

Asthma Guidance for Children & Young People (CYP) in Bath & Northeast Somerset, Swindon & Wiltshire (BSW)

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Introduction

This guide is for healthcare professionals looking after children and young people (CYP) with suspected asthma or recurrent viral-induced wheeze. In keeping with national and international guidance, we have differentiated age groups into 3 categories:

- Under 5 years
- 5-12 years old
- 12 years or older

For each category we have suggested a diagnostic pathway, medications available and criteria for referral to secondary care centred around the BTS/NICE/SIGN asthma guidelines published in November 2024.

Everyone who encounters CYP with asthma should understand asthma and how to manage it. A <u>national tiered training package</u> has been developed and a minimum of level 3 training would expected for those using this guidance.

Every child should have a <u>Personalised Asthma Action Plan</u> – this should be given to the parents and any childcare settings as well as being documented in the child's medical records. Any subsequent changes to this plan will require a new one to be issued with the most up to date accurate information.

Inhaler technique must be checked in person and supplemented with videos available on the Asthma UK website for the various devices.

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Under 5 Years - Management

Algorithm E: Pharmacological management of asthma in children under 5 BTS, NICE and SIGN guideline on asthma

Symptom relief 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; passive smoking (including Maintenance therapy e-cigarettes); seasonal factors; environmental factors (such as air pollution and indoor mould exposure) Children under 5 with suspected asthma and symptoms indicating need for maintenance therapy or severe acute episodes of difficulty breathing and wheeze Consider 8 to 12 week trial of twice daily paediatric low-dose ICS With a SABA For guidance on dosages for paediatric low-dose ICS, see If symptoms do not resolve during trial If symptoms resolve during trial inhaled corticosteroid doses for the BTS, NICE and SIGN Check inhaler technique and adherence, whether Consider stopping ICS and SABA treatment after asthma guideline there is an environmental source of their symptoms 8 to 12 weeks and review symptoms after a further and review if an alternative diagnosis is likely 3 months Refer the child to a specialist in asthma care if none If symptoms recur after review or acute episode of these explain treatment failure requires systemic corticosteroids or hospitalisation Restart regular ICS. Begin at a paediatric low dose and With a SABA titrate up to a paediatric moderate dose if needed Consider a further trial without treatment after reviewing the child within 12 months If asthma is uncontrolled Consider an LTRA in addition to the ICS for a trial of 8 With a SABA Uncontrolled asthma: Any exacerbation to 12 weeks, then stop if ineffective or side effects requiring oral corticosteroids or frequent If asthma is uncontrolled regular symptoms (such as using reliever inhaler 3 or more days a week or night-Stop the LTRA and refer the child to a specialist in time waking 1 or more times a week) asthma care for further investigation and management ICS, inhaled corticosteroid; LTRA, leukotriene receptor antagonist; SABA, short-acting beta, agonist. NICE National Institute for Health and Care Excellence Thoracic © BTS, NICE and SIGN 2024. All rights reserved. Last updated November 2024.

BTS ISBN: 978-1-917619-30-1, NICE ISBN: 978-1-4731-6641-7, SIGN ISBN: 978-1-909103-99-3,

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Under 5 Years – Prescribing Options; Low Dose Inhaled Corticosteroids (ICS):

Brand Name	Clenil Modulite® 100mcg/dose Metered Dose Inhaler	Flixotide 50mcg/dose Evohaler®
Drug Name	Beclometasone dipropionate (BDP) 100 micrograms per 1 dose	Fluticasone propionate 50 micrograms per 1 dose (equivalent to 100mcg of BDP)
Dose	One puff twice daily via appropriate spacer	One puff twice daily via appropriate spacer
Image	Genil No wallte 110 mg Inheles PRE VENTER	Flixotide 50 micrograms Evohaler fluticasone propionate Pressurbed inhalation suppressions 120 metered actuations
Number of	200 actuations	120 actuations
actuations (How long it will last)	(Lasts 100 days if 1 puff twice daily; 4 per year)	(Lasts 2 months if 1 puff twice daily; 6 per year)
Cost	£7.42 (7.42p/day)	£6.53 (10.88p/day)
License	2-11 years old	From 4 years old



