeNO or elevated blood eosinophils can support a diagnosis of Type 2 asthma. Lower levels do **not** rule out asthma (see text)

FeNO Testing

- **Biomarker of Eosinophilic Inflammation**: FeNO can identify patients more likely to respond to inhaled corticosteroids, providing a more personalised approach.
- **Non-Invasive and Rapid**: FeNO testing is simple, quick, and non-invasive, making it suitable for primary care settings
- **High cut point**: Rule in test (high specificity); if negative, move on to further testing
- However, **false positives** can occur (rhinitis)
- There are no **standardised reference equations**

FeNO: NICE / BTS / SIGN

Study	Study Population	Ref Standard	Cut off	Sen	Spec	PPV	NPV
Eom 2020	Children presenting with resp symptoms	Assessed by pulmonologist after 6 months, diagnosis according to GINA	>19.6ppb	0.64 (0.57 – 0.71)	0.83 (0.74 – 0.91	90% (84 – 93)	50% (45 – 56)
Jerynska 2014	Retropsective, cross sectional; 1767 children with symptom of allergic disease	Universally established according to GINA / WHO	>23ppb	0.9 (0.88 – 0.98)	0.52 (0.48 – 0.56)	25% (16 – 37)	97% (88 -99)
Kesler 2019	Prospective, steroid naiive children with symptoms of asthma	Spiro, methacholine, SPTs	>34ppb	0.12 (0.07 -0.20)	0.94 (0.87 – 0.97)	67%	50%
			>24ppb	0.22 (0.15 – 0.31)	0.91 (0.84 – 0.95)		
Livnat 2015	Children ref for methacholine	Methacholine	>23ppb	0.6 (0.47 -0.72)	0.72 (0.60 – 0.82)	67%	66%
Woo, 2015	Children with non specific resp symptoms	BDR and or methacholine	>22ppb	0.57 (0.49 – 0.65)	0.91 (0.82 – 0.96)	90.5%	48.6%
Zhou, 2018	Prospective cohort	Clinical guideline (spiro, histamine, SPTs)	>25ppb	0.83 (0.61 – 0.95)	0.97 (0.91 – 0.99)	97.5%	81.4%

Cut point included in algorithm 35ppb

Factors affecting blood eosinophils and FeNO

Blood eosinophils are higher:

- In children than adults
- In males than females
- In the morning than the afternoon
- In current smokers
- With parasitic infections
- In allergic diseases, e.g., atopic dermatitis, allergic rhinitis, or after allergen exposure
- In other non-asthma conditions, e.g., eosinophilic bronchitis, EGPA

Blood eosinophils are lower:

- In some asthma phenotypes
- In patients taking oral corticosteroids (also with inhaled or nasal corticosteroids)

FeNO is higher:

- In adults than children
- In males than females
- In the afternoon than the morning
- In allergic diseases, e.g., atopic dermatitis, allergic rhinitis
- About 24 hours after allergen exposure (if sensitized)

FeNO is lower:

- In current smokers
- During bronchoconstriction and with lower lung function
- During the early allergic response
- In patients taking inhaled corticosteroids (also with oral or nasal corticosteroids)

Diagnosis: Under 5

1.3 Diagnosing asthma in children under 5

Diagnosis is hard in this age group because it is difficult to do the tests and there are no good reference standards.

1.3.1 For children under 5 with suspected asthma, treat with inhaled corticosteroids in line with the recommendations on medicines for initial management in children under 5, and review the child on a regular basis. If they still have symptoms when they reach 5 years, attempt objective tests (see the section on objective tests for diagnosing asthma in adults, young people and children aged 5 to 16). **[NICE 2017]**

1.3.2 If a child is unable to perform objective tests when they are aged 5:

- try doing the tests again every 6 to 12 months until satisfactory results are obtained
- refer for specialist assessment if the child's asthma is not responding to treatment. **[NICE 2017, BTS/SIGN 2019, amended BTS/NICE/SIGN 2024]**

1.3.3 Refer to a specialist respiratory paediatrician any preschool child with an admission to hospital, or 2 or more admissions to an emergency department, with wheeze in a 12-month period. **[BTS/NICE/SIGN 2024]**

PCRS Position Statement

Diagnosis of asthma in children and young people (CYP)

June 2025

Key issues

Diagnosis in children under 5 (NICE/BTS/SIGN) and 5 and under (GINA)

It is generally accepted that making a diagnosis of asthma in this age group is difficult owing to the challenges with objective testing and large overlap with other conditions.

The diagnosis of asthma can be made in children aged 5 years or younger, though it may be challenging.

Diagnostic assessment in this age-group involves a thorough medical history and physical examination to identify signs and symptoms consistent with asthma and to exclude other respiratory conditions (e.g., viral bronchiolitis, tuberculosis, protracted bacterial bronchitis, and congenital lung anomalies).

