integrated working

Pharmacological Management of Asthma in Adolescents and Adults (≥ 12 Years): Quick Summary

NHS West Suffolk Clinical Commissioning Group

This is based on the revised British Thoracic Society-Scottish Intercollegiate Guidelines Network guideline, which no longer recommends the use of short-acting β_2 agonist (SABA) alone for the management of asthma.

Patients seen with asthma exacerbation in hospital, emergency department or out-of-hours service should be followed-up within two working days of receiving such notification. This is to allow optimisation of treatment and to identify those patients whose asthma remains out of control.

Key principles

- Patient should start treatment at the stage most appropriate to initial severity of their asthma
- Always demonstrate inhaler technique to patient and ensure technique is satisfactory
- Ensure patient has a personalised asthma action plan
- Encourage patient to take the Asthma Control Test™ every four weeks and prior to asthma review **(https://www.asthmacontroltest.com/Europe/United%20Kingdom/en/adult)**
- Teach and encourage patient to monitor peak flow using a peak flow meter **(see normal values http://www.peakflow.com/pefr_normal_values.pdf)**. Scores should be recorded in a peak flow diary and this should be used alongside a personalised asthma action plan
- Advise patient to monitor symptoms and return to the GP surgery if no improvement
- Check concordance and inhaler technique; reconsider diagnosis if response to treatment is unexpectedly poor
- Remind patient to return to clinic if symptoms return after 'stepping down'
- Offer annual influenza vaccination to all patients with asthma that require continuous or repeated use of inhaled or systemic corticosteroids or with previous exacerbations requiring hospital admission
- **Patients requiring more than four SABA inhalers (e.g. Ventolin® Evohaler®, Easyhaler® salbutamol, etc.) per year should be assessed and prevention optimised**
- Educate patients who smoke on the effects of smoking. Refer to stop smoking service

Rhinitis is a risk factor for the development and increasing severity of asthma. Consider asthma in all patients with rhinitis. Treat both conditions.

Complete control of asthma

No	Daytime symptoms
No	Night-time awakening due to asthma
No	Need for rescue medication
No	Asthma attacks/ exacerbations/ flare-ups
No	Limitation on activity including exercise
Normal	Lung function (FEV_1 and/or PEF > 80% predicted or best)
With	Minimal side-effects from medication

Criteria for specialist referral

- Prominent systemic features (myalgia, fever, weight loss)
- Unexpected clinical findings (e.g. crackles, clubbing, cyanosis, cardiac disease, monophonic wheeze or stridor)
- Suspected occupational asthma (symptoms that improve when patient is not at work, adult-onset asthma and workers in high-risk occupations)
- Uncontrolled symptoms despite high dose ICS, LABA and LTRA
- Persistent non-variable breathlessness
- Poor response to asthma treatment
- Unexplained restrictive spirometry
- Severe/life-threatening asthma

Spacer devices

- Always offer a spacer device with a metered dose inhaler (MDI)
- Prescribe a spacer device that is compatible with the MDI **(see 'Key to spacer devices' overleaf)**
- Patients should be advised not to switch between spacer devices as they may not be interchangeable
- They should be cleaned once a month by washing in a mild detergent and then allowed to dry in air without rinsing; the mouthpiece should be wiped clean of detergent before use
- They should be replaced every 6-12 months

Bibliography

British Thoracic Society (2019). Position Statement – Environmental and Lung Health 2019
British Thoracic Society and Scottish Intercollegiate Guidelines Network (2019). SIGN 158: British guideline on the management of asthma - quick reference guide
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BMJ Group and the Royal Pharmaceutical Society of Great Britain (2020): British National Formulary January 2020. [Online]: BMJ Group and Pharmaceutical Press. Available: https://www.medicinescomplete.com/mc/bnf/current/ [Last accessed 14 January 2020]
Haymarket Media Group Limited (2020): MIMS. [Online]: Haymarket Media Group Limited. Available: http://www.mims.co.uk/ [Last accessed 14 January 2020]
Public Health England and Department of Health (2017) Immunisation against infectious disease
Royal College of Physicians (2014) Why asthma still kills: The national review of asthma deaths (NRAD)

See overleaf for pharmacological management options supported by respiratory specialists at West Suffolk Foundation Trust.

Pharmacological Management

Stepping DOWN – Move down to find and maintain lowest controlling therapy

- Complete control needs to be achieved for 12 weeks before stepping down
- **ICS/LABA** – Step down to the lowest dose of combination inhaler and then from a combination inhaler to a single agent ICS
- **ICS** – Reduce ICS dose by 25 – 50%
- After stepping down, review in 12 weeks: step patient up again if symptomatic during this period
- **Stepping down before 12 weeks of control can lead to exacerbations and hospital admissions**

Stepping UP – Think TTT first, then move up to improve control if needed

Before initiating a new drug therapy or stepping up, practitioners should check:

- Compliance with existing **Therapy**
- Inhaler **Technique**
- **Trigger** factors

Think TTT

After stepping up, it is recommended to review patient in 8 weeks

Colour coded cost

Devices are listed **in cost order** within the cost bracket and exclude the cost of spacers.
Cost is based on **30 days** of regular treatment at the specified dose.