Under 5 Years – Prescribing Options; Moderate Dose ICS:

Brand Name	Clenil Modulite® 100mcg/dose Metered Dose Inhaler	Flixotide 50mcg/dose Evohaler®
Drug Name	Beclometasone dipropionate (BDP) 100 micrograms per 1 dose	Fluticasone propionate 50 micrograms per 1 dose (equivalent to 100mcg of BDP)
Dose	Two puffs twice daily via appropriate spacer	Two puffs twice daily via appropriate spacer
Image	Genil If waiting IN men Intele ENE VENTER	Flixotide 50 micrograms Evohaler fluticasone propionate Pressurined inhabitation propionate Pressurined inhabitation propionate Tax meterred actualitiers
Number of actuations (How long it will last)	200 actuations (Lasts 50 days if 2 puffs twice daily; 7 per year)	120 actuations (Lasts 1 month if 2 puffs twice daily; 12 per year)
Cost	£7.42 (14.84p/day)	£6.53 (21.76p/day)
License	2-11 years old	From 4 years old



Under 5 Years – Prescribing Options; Leukotriene Receptor Antagonist:

Brand Name	Granules 4mg sachets sugar-free	Chewable tablets 4mg sugar free
Drug Name	Montelukast	Montelukast
Dose	4mg once daily in the evening	4mg once daily in the evening
Image	N/A	N/A
Number of doses	28 sachets	28 tablets
(How long it will last)	(28 days)	(28 days)
Cost	£6.91 (24.79p/day)	£1.02 (3.64p/day)
License	6 months to 5 years	From 4 years old

If prescribing Montelukast, please provide verbal and written safety net information about the possible side effects and document this in the medical records. The <u>information leaflet from Medicines for Children</u> is recommended and is important to be aware of the update in relation to the risk of neuropsychiatric reactions from the <u>Medicines and Healthcare products Regulatory Agency</u> (2019).



Under 5 Years – Threshold for Secondary Care Referral

- Clinical/diagnostic uncertainty or if symptoms do not resolve during 8-12 week trial of twice daily low-dose ICS with good inhaler technique and adherence to prescribed medication
- Features suspicious of alternate diagnoses:
 - Red Flags: Failure to thrive, unexplained clinical findings (e.g. focal signs, abnormal voice or cry, dysphagia, inspiratory stridor), symptoms since birth, perinatal respiratory problems, excessive vomiting, severe upper respiratory tract infections, persistent wet or productive cough, nasal polyps, family history of unusual respiratory disease
 - Alternative Diagnoses: Cystic fibrosis/bronchiectasis, Primary Ciliary Dyskinesia, Chronic Lung Disease of Prematurity, Developmental/congenital lung anomaly, Neuromuscular disorders, Protracted Bacterial Bronchitis, Recurrent aspiration/reflux, Immune/Host Defence disorders, Pertussis, Tracheal/laryngeal disorders, Tuberculosis, Missed foreign body
- Acute asthma/wheeze exacerbation requiring admission
- Severe or life-threatening exacerbation (for example, if admitted to another hospital whilst away) all CYP admitted to acute hospitals within BSW should have local follow-up arranged and all CYP admitted to Paediatric Intensive Care should have local follow-up alongside tertiary care paediatric respiratory follow-up from either the Bristol or Southampton teams
- 2 or more courses of oral steroids in the last 12 months.
- Consider lower thresholds if any safeguarding concerns or family living in poverty (particularly in the lowest 2 deciles for Index of Multiple Deprivation (IMD) – free IMD postcode checker here)

If there are grey areas or you are unsure, please use the Cinapsis advice and guidance service to discuss with your local paediatric team.