The diagnosis of asthma is primarily clinical. All three of the following criteria should be met:

1

Recurrent acute wheezing episodes

OR

At least 1 acute wheezing episode with asthma-like symptoms between episodes

+

2

No likely alternative cause for the respiratory symptoms

+

3

Timely clinical response of respiratory symptoms or signs to asthma medications

Any of:

- **Short-term response to SABA** within minutes during acute wheezing episode in healthcare setting (or, for more severe episode, within 3-4 hours after SABA and OCS started)
- **Short-term response to SABA at home** (within minutes)
- **Reduced frequency or severity** of acute wheezing episodes and/or of symptoms between episodes during 2–3 months' trial of daily ICS

All three criteria are needed for the diagnosis of asthma in children 5 years and younger

Acute wheezing episode: symptoms such as wheezing on expiration, accessory muscle use, or difficult, fast or heavy breathing, lasting for more than 24 hours

Asthma-like symptoms between episodes (also called *interval symptoms*): symptoms such as dry cough or wheeze after running, laughing or crying, or during sleep, that occur between acute wheezing episodes

If only 1 or 2 criteria are met, describe as 'suspected asthma', and continue follow-up

A personal or family history of allergic disease may strengthen the diagnosis of asthma, but is not required, and is not specific for asthma

GINA 2025, Box 10-1

Medications

Algorithm D: Pharmacological management of asthma in children aged 5 to 11 years

BTS, NICE and SIGN guideline on asthma

Take into account and try to address the possible reasons for uncontrolled asthma before starting or adjusting medicines for asthma. For example: alternative diagnoses or comorbidities; suboptimal adherence; suboptimal inhaler technique; active or passive smoking (including e-cigarettes); psychosocial factors; seasonal factors; environmental factors (such as air pollution and indoor mould exposure)

Symptom relief

MART

Maintenance therapy

Newly diagnosed asthma in children aged 5 to 11 years

Offer twice-daily paediatric low-dose ICS — With a SABA

If asthma is uncontrolled

Assess ability to manage MART regimen

Able to manage MART regimen

Consider paediatric low-dose MART

If asthma is uncontrolled

Consider increasing to paediatric moderate-dose MART

If asthma is uncontrolled

Refer the child to a specialist in asthma care

Unable to manage MART regimen

Consider adding an LTRA to twice daily paediatric low-dose ICS for a trial period of 8 to 12 weeks. Stop if ineffective or side effects — With a SABA

If asthma is uncontrolled

Offer twice daily paediatric low-dose ICS/LABA combination (with or without an LTRA) — With a SABA

If asthma is uncontrolled

Offer twice daily paediatric moderate-dose ICS/LABA combination (with or without an LTRA) — With a SABA

If asthma is uncontrolled

Refer the child to a specialist in asthma care

For guidance on dosages for paediatric low-dose ICS, see inhaled corticosteroid doses for the BTS, NICE and SIGN asthma guideline

In **November 2024**, no asthma inhalers were licensed for MART in children under 12, so use would be off-label

Uncontrolled asthma: Any exacerbation requiring oral corticosteroids **or** frequent regular symptoms (such as using reliever inhaler 3 or more days a week or night-time waking 1 or more times a week)

ICS, inhaled corticosteroid; **LABA**, long-acting beta$_2$ agonist; **LTRA**, leukotriene receptor antagonist; **MART**, maintenance and reliever therapy (using ICS/formoterol combination inhalers); **SABA**, short-acting beta$_2$ agonist.

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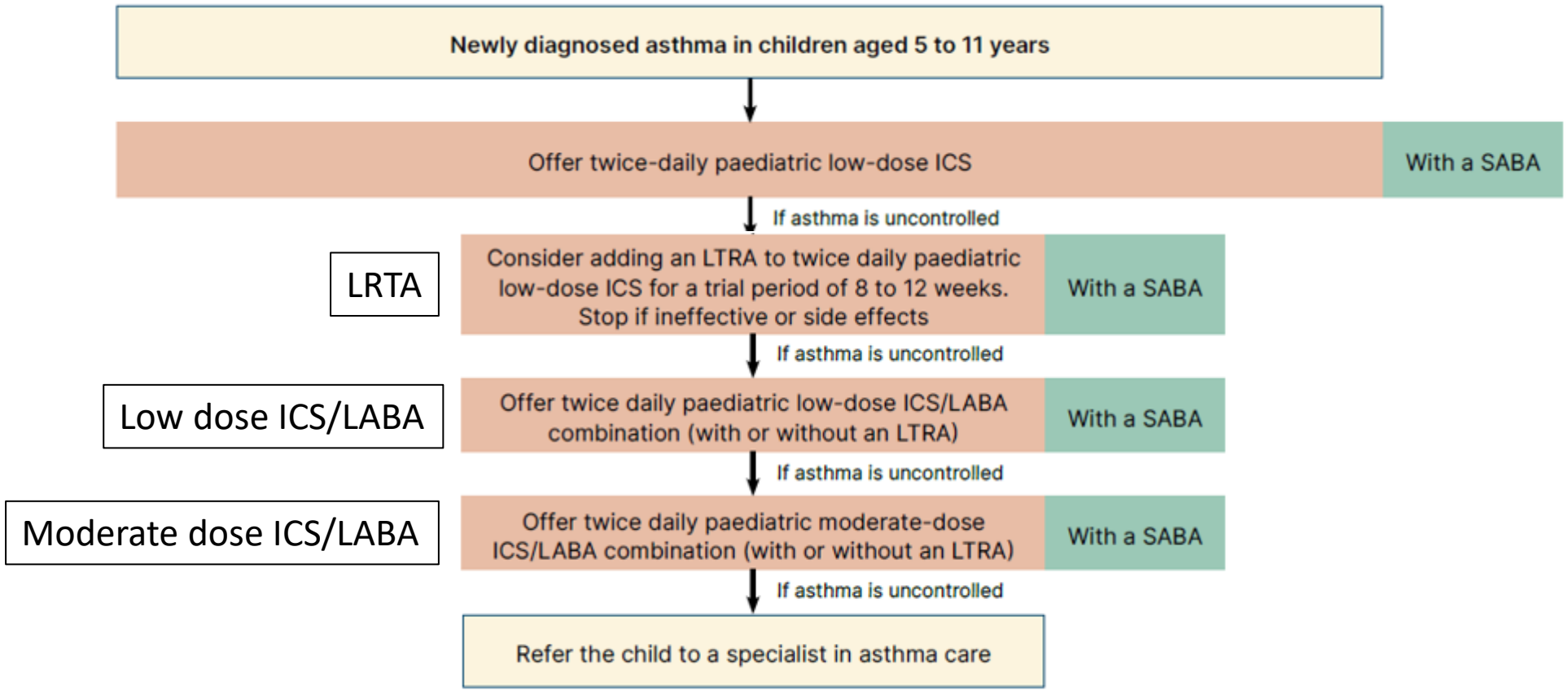
BTS ISBN: 978-1-917619-29-5. NICE ISBN: 978-1-4731-6640-0. SIGN ISBN: 978-1-909103-98-6.

