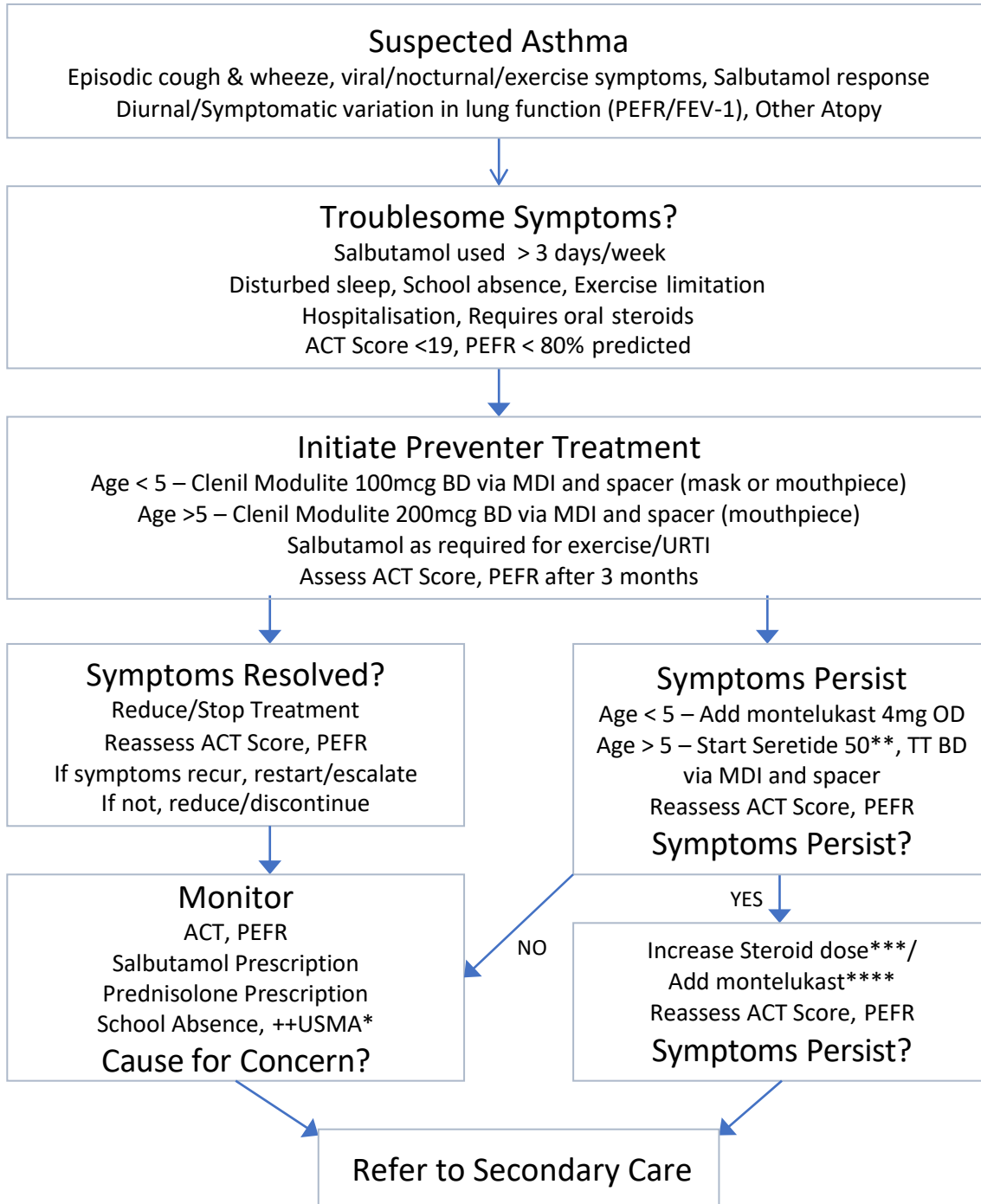


Chronic Management – Primary Care



*USMA = unscheduled medical attendance.