For referrals, please use the Electronic Referral System (ERS) pathway.

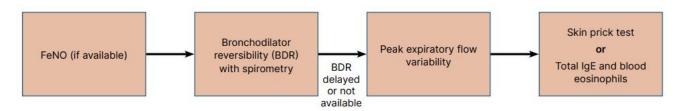


5-16 Years - Diagnosis

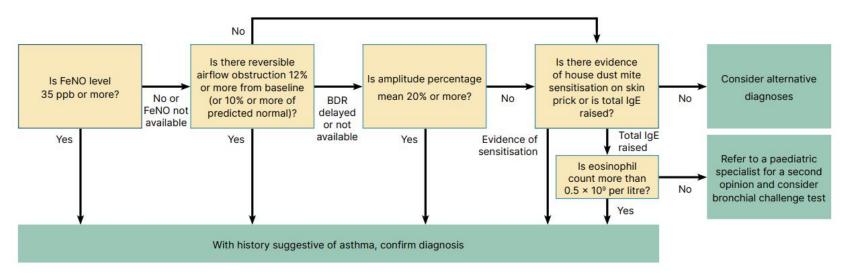
Algorithm B: Objective tests for diagnosing asthma in children aged 5 to 16 with a history suggesting asthma

BTS, NICE and SIGN guideline on asthma

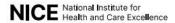
Order of tests



Interpretation of test results









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5-16 Years – Diagnosis – Fractional Excretion of Nitric Oxide (FeNO)

Fractional Excretion of Nitric Oxide (FeNO), an indicator of airway inflammation, where available is the first investigation recommended by the updated national asthma guidelines.

A FeNO of 35 parts per billion (ppb) is considered a positive test and with a history suggestive of asthma, confirms the diagnosis.

5-16 Years – Diagnosis – Spirometry

NHSE/I recommend spirometry should be attempted and is usually possible in most CYP aged 5 or over. Specialist training is required for healthcare professionals to perform spirometry in children and young people under the age of 12 years, and it should only be performed if competent to do so. For CYP 12 years or older, healthcare professionals deemed competent in testing adults would be deemed capable to perform the tests. Further information on quality assured diagnostic spirometry as well as available training courses from the Association for Respiratory Technology & Physiology are available here.

Bronchodilator Reversibility (BDR)

It is recommended to perform BDR if the Forced Expiratory Volume in 1 second (FEV₁) is less than 70% predicted (or less than the estimated lower limit of normal) and/or if the FEV₁/Forced Vital Capacity (FVC) ratio is less than 70% predicted (or less than the estimated lower limit of normal).

400 micrograms of Salbutamol (equivalent of 4 puffs of 100 micrograms Salbutamol) should be administered and then spirometry repeated 20 minutes later. An improvement in FEV₁ of 12% or more is considered a positive BDR test and supportive of an asthma diagnosis.



5-16 Years – Diagnosis – Peak Flow Monitoring

If diagnostic FeNO and spirometry with BDR is unavailable/unsuccessful/delayed, monitor peak flow variability for 2 to 4 weeks. A diary or digital app should be used to record values and measure variability. Variability over 20% is suggestive of asthma and would confirm the diagnosis.

5-16 Years – Diagnosis – Skin Prick Testing +/or Total IgE and blood eosinophils

If diagnostic tests remain unclear or not suggestive of asthma, skin prick testing for house dust mite and blood tests for total IgE and eosinophils (part of a full blood count) should be arranged. Current provision across BSW ICB would require a referral to the local allergy services based at RUH, GWH and SFT. Paediatric phlebotomy local service pathways should be followed for organising the blood tests.