Conventional Regime



MART Regime

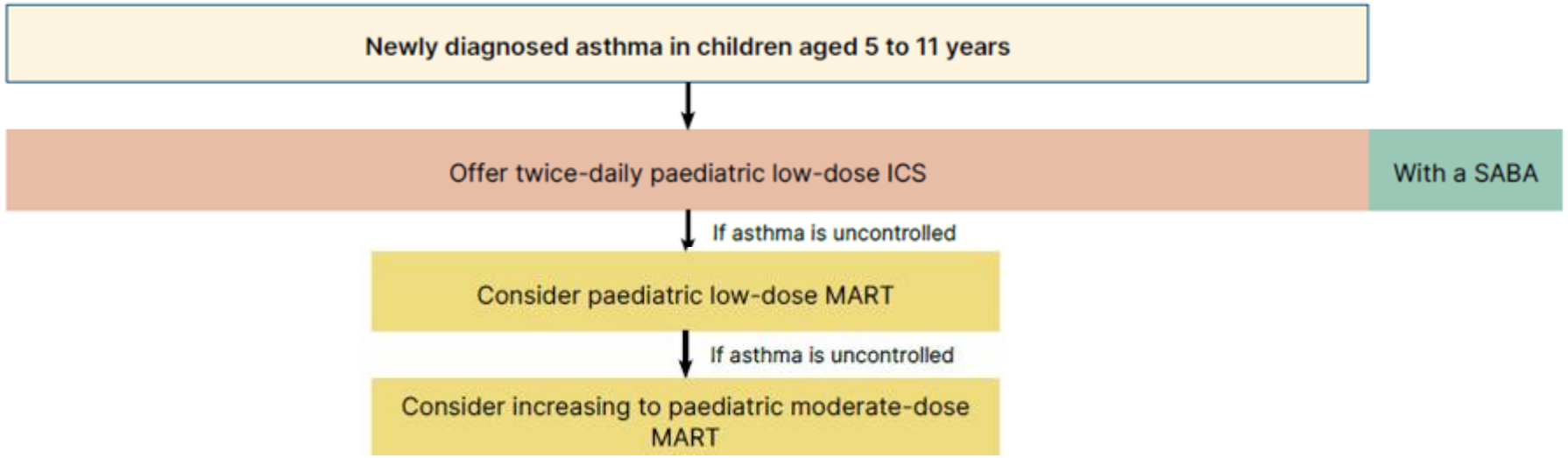


Table 2. ICS dosages for children aged 5 to 11 years

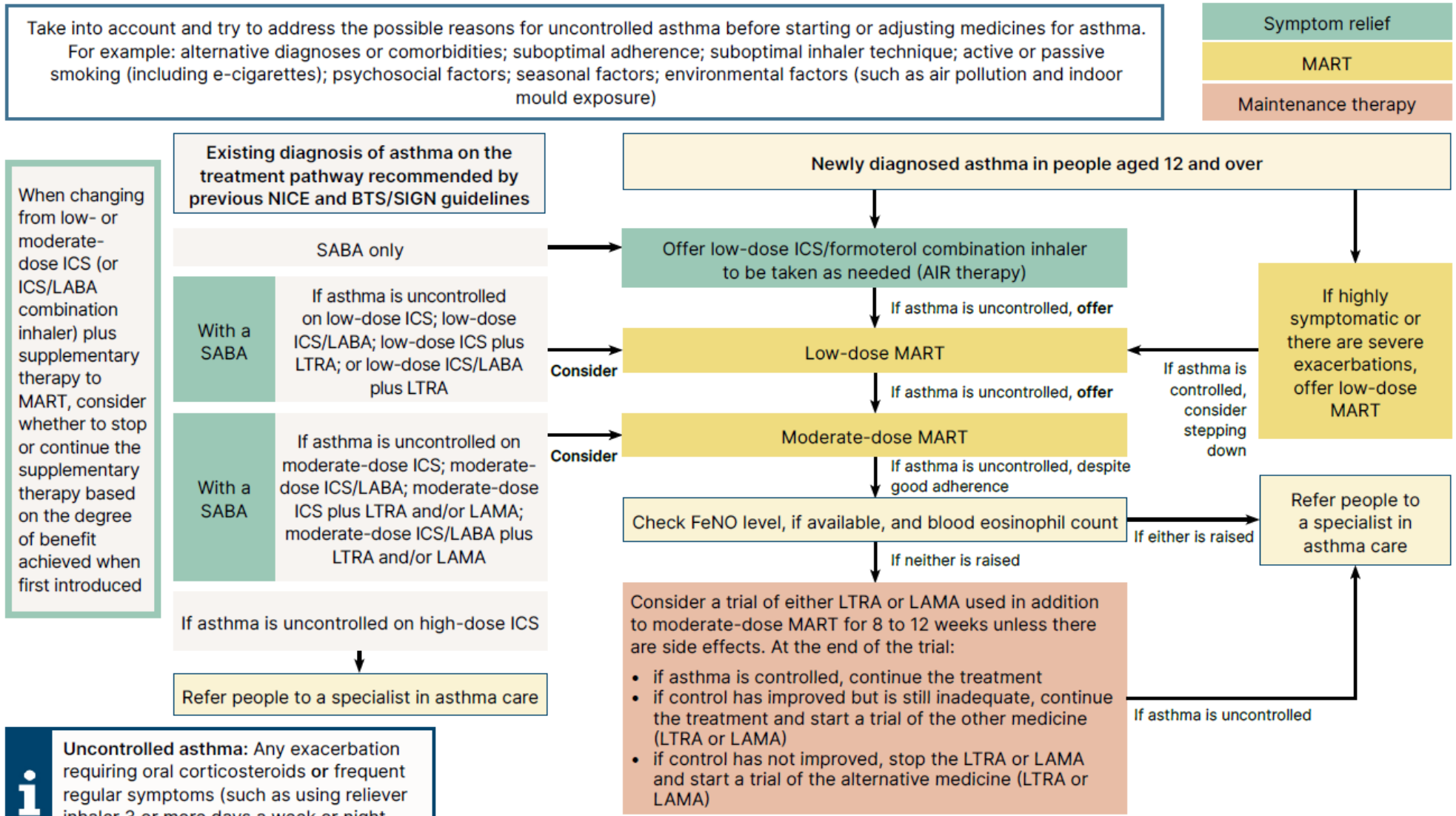
	Paediatric low dose	Paediatric moderate dose	Paediatric high dose
Budesonide			
Dry powder inhalers	100 to 200 micrograms per day as a singe dose or in 2 divided doses	300 to 400 micrograms per day as a single dose or in 2 divided doses	500 to 800 micrograms per day in 2 divided doses

GINA Dosing

Step 3 very low dose MART	Step 4 low dose MART	Max puffs dose per 24 hours
100mcg	200mcg	8 puffs 800 / 48mcg

Algorithm C: Pharmacological management of asthma in people aged 12 years and over

BTS, NICE and SIGN guideline on asthma



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BTS ISBN: 978-1-917619-28-8. NICE ISBN: 978-1-4731-6639-4. SIGN ISBN: 978-1-909103-97-9.

Concerns About SABA Overuse

ERJ OPEN RESEARCH
ORIGINAL RESEARCH ARTICLE
A. MORGAN ET AL.

Short-acting β_2-agonists and exacerbations in children with asthma in England: SABINA Junior

- **Take home messages:**

1. Children prescribed ≥ 3 SABA cannisters per year had a at least a 2-fold higher risk of an asthma attack
2. >30% of children were prescribed SABA only
3. In those prescribed ICS the median proportion of days covered by ICS was 33%

Regular or frequent use of SABA, even for 1-2 weeks is associated with adverse effects

- β-receptor downregulation, decreased bronchoprotection, rebound hyperresponsiveness, decreased bronchodilator response
- Increased allergic response, and increased eosinophilic airway inflammation
- Inducement of proinflammatory pathways (RV and IL-6)

Patel M, Clin Exp Allergy 2013
Johnston SL, Thorax 2009
Edwards MR, J Biol Chem 2007
Hancox, Respir Med 2000
Aldridge, AJRCCM 2000
Stanford, AAAI 2012

Adherence

Adherence to maintenance treatment is poor – children fall back on their reliever