**or other licensed preparation (e.g. COMBISAL)

***if montelukast already added, higher dose combinations may represent off license usage

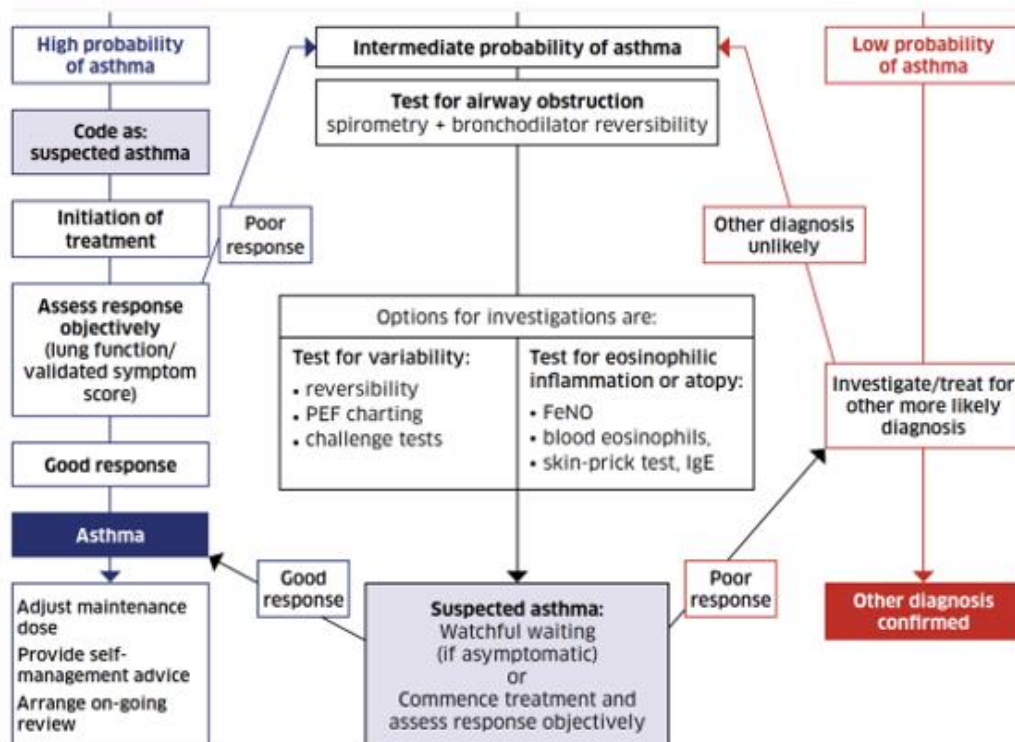
****5-14y 5mg daily, 15+ 10mg daily

Diagnosis

Structured clinical assessment

A structured clinical assessment in conjunction with the BTS algorithm cited below can assign children to broad categories of validity of asthma diagnosis and thus guide treatment approach.

- History of recurrent episodes of wheeze, cough, breathlessness and chest tightness that can vary over time
- Peak flow measurement (including diary), diurnal variation, or symptoms with normal peak flow can be helpful.
- Quantification of subjective symptoms via the ACT (available at www.myasthmaproject.co.uk)
- Document evidence of wheeze noted by health professionals (as well as parental-reported)
- Document family/personal history of atopic conditions.
- Check for symptoms/signs to suggest comorbidities / alternative diagnosis (including non-response to salbutamol (acute) or inhaled steroid (longterm) – see [page 15](#)).