5-12 Years - Management

Algorithm D: Pharmacological management of asthma in children aged 5 to 11 years BTS, NICE and SIGN guideline on asthma

Symptom relief 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 MART smoking (including e-cigarettes); psychosocial factors; seasonal factors; environmental factors (such as air pollution and indoor mould exposure) Maintenance therapy Newly diagnosed asthma in children aged 5 to 11 years Offer twice-daily paediatric low-dose ICS With a SABA For guidance on dosages for paediatric low-dose ICS, see If asthma is uncontrolled inhaled corticosteroid doses for the BTS, NICE and SIGN Assess ability to manage MART regimen asthma quideline Able to manage MART regimen Unable to manage MART regimen Consider adding an LTRA to twice daily paediatric Consider paediatric low-dose MART low-dose ICS for a trial period of 8 to 12 weeks. With a SABA Stop if ineffective or side effects If asthma is uncontrolled If asthma is uncontrolled Consider increasing to paediatric moderate-dose Offer twice daily paediatric low-dose ICS/LABA MART With a SABA combination (with or without an LTRA) If asthma is uncontrolled If asthma is uncontrolled Uncontrolled asthma: Refer the child to a specialist in asthma care Offer twice daily paediatric moderate-dose With a SABA Any exacerbation ICS/LABA combination (with or without an LTRA) requiring oral If asthma is uncontrolled corticosteroids or frequent regular symptoms (such as In November 2024, Refer the child to a specialist in asthma care using reliever inhaler no asthma inhalers were 3 or more days a week or licensed for MART in night-time waking 1 or more children under 12, so times a week) use would be off-label ICS, inhaled corticosteroid; LABA, long-acting beta, agonist; LTRA, leukotriene receptor antagonist; MART, maintenance and reliever therapy (using ICS/formoterol combination inhalers); SABA, short-acting beta, agonist.

BSW Asthma Guide for CYP

CE National Institute for Health and Care Excellence

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5-12 Years – Prescribing Options; Low Dose ICS (MDI & Spacer):

Brand Name	Clenil Modulite® 100mcg/dose Metered Dose Inhaler	Flixotide 50mcg/dose Evohaler®
Drug Name	Beclometasone dipropionate (BDP) 100 micrograms per 1 dose	Fluticasone propionate 50 micrograms per 1 dose (equivalent to 100mcg of BDP)
Dose	One puff twice daily via appropriate spacer	One puff twice daily via appropriate spacer
Image	Signal Countries of the	Flixotide* 50 micrograms Evohaler fluticasone propionate Pressurined inhalation propensions 120 meterred accusations
Number of actuations (How long it will last)	200 actuations (Lasts 100 days if 1 puff twice daily; 4 per year)	120 actuations (Lasts 2 months if 1 puff twice daily; 6 per year)
Cost	£7.42 (7.42p/day)	£6.53 (10.88p/day)
License	2-11 years old	From 4 years old



5-12 Years – Prescribing Options; Low Dose ICS (MDI Breath-Activated):

Brand Name	Qvar 50 Autohaler®
Drug Name	Beclometasone dipropionate (BDP) 50 micrograms per 1 dose
Dose	One puff twice daily
Image	Constructions TEIVIO Qvar 50 Autohaler Beclometasone Dipropionate CFC FREE Breath-actuated aerosol Inhalation use Preventer 200 actuations
Number of	200 actuations
actuations	(Lasts 100 days if 1 puff twice daily; 4 per year)
(How long it will	
last)	
Cost	£7.87 (7.87p/day)
License	From 5 years



5-12 Years – Prescribing Options; Low Dose ICS (Dry Powder Inhalers; DPIs):

Brand Name	Pulmicort 100 Turbohaler®	Flixotide 50mcg/dose Accuhaler®
Drug Name	Budesonide 100 micrograms per 1 dose	Fluticasone propionate 50 micrograms per 1 dose (equivalent to 100mcg of BDP)
Dose	One puff twice daily	One puff twice daily
Image	Pulmicort Turbohaler 100 budesonide 200 actuations	Flixotide* Accuhaler So micrograms fluticase dry porobr inhalation device Multi-dese dry porobr inhalation device 60 blisters
Number of actuations (How long it will last)	200 actuations (Lasts 100 days if 1 puff twice daily; 4 per year)	60 actuations (Lasts 1 month if 1 puff twice daily; 12 per year)
Cost	£14.25 (14.25p/day)	£4.00 (13.33p/day)
License	From 5 years old	From 4 years old