=

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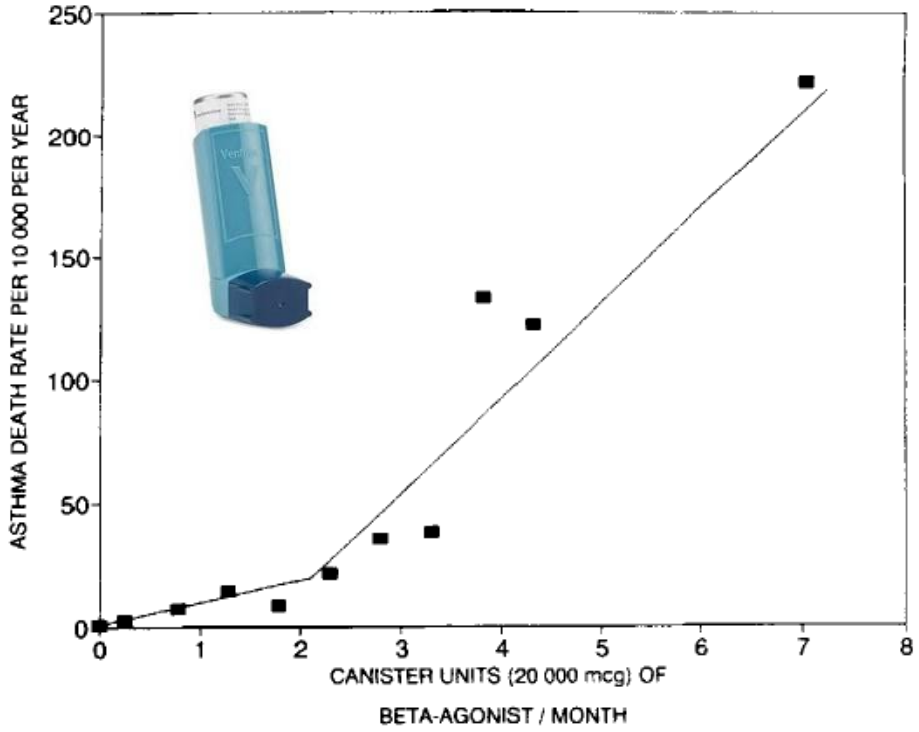
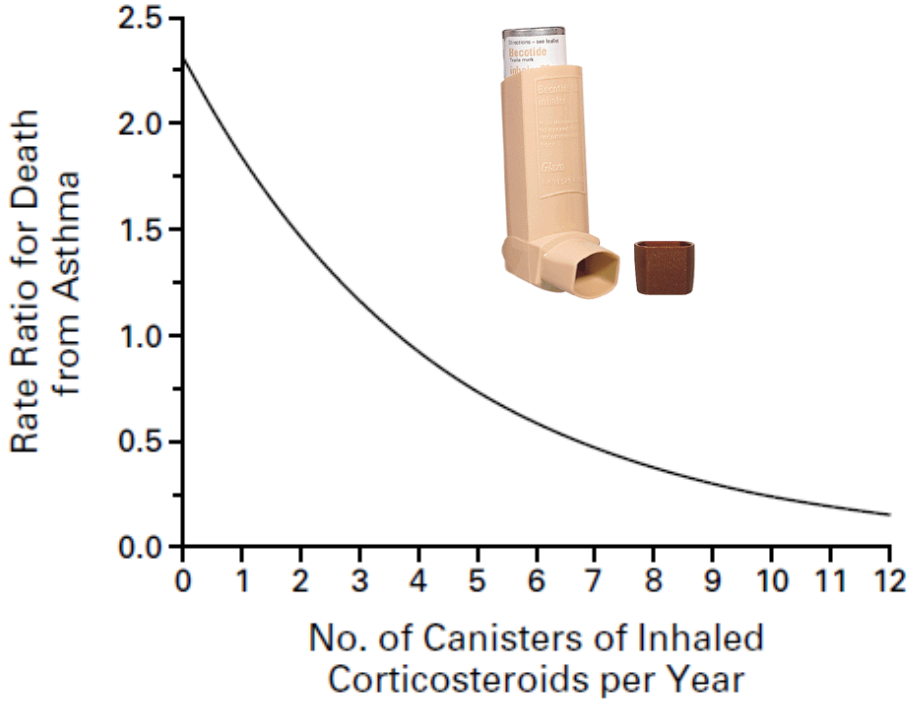
Increased use of SABA associated with increased risk of death



Suissa AJRCCM, 1994:149;604-610

Increased use of ICS associated with decreased risk of death



Suissa NEJM,2000:343;332-326

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BTS, NICE and SIGN guideline on asthma

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Symptom relief

MART

Maintenance therapy

Ne

Able t

Consider paediatric low-

If asth

Consider increasing to paediatr MART

If asth

Refer the child to a specialist

In November 2024, no asthma inhalers were licensed for MART in children under 12, so use would be off-label

ABA

ABA

ABA

ABA

For guidance on dosages for paediatric low-dose ICS, see inhaled corticosteroid doses for the BTS, NICE and SIGN asthma guideline

Refer the child to a specialist in asthma care

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ICS, inhaled corticosteroid; **LABA**, long-acting beta$_2$ agonist; **LTRA**, leukotriene receptor antagonist; **MART**, maintenance and reliever therapy (using ICS/formoterol combination inhalers); **SABA**, short-acting beta$_2$ agonist.

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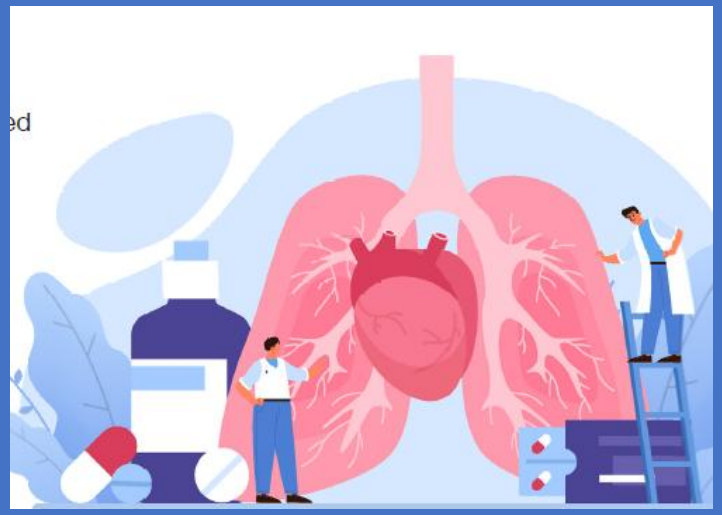