£4 - £7	£14 – £15	£28 – £30	£45	£56

Prices correct at January 2020

Hydrofluorocarbon propellants, contained in pressurised MDIs, were estimated to be responsible for 8% of the NHS entire carbon footprint in 2012. DPIs have a carbon footprint 18 times lower than pressurised MDIs. Patient preference and inspiratory flow should be considered before offering DPIs.

Seek specialist advice before initiating

Low dose ICS [BDP 400-500mcg/day]	Add LABA as combination inhaler with low dose ICS [BDP 400-500mcg/day]	Increase dose of ICS - medium dose [BDP 800-1000mcg/day] as combination inhaler with LABA	Increase dose of ICS - high dose [BDP 1600-2000mcg/day] as combination inhaler with LABA
Clenil® Modulite® (beclometasone), 100mcg/dose MDI[b, c] 2 doses BD [400mcg] **Easyhaler® budesonide, 100mcg/dose DPI 2 doses BD [400mcg]** **Flixotide® Evohaler® (fluticasone), 50mcg/dose MDI[a, b, c] 2 doses BD [400mcg]**	**Symbicort® Turbohaler® (budesonide, formoterol), 200mcg, 6mcg/dose DPI 1 dose BD [400mcg]** *(Consider **MART** if uncontrolled* **Ω** *- ≥ 12 years only)* **Flutiform® (fluticasone, formoterol), 50mcg, 5mcg/dose BAMDI (k-haler®) or MDI[a, b] 2 doses BD [400mcg]** **Fostair® (beclometasone, formoterol), 100mcg, 6mcg/dose BADPI (NEXThaler®) or MDI[a, b] 1 dose BD [500mcg] ≥ 18 years only (BADPI & MDI)** *(Consider **MART** if uncontrolled* **Ω** *- ≥ 18 years only)*	**Flutiform® (fluticasone, formoterol), 125mcg, 5mcg/dose BAMDI (k-haler®) or MDI[a, b] 2 doses BD [1000mcg] Ω** **Symbicort® Turbohaler® (budesonide, formoterol), 200mcg, 6mcg/dose DPI 2 doses BD [800mcg] Ω** *(Consider **MART** if uncontrolled* **[¥]** *- ≥ 12 years only)* **Fostair® (beclometasone, formoterol), 100mcg, 6mcg/dose BADPI (NEXThaler®) or MDI[a, b] 2 doses BD [1000mcg] Ω ≥ 18 years only (BADPI & MDI)** *(Consider **MART** if uncontrolled* **[¥]** *- ≥ 18 years **only**)*	**Fostair® (beclometasone, formoterol), 200mcg, 6mcg/dose BADPI (NEXThaler®) or MDI[a, b] 2 doses BD [2000mcg] ¥ ≥ 18 years only (BADPI & MDI)** **Flutiform® (fluticasone, formoterol), 250mcg, 10mcg/dose MDI[a, b] 2 doses BD [2000mcg] Ω** **Symbicort® Turbohaler® (budesonide, formoterol), 400mcg, 12mcg/dose DPI 2 doses BD [1600mcg] ¥**
Key to spacer devices **a** - AeroChamber Plus® standard device **with mouth piece (£4.99) / with mask (£8.33)** **b** - AeroChamber Plus® Flow-Vu® antistatic device **with mouth piece (£5.22) / with mask (£8.72)** **c** - Volumatic® standard device **with mouth piece (£3.88)**	**MART** ONE additional dose PRN up to a max of 8 doses daily (this includes the daily maintenance dose) **Notes** **Ω** - Corticosteroid safety card recommended **¥** - Corticosteroid safety card required **[Xmcg]** - ICS equivalence to BDP	**If control still inadequate, consider adding:** **1. Montelukast** 5mg each evening **(< 15 yrs) OR** 10mg each evening **(≥ 15 yrs) OR** **2. Spiriva® Respimat®** (tiotropium), solution for inhalation, 2.5mcg/dose – 2 doses OD	**If control still inadequate, consider adding:** **1. Montelukast** 5mg each evening **(< 15 yrs) OR** 10mg each evening **(≥ 15 yrs) OR** **2. Spiriva® Respimat®** (tiotropium), solution for inhalation, 2.5mcg/dose – 2 doses OD

Consider referral to specialist

SABA: 1-2 dose(s) PRN (unless using MART) – [b, c]Ventolin® Evohaler® (salbutamol), 100mcg/dose MDI OR Easyhaler® salbutamol, 100mcg/dose DPI. Consider 'Stepping UP' if using three doses or more a week.

Abbreviations					
BADPI – Breath-actuated DPI	**BAMDI** – Breath-actuated MDI	**BD** – Twice daily	**BDP** – Beclometasone dipropionate	**DPI** – Dry powder inhaler	**FEV_1** – Forced expiratory volume in 1 second
ICS – Inhaled corticosteroid	**LABA** – Long–acting β_2 agonist	**LTRA** – Leukotriene receptor antagonist	**MART** – Maintenance & reliever therapy	**OD** – Once daily	**PEF** – Peak expiratory flow	**PRN** – When required

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