6*-12 Years – Prescribing Options; Leukotriene Receptor Antagonist:

Brand Name	Chewable tablets 5mg sugar free
Drug Name	Montelukast
Dose	5mg once daily in the evening
Image	N/A
Number of doses	28 tablets
(How long it will last)	(28 days)
Cost	£1.10 (3.92p/day)
License	From 6 years old

^{*}Note: the recommended dose for children aged 5 and below is 4mg; 5mg is recommended for children aged 6-14 years.

If prescribing Montelukast, please provide verbal and written safety net information about the possible side effects and document this in the medical records. The <u>information leaflet from Medicines for Children</u> is recommended and is important to be aware of the update in relation to the risk of neuropsychiatric reactions from the <u>Medicines and Healthcare products Regulatory Agency</u> (2019).



5-12 Years – Prescribing Options; Low Dose ICS & Long-Acting Beta-Agonist (LABA) Combination Inhaler (DPI):

Brand Name	Symbicort 100/6 Turbohaler®
Drug Name	Budesonide 100 micrograms/dose & Formoterol 6 micrograms/dose
Dose	One puff twice daily
Image	Symbicon Table Made Table Tabl
Number of actuations (How long it will last)	120 actuations (Lasts 60 days if 1 puff twice daily; 6 per year)
Cost	£28.00 (46.67p/day)
License	From 6 years



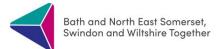
5-12 Years – Prescribing Options; Moderate Dose ICS (MDI & spacer):

Brand Name	Clenil Modulite® 100mcg/dose Metered Dose Inhaler	Flixotide 50mcg/dose Evohaler®
Drug Name	Beclometasone dipropionate (BDP) 100 micrograms per 1 dose	Fluticasone propionate 50 micrograms per 1 dose (equivalent to 100mcg of BDP)
Dose	Two puffs twice daily via appropriate spacer	Two puffs twice daily via appropriate spacer
Image	Gentl Albouting 100 mg lidates PREVENTER	Flixotide* 50 micrograms Evohaler fluticasone propionale Prosurbed subaldative suspension 120 necestred actuations
Number of actuations (How long it will	200 actuations (Lasts 50 days if 2 puffs twice daily; 8 per year)	120 actuations (Lasts 1 month if 2 puffs twice daily; 12 per year)
last)		
Cost	£7.42 (14.84p/day)	£6.53 (21.76p/day)
License	2-11 years old	From 4 years old



5-12 Years – Prescribing Options; Moderate Dose ICS (MDI Breath-Activated):

Brand Name	Qvar 50 Autohaler®
Drug Name	Beclometasone dipropionate (BDP) 50 micrograms per 1 dose
Dose	Two puffs twice daily
Image	Qvar 50 Autohaler Becometasone Dipropionate CFC FREE Breath-actuated aerosol Inhalation use Preventer 200 actuations
Number of actuations (How long it will last)	200 actuations (Lasts 50 days if 2 puffs twice daily; 8 per year)
Cost	£7.87 (15.74p/day)
License	From 5 years



5-12 Years – Prescribing Options; Moderate Dose ICS (Dry Powder Inhalers; DPIs):

Brand Name	Pulmicort 100 Turbohaler®	Flixotide 100mcg/dose Accuhaler®
Drug Name	Budesonide 100 micrograms per 1 dose	Fluticasone propionate 100 micrograms per 1 dose (equivalent to 200mcg of BDP)
Dose	Two puffs twice daily	One puff twice daily
Image	Pulmicort Turbohaler 100 budesonide 200 actuations	Flixotide Accuhaler 100 micrograms fluciasone propionate Audit-door dry poorder inhalation device 60 blisters
Number of actuations (How long it will last)	200 actuations (Lasts 50 days if 2 puffs twice daily; 8 per year)	60 actuations (Lasts 1 month if 1 puff twice daily; 12 per year)
Cost	£14.25 (28.50p/day)	£4.02 (13.40p/day)
License	From 5 years old	From 4 years old