Consensus recommendations for the practical application of the

NICE/BTS/SIGN 2024 asthma guidance on MART therapy in children and young people

It is therefore recommended that MART should only be used in the 5-11 years age group if the following criteria are met:

1. The healthcare professional explaining, prescribing and implementing the MART regime is trained to tier 3 level or above according to the 'National Capabilities Framework for Professionals who Care for Children and Young People with Asthma'

2. If using a dry powder device, a formal assessment of the ability of the CYP to generate adequate inspiratory flow for the device to be used has been undertaken. (e.g. using the In-Check™ DIAL G16 Inhaler Technique Training and Assessment Tool or an inhaler device whistle)

3. Extra time has been allocated for the consultation to allow for adequate explanation and education of the MART regime and to complete and explain an associated MART Personalised Asthma Action Plan (PAAP): Find examples at: BeatAsthma, LALIG and ALUK

4. There is infrastructure to allow for closer monitoring and more regular surveillance than for those on conventional therapy e.g. capacity for more frequent follow up and prescribing alerts for higher-than-expected use. This is to ensure patient understanding and adequate inhaler technique, effectiveness of the regime and review potential side effects of steroid toxicity or from higher dose formoterol use.

Suggested dosing and devices: Children (5 -11 Years)

Primary Care

MART Pathway

review the diagnosis and modifiable factors before increasing treatment

	pMDI and spacer	DPI
Newly diagnosed Low dose ICS + SABA	Clenil 50 or Soprobec 50 1 or 2 inhalations twice daily + SABA for relief	Pulmicort Turbohaler 100: Budesonide easyhaler 100 1 inhalation once or twice per day or Flixotide Accuhaler 50 1 inhalation twice daily + SABA for relief
If uncontrolled Low dose MART	Not Recommended* If not able to use a DPI device either remain on the conventional pathway or refer to secondary care	⚠ Symbicort 100/6 ⚠ Fobumix 80/4.5** 1 inhalation once or twice daily (maintenance) + 1 inhalation for relief (maximum 8 inhalations in total/24hrs, max 4 at any one time)***
If uncontrolled Moderate dose MART	Not Recommended: REFER	Not Recommended: REFER

Suggested dosing and devices: Children (5 -11 Years)

Secondary Care

MART Pathway

review the diagnosis and modifiable factors before increasing treatment

	pMDI and spacer	DPI
Newly diagnosed: Paediatric Low dose ICS + SABA	Clenil 50 or Soprobec 50 1 or 2 inhalations twice daily + SABA for relief	Pulmicort Turbohaler 100: Budesonide easyhaler 100 1 inhalation once or twice per day or Flixotide Accuhaler 50 1 inhalation twice daily + SABA for relief
If uncontrolled: Paediatric Low dose MART	⚠ Symbicort 100/3* 1 inhalation twice daily or 2 inhalations once daily Plus 2 inhalations for relief	⚠ Symbicort 100/6 ⚠ Fobumix 80/4.5** 1 inhalation once or twice daily (maintenance) + 1 inhalation for relief (maximum 8 inhalations in total/24hrs, max 4 at any one time)***
If uncontrolled: Paediatric Moderate dose MART	⚠ Symbicort 100/3* 2 inhalations twice daily (maintenance)	⚠ Symbicort 100/6* or or ⚠ Fobumix 80/4.5* 2 inhalations twice daily (maintenance)
	+ 2 inhalations for relief (maximum 16 inhalations in total/24hrs, max 8 at any one time) !	**+ 1 inhalation for relief (maximum 8 inhalations in total/24hrs, max 4 at any one time) *** **

Adults & young people (12 years+)

Primary Care

review the diagnosis and modifiable factors before increasing treatment

	pMDI and spacer	DPI
AIR	⚠ Symbicort 100/3	Symbicort 200/6 or DuoResp Spiromax 160/4.5 or Wockair 160/4.5 Foburnix 160/4.5
Low dose MART	Symbicort 100/3 2 inhalations once or twice daily (maintenance)	Symbicort 100/6 Foburnix 80/4.5 1 inhalation twice daily (maintenance) Symbicort 200/6 or Foburnix 160/4.5 or Duoresp Spiromax 160/4.5 or Wockair 160/4.5 1 inhalation once or twice daily (maintenance)
Mod dose MART	Symbicort 100/3 4 inhalations twice daily (maintenance)	Symbicort 200/6 or Foburnix 160/4.5 or Duoresp Spiromax 160/4.5 or Wockair 160/4.5 2 inhalations twice daily (maintenance)
	+2 inhalations for relief, Max 24 in one day, max 12 at any one time*	**+ 1inhalation for relief, max 12 in one day, max 6 at any one time****