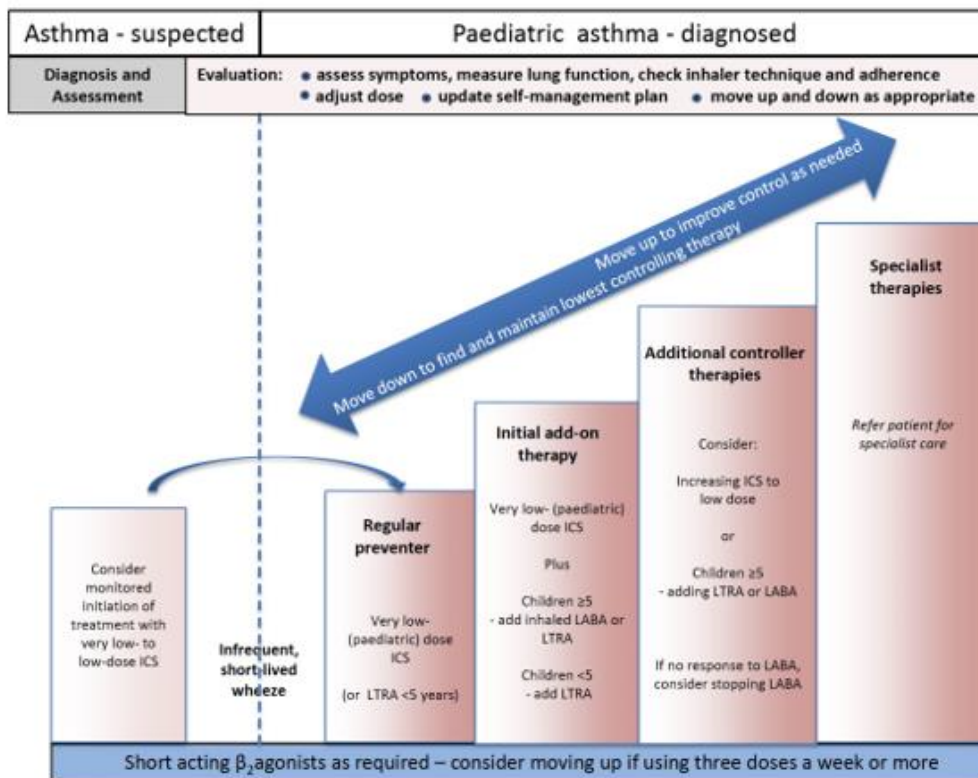
¹ In children under 5 years and others unable to undertake spirometry in whom there is a high or intermediate probability of asthma, the options are monitored initiation of treatment or watchful waiting according to the assessed probability of asthma.

(BTS-SIGN Guideline 2019)

Treatment

- Initiating Treatment

- Commence ICS preventer treatment at [low dose](#) (>5y) or [very low dose](#) (<5y). See [flow chart on page 15 for a detailed summary](#).
- Provide [inhaler technique](#) and asthma education.
- Step down treatment at asthma review if adequate control ([pg. 6](#)) is reached.
- Increase inhaled steroids dose or commence add-on therapy if control is not achieved despite good compliance and technique and avoidance of triggers.
- The BTS Treatment Ladder (below) guides treatment escalation or reduction
- The [following](#) page indicates preventer inhaler dose equivalences.