5-12 Years – Prescribing Options; Moderate Dose ICS & Long-Acting Beta-Agonist (LABA) Combination Inhaler (MDI & Spacer):

Brand Name	Seretide 50 Evohaler®	
Drug Name	Fluticasone 50 micrograms/dose & Salmeterol 25	
	micrograms/dose	
Dose	Two puffs twice daily via appropriate spacer	
Image	Seretide 50 Evohaler 0 25 microgram per meterod door presumed inhabitor, supernison colmetrol/fluitasone propionate Education 25/27 Pulsesone 50/17 Prepioner 50/17 Prepio	
Number of	120 actuations	
actuations	(Lasts 30 days if 2 puffs twice daily; 12 per year)	
(How long it will		
last)		
Cost	£17.46 (58.20p/day)	
License	From 4 years	



5-12 Years – Prescribing Options; Moderate Dose ICS & Long-Acting Beta-Agonist (LABA) Combination Inhaler (DPI):

Brand Name	Symbicort 200/6 Turbohaler®	Seretide 100 Accuhaler®
Drug Name	Budesonide 200 micrograms/dose & Formoterol 6 micrograms/dose	Fluticasone proprionate 100 micrograms/dose & Salmeterol 50 micrograms/dose
Dose	One puff twice daily	One puff twice daily
Image	Symbicont land	ALLENA HANBURYS Seretides 100 ACCUPACING 19 Forms The second of the s
Number of actuations (How long it will last)	120 actuations (Lasts 60 days if 1 puff twice daily; 6 per year)	60 actuations (Lasts 30 days if one puff twice daily; 12 per year)
Cost	£28.00 (46.67p/day)	£17.46 (58.2p/day)
License	From 12 years (used off-label in younger children)	From 4 years



5-12 Years – Maintenance And Reliever Therapy (MART) or Anti-Inflammatory Reliever (AIR) regimes – see over 12 years guidance on pages 25-27 (same dosing but prescribed off-label in CYP under 12 years if assessed and suitable to use appropriate inhaler)



5-12 Years – Threshold for Secondary Care Referral

- Any "High Risk" patients as per Box B or "Red flag indicators for alternative diagnoses" as per Box C in the "Managing Asthma in Children aged 5-12 years (primary care)" pathway
 - o "High Risk" patients:
 - History of severe attacks
 - Poor health seeking behaviours amongst carers
 - Failure to recognise symptom severity
 - Poor adherence to treatment
 - Overuse of SABA (>1 inhaler/month)
 - Peanut allergy
 - o "Red flag indicators for alternative diagnoses":
 - Failure to thrive
 - Abnormal voice/cry
 - Stridor
 - Dysphagia
 - Persistent wet/productive cough
 - Nasal polyps
- Escalation to "Specialist therapies" in the treatment ladder (more than low dose ICS and LTRA or LABA)
- Clinical/diagnostic uncertainty
- Consider lower thresholds if any safeguarding concerns or family living in poverty (particularly in the lowest 2 deciles for Index of Multiple Deprivation (IMD) – free IMD postcode checker here).

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If there are grey areas or you are unsure, please use the Cinapsis advice and guidance service to discuss with your local paediatric team.

For referrals, please use the Electronic Referral System (ERS) pathway.