Medi-cation	Picture	Type	Age 6-11 years			Age 12-17 years		
			AIR	Paediatric Low dose MART	Paediatric Mod dose MART	AIR	Low dose MART	Mod dose MART
Symbicort 100/3		MDI	Not licensed Not recom-mended	Not licensed Recommend-ed according to HCP competencies	Not licensed Recommend-ed according to HCP competencies	Not licensed Recommend-ed according to HCP com-petencies	Licensed	Licensed
Symbicort turbohaler 100/6		Dry powder inhaler	Not licensed Not recom-mended	Not licensed Recommend-ed according to HCP competencies	Not licensed Recommend-ed according to HCP competencies	Not licensed Not recommend-ed	Licensed	Licensed
Fobumix Easyhaler 80/4.5*		Dry powder inhaler	Not licensed Not recom-mended	Not licensed Recommend-ed according to HCP competencies	Not licensed Recommend-ed according to HCP competencies	Not licensed Not recommend-ed	Licensed	Licensed
Fobumix Easyhaler 160/4.5		Dry powder inhaler	Not licensed Not recom-mended	Not licensed Not recommended	Not licensed Recommend-ed according to HCP competencies	Licensed	Licensed	Licensed
Symbicort turbohaler 200/6		Dry powder inhaler	Not licensed Not recom-mended	Not licensed Not recommended	Not licensed Not recommended	Licensed	Licensed	Licensed
Duoresp spiromax 160/4.5		Dry powder inhaler	Not licensed Not recom-mended	Not licensed Not recommended	Not licensed Not recommended	Licensed	Licensed	Licensed
WokAir 200/6		Dry powder inhaler	Not licensed Not recom-mended	Not licensed Not recommended	Not licensed Not recommended	Licensed	Licensed	Licensed

MART Emergency Management:

Any CYP on an AIR or MART regime should have corresponding personalised asthma action plan (PAAP).

This plan should outline the number of doses a CYP can have in the different zones, the maximum dose they can have at any one time and the maximum total dose they can have in a 24-hour period. Patients should be advised to seek an urgent medical review if they are regularly using close to their maximum doses.

If a child/young person in the 'red zone' remains symptomatic having used their max dose of MART at any one time, they should call 999.

If needed, they can repeat their 'maximum set of doses at any one time' whilst waiting for the ambulance to come.

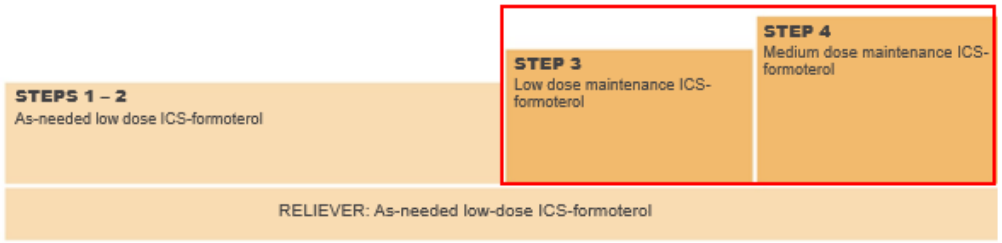
There is no role for the use of SABA in an AIR or MART PAAP. The one exception to this is if the child/young person is in a situation where their MART inhaler is not available (E.g in school) treatment should be with SABA in the conventional way.

If a child/young person on a MART regime has had SABA treatment as part of an emergency hospital admission for an acute exacerbation, they should be transferred back from SABA to their MART regime according to their MART PAAP where possible before discharge so as to allow treatment to be gradually reduced at home according to their MART PAAP/symptoms.

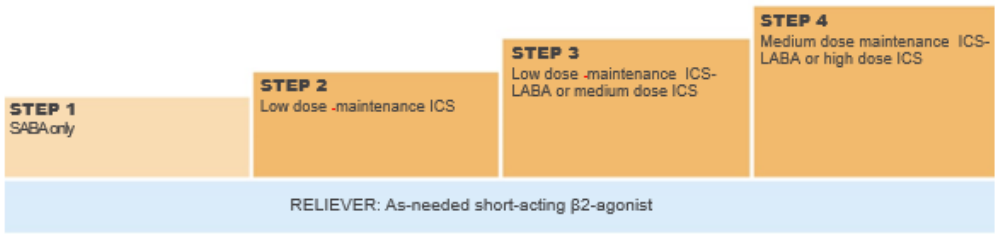
CARE-UK
ASTHMA STUDY

https://careukstudy.uk/

AIR As needed or part of MART:
ICS/formoterol
(**intervention)**



Current standard of care:
SABA +/ - ICS
(**control)**



- 1352 children (aged 6 – 11 years) enrolled across 20 – 25 sites in UK
- Clinician diagnosed asthma
- Prescribed SABA as a reliever

Population-level vs patient-level treatment decisions

Choosing between treatment options at a population level

(e.g., national formularies, health maintenance organizations, national guidelines)

The 'preferred' medication at each step is the best treatment for most patients, based on:

- Efficacy
- Effectiveness
- Safety

Mainly based on evidence about symptoms and exacerbations (from randomized controlled trials, pragmatic studies and strong observational data)

- Access

Population-level availability and cost

There are different population-level recommendations by age-group (adults/adolescents, children 6–11 years, children 5 years and younger). For patients with severe asthma, there are also different population-level recommendations depending on the inflammatory phenotype.

Choosing between controller options for individual patients

Use shared decision-making with the patient or parent/caregiver to discuss the following:

1. Preferred medication

- What is the best medication for symptom control and risk reduction (as above)?

2. Patient characteristics or phenotype

- Does the patient have any factors that predict differences in risk or treatment response, compared with other patients, e.g., smoking; SABA over-use; exacerbation history; high FeNO or eosinophils; environmental exposures; comorbidities?