Preventer Therapy Dose Equivalence

ICS	Dose		
	Very low dose	Low dose	Medium dose#
Pressurised metered dose inhalers (pMDI) with spacer			
Beclometasone dipropionate			
Non-proprietary	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Clenil Modulite	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Qvar (extrafine) Qvar autohaler Qvar Easi-breathe	n/a	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day
Soprobeq	50 micrograms two puffs twice a day	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Ciclesonide			
Alvesco Aerosol Inhaler	n/a	80 micrograms two puffs once a day	160 micrograms two puffs once a day
Fluticasone propionate			
Flixotide Evohaler	50 micrograms one puff twice a day	50 micrograms two puffs twice a day	125 micrograms two puffs twice a day
Dry powder inhalers (DPI)			
Budesonide			
Non-proprietary Easyhaler	n/a	100 micrograms two puffs twice a day	200 micrograms two puffs twice a day
Pulmicort Turbohaler	100 micrograms one puff twice a day	100 micrograms two puffs twice a day 200 micrograms one puff twice a day	200 micrograms two puffs twice a day 400 micrograms one puff twice a day
Fluticasone propionate			
Flixotide Accuhaler	50 micrograms one puff twice a day	100 micrograms one puff twice a day	250 micrograms one puff twice a day
Mometasone			
Asmanex Twisthaler	n/a	200 micrograms one puff twice a day	n/a
Combination Inhalers			
Budesonide with formoterol			
Symbicort Turbohaler	100/6 one puff twice a day	100/6 two puffs twice a day 200/6 one puff twice a day	n/a
Fluticasone propionate with salmeterol			
Combisal MDI	n/a	50/25 two puffs twice a day	n/a
Seretide Accuhaler	n/a	100/50 one puff twice a day	n/a
Seretide Evohaler	n/a	50/25 two puffs twice a day	n/a

Primary Care Management - Acute

- Key Pointers

- Children presenting to primary care with suspected acute asthma should have important differentials excluded.
- Children with acute asthma should have an assessment of asthma severity.
- Children with severe asthma should be treated and referred to hospital.
- Treatment approach varies slightly with age

Important Differentials:

- Pneumonia
- Croup
- Bronchiolitis
- Anaphylaxis
- Inhaled foreign body
- Diabetic ketoacidosis

Age<5y

Give 3 x 10 puffs inhaled salbutamol via pMDI and spacer over the first 1hr, consider 10-20mg oral prednisolone.

Age>5

Give 3 x 10 puffs inhaled salbutamol via pMDI and spacer and 40mg oral prednisolone.

Children requiring oxygen should receive nebulised bronchodilator with oxygen

If not improving send to hospital, via Ambulance if appropriate.

If improving can be discharged home if symptom-free (or likely to be) 3-4hr post salbutamol.

Discharge Requirements - On discharge ensure:

- Patient stable on 3-4 hourly bronchodilators
- Personalised Asthma Action Plan provided
- Written wheeze information provided and understood
- Wheeze triggers are identified
- Escalation of treatment is considered
- Inhaler technique and understanding is reviewed
- Overuse of salbutamol (>10/yr)/underuse of preventer inhaler is considered
- Primary care review within 48 hrs of an acute attack
- Referral to secondary care is considered (see later for criteria)

Spacers

AeroChamber Spacers

If you receive an aerochamber (below), please make sure you have the right one for your child's age.

Spacer	Appropriate User
With Mask	0-18 months
With Mask	1-5 years
No Mask	5-16 years
No Mask	12+ years
With Mask	5+ years with learning difficulties/inability to use mouthpiece
With Mask	16+ years with learning difficulties/inability to use mouthpiece
























Prescribers should specify the type of *AeroChamber Plus Flow-Vu anti-static VHC* spacer from the list below. A mouthpiece should be used where possible in preference to a mask, with the exception of small children.

Colour	Name of Spacer
Orange	AeroChamber Plus Flow-Vu Anti-static VHC with Small Mask for Infants (0-18 months)
Yellow	AeroChamber Plus Flow-Vu Anti-static VHC with Medium Mask for Children (1-5 years)
Green	AeroChamber Plus Flow-Vu Anti-static VHC Youth Mouthpiece (5+ years)
Blue	AeroChamber Plus Flow-Vu Anti-static VHC with Mouthpiece
Purple	AeroChamber Plus Flow-Vu Anti-static VHC with Small Adult Mask
Blue	AeroChamber Plus Flow-Vu Anti-static VHC with Large Adult Mask

Inhalers

The devices below are those that we recommend for use in paediatrics:

SABA	LAMA/SAMA	ICS	ICS/LABA	ICS/LABA (DPI)
Salamol Evohaler Salbutamol 100µg/puff Age 0+ (usu >1y)  £0.22/30 days (if 1 puff/day)	Spiriva Respimat Tiotropium 2.5µg/puff Age 6+  £23/30 days (if 2 puffs/day)	Clenil Modulite 50 Evohaler Beclomethasone 50µg/puff Age 2+ (occ use <2 years)  £2.22/30 days (if 4 puffs/day)	Seretide 50 Evohaler Salmeterol/ Fluticasone 25/50µg/puff Age 4+  £18/30 days (if 4 puffs/day)	Symbicort 100 Turbohaler Budesonide/ Formoterol 100/6µg/puff Age 6+ (SMART at 12+)  £28/30 days (if 4 puffs/day)
Ventolin Evohaler Salbutamol 100µg/puff Age 4+ (often <4y)  £0.23/30 days (if 1 puff/day)	Atrovent inhaler Ipratropium 20µg/puff Age 1m+  £0.83/30 days (if 1 puff/day)	Clenil Modulite 100 Evohaler Beclomethasone 100µg/puff Age 2+ (occ use <2 years)  £4.45/30 days (if 4 puffs/day)	Combisal 50 Evohaler Salmeterol/ Fluticasone 25/50µg/puff Age 4+  £13.50/30 days (4 puffs/day)	Symbicort 200 Turbohaler Budesonide/ Formoterol 200/6µg/puff Age 12+  £28/30 days (if 4 puffs/day)
Salamol Easi-breathe Salbutamol 100µg/puff Age 4+ (rarely <12y)  £0.95/30 days (if 1 puff/day)		Clenil Modulite 200 Evohaler Beclomethasone 200µg/puff Age 12+ (occ use < 12 years)  £9.70/30 days (if 4 puffs/day)	Seretide 125 Evohaler Salmeterol/ Fluticasone 25/125µg/puff Age 12+  £23.45/30 days (4 puffs/day)	Symbicort 400 Turbohaler Budesonide/ Formoterol 400/12µg/puff Age 12+  £56/30 days (if 4 puffs/day)
Airomir Autohaler Salbutamol 100µg/puff Age 4+ (rarely <12y)  £0.90/30 days (if 1 puff/day)		Clenil Modulite 250 Evohaler Beclomethasone 250µg/puff Age 12+ (occ use < 12 years)  £9.77/30 days (if 4 puffs/day)	Combisal 125 Evohaler Salmeterol/ Fluticasone 25/50µg/puff Age 12+  £17.59/30 days (4 puffs/day)	Relvar Ellipta 92 Fluticasone/ Vilanterol 92/22mcg/puff Age 12+  £22/30 days (if 1 puff/day)
This list is not exhaustive (e.g. Soprobeq) Generic prescribing is avoided due to: - differing activity of formulations such (e.g. Qvar) - Unlicensed formulations (e.g. Sirdupla)			Seretide 250 Evohaler Salmeterol/ Fluticasone 25/250µg/puff Age 12+  £29.32/30 days (4 puffs/day)	Relvar Ellipta 184 Fluticasone/ Vilanterol 184/22mcg/puff Age 12+  £29.50/30 days (1 puff/day)
VLD = Very Low Dose inhaled steroid at suggested dose/age LD = Low Dose inhaled steroid at suggested dose/age MD = Medium Dose inhaled steroid at suggested dose/age HD = High Dose inhaled steroid at suggested dose/age	Pricing is representative and assumes dosing as on bottom line of each cell and is correct at time of going to print.		Combisal 250 Evohaler Salmeterol/ Fluticasone 25/50µg/puff Age 12+  £27.99/30 days (4 puffs/day)	References: 1) www.rightbreathe.com 2) www.bnfrc.nice.org.uk

Barts Health NHS Trust and Tower Hamlets Together are committed to sustainability in healthcare. As part of this commitment we encourage recycling of inhaler devices.

Information can be found at: www.completethecycle.eu