Over 12 Years - Management

Algorithm C: Pharmacological management of asthma in people aged 12 years and over BTS, NICE and SIGN guideline on asthma

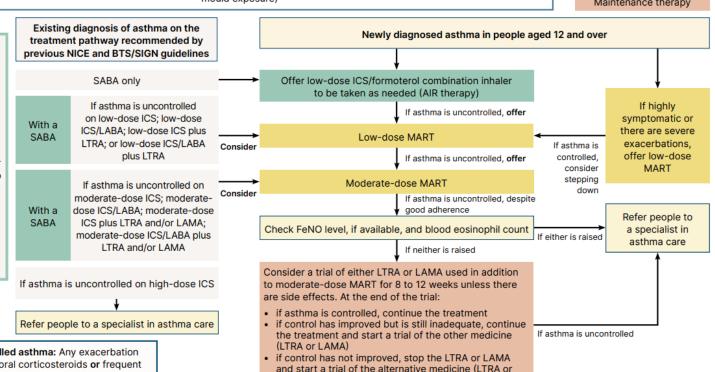
Take into account and try to address the possible reasons for uncontrolled asthma before starting or adjusting medicines for asthma. For example: alternative diagnoses or comorbidities; suboptimal adherence; suboptimal inhaler technique; active or passive smoking (including e-cigarettes); psychosocial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

Symptom relief

MART

Maintenance therapy

When changing from low- or moderatedose ICS (or ICS/LABA combination inhaler) plus supplementary therapy to MART, consider whether to stop or continue the supplementary therapy based on the degree of benefit achieved when first introduced

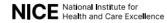


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Uncontrolled asthma: Any exacerbation requiring oral corticosteroids or frequent regular symptoms (such as using reliever inhaler 3 or more days a week or night-time waking 1 or more times a week)

ICS, inhaled corticosteroid; LABA, long-acting beta₂ agonist; LAMA, long-acting muscarinic receptor antagonist; LTRA, leukotriene receptor antagonist; MART, maintenance and reliever therapy (using ICS/formoterol combination inhalers); SABA, short-acting beta₂ agonist.







LAMA)

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Over 12 Years – Use of Dry Powder Inhalers – assessment and training resources

Brand	Patient Trainer Whistle for	Clement Clarke
Name	Symbicort 100/6 Turbohaler®	Dial G15 Inhaler Training Device
Image	Commission of the control of the con	CLEMENTS OF Life
Use	Single patient use	Multiple patient use
		Requires single patient use filters
Cost	Free	£55 per unit + filters
Additional	Request via:	Will require single use filters
details	medical.informationuk@astrazeneca.com	



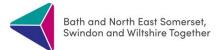
Over 12 Years – Prescribing Options; Low Dose ICS & Long-Acting Beta-Agonist (LABA) Combination Inhaler (DPI):

Brand Name	Symbicort 100/6 Turbohaler®	Fobumix Easyhaler 80/4.5
Drug Name	Budesonide 100 micrograms/dose & Formoterol 6 micrograms/dose	Budesonide 80 micrograms & Formoterol fumarate dihydrate 4.5 micrograms/dose
Dose	One puff twice daily (up to a maximum of 8 inhalations daily as part of MART) OR as needed (AIR)	One puff twice daily (up to a maximum of 8 inhalations daily as part of MART) OR as needed (AIR)
Image	Symbicort and the state of the	# Easyhaler* Fobumix Easyhaler® 80 micrograms/ 4.5 micrograms, Inhalation Powder budesonide 80 micrograms, fornoderof fuminate divydrate budesonide 80 micrograms, fornoderof fuminate divydrate 4.5 micrograms.
Number of	120 actuations	120 actuations
actuations	(Lasts 60 days if 1 puff twice daily; 6 per year)	(Lasts 60 days if 1 puff twice daily; 6 per year)
(How long it will last)	(Lasts 15 days if 8 puffs daily; 24 per year)	(Lasts 15 days if 8 puffs daily; 24 per year)
Cost	£28.00 (46.67p/day)	£21.50 (35.83p/day)
License	From 6 years; MART regimens from adolescents	From 6 years



Over 12 Years – Prescribing Options; Moderate Dose ICS & Long-Acting Beta-Agonist (LABA) Combination Inhaler (DPI):