3. Patient views

- What are the patient's goals, beliefs and concerns about asthma and its treatment?

4. Practical issues

- For the preferred medication(s), which inhalers are available to this patient?
- Can they use the inhaler correctly after training?
- Can they afford the medication?
- Adherence – how often are they likely to take the medication?
- If more than one inhaler is suitable for the patient, which has the lowest environmental impact?

Current Biologics

Class	Name	Age	Asthma indication	Other indications
Anti-IgE	Omalizumab (SC)	≥6 years	Severe allergic asthma	Nasal polyposis, chronic spontaneous urticaria
Anti-IL5 Anti-IL5R	Mepolizumab (SC) Reslizumab (IV) Benralizumab (SC)	≥6 years ≥18 years ≥6 years (FDA) ≥18 years EMA)	Severe eosinophilic/Type 2 asthma	Mepolizumab: EGPA, CRSwNP, hypereosinophilic syndrome
Anti-IL4R	Dupilumab (SC)	≥6 years	Severe eosinophilic/Type 2 asthma, or maintenance OCS	Moderate-severe atopic dermatitis, CRSwNP
Anti-TSLP	Tezepelumab (SC)	≥12 years	Severe asthma	

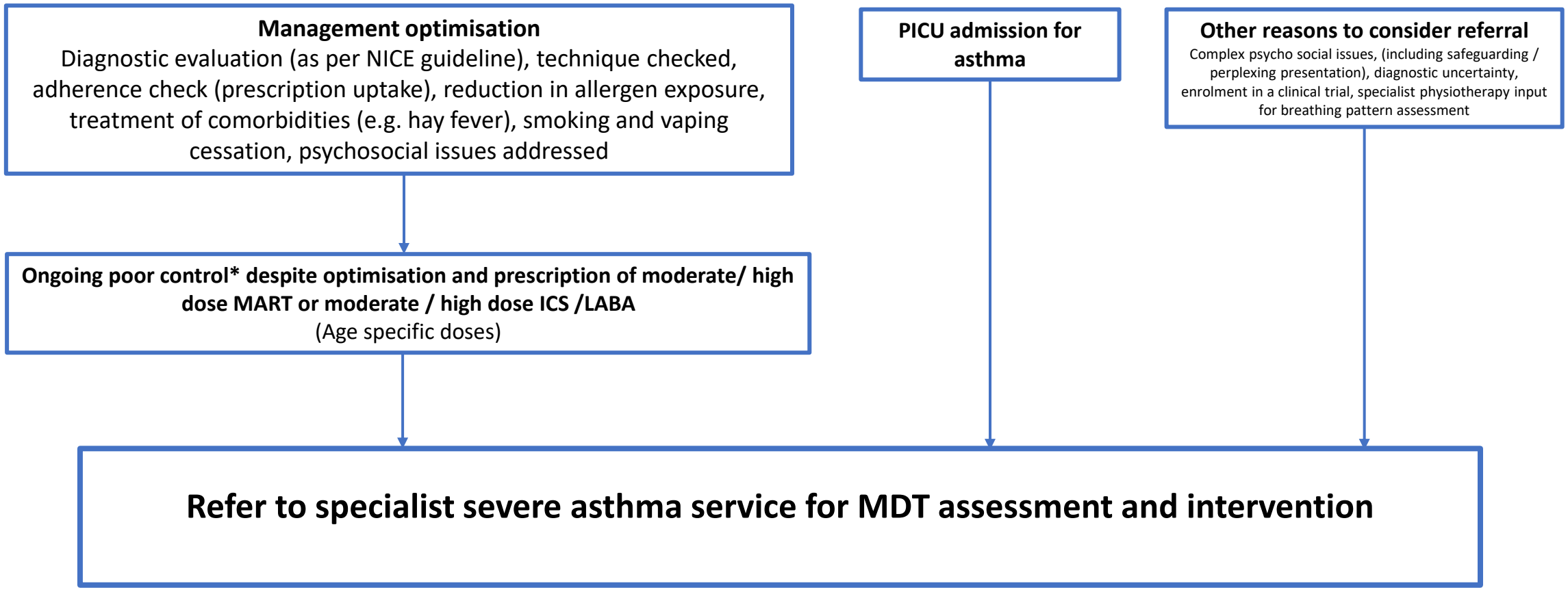
CRSwNP : chronic rhino-sinusitis with nasal polyps

Healthcare Systems

Standards of Care

https://bprs.co.uk/2025/08/22/standards-for-a-paediatric-respiratory-service-in-secondary-care/

Referral from secondary care to specialist severe asthma service



***Indicators of poor asthma control**

- Recurrent attacks in the past year (≥2 courses OCS)
- ≥1 hospital attendance or ED attendance per year
- Persistent symptoms (ACT or cACT score of <20)
- Prescription of ≥3 SABA inhalers in past year
- Persistent airflow obstruction (FEV1 <80% or FEV1/FVC <LLN post bronchodilator)

Summary

- Significant changes in asthma management since #AskAboutAsthma2024
- Access to diagnostic hubs for children in essential – all tests should be available
- There is a convincing body of evidence for anti-inflammatory reliever therapy either as needed or as part of MART for adolescents
- Lack of evidence and licensed inhalers for children <12years, important to have robust efficacy and safety data
- Systems and training to deliver optimised asthma care