Brand Name	Symbicort 200/6 Turbohaler®	Fobumix Easyhaler 160/4.5	Wockair 160/4.5
Drug Name	Budesonide 200 micrograms/dose & Formoterol 6 micrograms/dose	Budesonide 160 micrograms & Formoterol fumarate dihydrate 4.5 micrograms/dose	Budesonide 160 micrograms & Formoterol fumarate dihydrate 4.5 micrograms/dose
Dose	One puffs twice daily (up to a maximum of 8 inhalations daily as part of MART)	One puff twice daily (up to a maximum of 8 inhalations daily as part of MART)	One puff twice daily (up to a maximum of 8 inhalations daily as part of MART)
Image	Symbicort and a second a second and a second a second and	Economic States	Wockalk Lower Same Inhelition Powder, Pre-dispersed Budennichel Brownennichel Brownennichel
Number of	120 actuations	120 actuations	120 actuations
actuations (How long it	(Lasts 30 days if 1 puff twice daily; 12 per year)	(Lasts 30 days if 1 puff twice daily; 12 per year)	(Lasts 30 days if 1 puff twice daily; 12 per year)
will last)	(Lasts 15 days if 8 puffs daily; 24 per year)	(Lasts 15 days if 8 puffs daily; 24 per year)	(Lasts 15 days if 8 puffs daily; 24 per year)
Cost	£28.00 (46.67p/day)	£21.50 (35.83p/day)	£19.00 (31.67p/day)
License	From 12 years	From 12 years	From 12 years



Over 12 Years – Prescribing Options; Either add Long-acting muscarinic antagonist (LAMA) <u>OR</u> add Leukotriene receptor antagonist (LTRA)

Brand Name	Spiriva Respimat 2.5mcg SMI	Montelukast
Drug Name	Tiotropium	Montelukast
	(LAMA)	(LTRA)
Dose	Two doses, once daily	6-14 years 5mg once daily (at night)
		15-17 years 10g once daily (at night)
Image	Spiriva • Respirat • 2,5 Mikrogramm Losung zer Inhalation Tiotropium Sine Perma sondi 1,1 or 4ar Alagare ver 10 (siden 10) Perspective School, Street, Stre	
Number of doses	60 doses	28 tablets
(How long it will last)	(Lasts 30 days)	(Lasts 28 days)
Cost	£23.00 (76.67p/day)	5mg: £1.10 (0.4p/day)
		10 mg: £1.64 (0.6p/day)
License	From 6 years	5mg from age 6
		10mg from age 15

If prescribing Montelukast, please provide verbal and written safety net information about the possible side effects and document this in the medical records. The <u>information leaflet from Medicines for Children</u> is recommended and is important to be aware of the update in relation to the risk of neuropsychiatric reactions from the <u>Medicines and Healthcare products Regulatory Agency</u> (2019).



Over 12 Years – Threshold for Secondary Care Referral

- Any "High Risk" patients or "Red flag indicators for alternative diagnoses"
 - o "High Risk" patients:
 - History of severe attacks
 - Poor health seeking behaviours amongst patient or carers
 - Failure to recognise symptom severity
 - Poor adherence to treatment
 - Overuse of Symbicort (>1 inhaler/month)
 - Peanut allergy
 - o "Red flag indicators for alternative diagnoses":
 - Failure to thrive
 - Abnormal voice/cry
 - Stridor
 - Dysphagia
 - Persistent wet/productive cough
 - Nasal polyps
- Requiring more than maintenance treatment 3 or more times per week
- Clinical/diagnostic uncertainty
- Consider lower thresholds if any safeguarding concerns or family living in poverty (particularly in the lowest 2 deciles for Index of Multiple Deprivation (IMD) – free IMD postcode checker here).

If there are grey areas or you are unsure, please use the Cinapsis advice and guidance service to discuss with your local paediatric team.

For referrals, please use the Electronic Referral System (ERS) pathway (new patients aged 16 or over should be referred to the adult respiratory team).

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