Asthma: Supporting Tool for the Implementation of National Guidance
Drug Management of Asthma

Health and Social Care in Northern Ireland

Adults and children 5-12 years

Step 1: Add Short acting β-agonist (SABA)†

Step 2: Add Inhaled corticosteroid (ICS) 200 – 800 micrograms/day *(or 200 – 400 micrograms/day in children between 5 and 12 years)*

Step 3a: Add Long acting β-agonist (LABA)

Step 3b: Assess control of asthma

- **Good response** – continue LABA
- **Some response** but still inadequate control – continue LABA and increase ICS to 800 micrograms/day*(400 micrograms/day in children between 5 and 12 years)*
- **No response – stop LABA** and increase ICS to 800 micrograms/day *(400 micrograms/day in children between 5 and 12 years)*

Consider addition of leukotriene receptor antagonist (LTRA) or theophylline

Step 4: Consider trial of increased ICS to 2000 mcg/day *(800 micrograms/day in children between 5 and 12 years)* and addition of 4th drug (LTRA or theophylline)

Step 5: Refer for specialist care treatment. Use daily steroid tablets at lowest dose providing control. Maintain use of high dose ICS of 2000 micrograms/day *(800 micrograms/day in children between 5 and 12 years)*

†Monitor for over-usage of bronchodilator therapy

Check medication adherence and inhaler technique

To check adherence ALWAYS review prescription records in previous 6-12 months

NEVER INCREASE asthma medication without review of prescription filling and discussion with patient

Details of the community pharmacy MUR (Medicines Use Review) are available on the BSO website at http://www.hscbusiness.hscni.net/services/2427.htm

Children under 5 years

Step 1: Add Short acting β-agonist (SABA)†

Step 2: Add Inhaled corticosteroid (ICS) 200 – 400 micrograms/day or a leukotriene receptor antagonist (LTRA) if ICS cannot be used

Step 3: If already on ICS 200 – 400 micrograms/day consider adding LTRA

If already taking LTRA consider adding ICS 200 – 400 micrograms/day

If under 2 years consider proceeding to step 4

Step 4: Refer to respiratory paediatrician

Before each step up of treatment

Consider the accuracy of asthma diagnosis. Then check:

- Adherence
- Inhaler technique
- Trigger factors have been eliminated

Stepping down treatment

- Should be considered for those patients whose disease has been stable for at least 3 months
- Treatment should be at the minimum level required to maintain disease control
- Regular review and step down of treatment is essential to prevent over-treating
- Step down of ICS therapy should be slow (25-50% dose reduction every 3 months until low dose ICS is achieved). BTS/SIGN guidance suggests that this is realistic and possible without compromising patient care
- When on a combination of LABA and ICS, the ICS should be reduced to low dose (as above) before stopping the LABA

*corticosteroids doses are beclometasone BDP (Clenil Modulite®) or equivalent

Prescribers please note Clenil Modulite®, Qvar® and Fostair® are NOT equipotent

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Prescribing Notes for patients of all ages

Short-acting β-agonists (SABA)

- **NI Formulary** choices are salbutamol and terbutaline; currently salbutamol is less expensive and available in a wider range of devices
- monitor for over-prescribing (Note: One salbutamol MDI inhaler contains 200 x 100 microgram doses therefore if prescribed PRN and used an average of four times daily it should last a minimum of 25 days)
- review disease control and inhaler technique if increased ordering of SABA
- inhalation is the most effective route of administrating SABA. **Review patients on oral SABA products**

Inhaled Corticosteroids (ICS)

- must be used daily for maximum benefit
- use the lowest dose of ICS possible that maintains disease control
- low dose ICS should be trialled for a minimum of 3 months to assess benefit
- review inhaler technique if patient presents with oral candidiasis
- mouth rinsing after ICS use should be encouraged and where appropriate, use of a spacer device to help prevent oral candidiasis
- not all ICS are equipotent thus caution if changing from one ICS to another (seek advice if necessary)
- beclometasone MDI CFC-free inhalers should be prescribed by brand (Clenil Modulite® or Qvar®) as not all products are equipotent
- patients on prolonged treatment with high dose ICS (≥ 800 micrograms/day) should be issued with a steroid card
- high-dose ICS should only be continued where there is clear benefit over the lower dose
- monitor the height and weight of children receiving ICS
- review disease control if infrequent ordering of ICS inhaler (may be suitable for step down of therapy)
- no benefit has been found to doubling the dose of ICS during an exacerbation

Leukotriene receptor antagonists (LTRA)

- should be trialled for 6 weeks and stopped if no clear benefit
- are the add-on therapy of choice in children under 5 (LABA is add-on therapy of choice in children aged 5 and over)
- should not be initiated during pregnancy
- ensure the appropriate montelukast product is prescribed for the age of the patient (over 15 years 10 mg OD; 6-15 years 5 mg OD; 6 months-6 years 4mg OD), and the dose is reviewed as the patient's age changes
- can be useful in exercise induced asthma
- patients on zafirlukast should be told how to recognise development of liver disorder and advised to seek medical attention if symptoms or signs such as persistent nausea, vomiting, malaise, or jaundice develop

Long-acting β-agonists (LABA)

- before considering the addition of long-acting β-agonists (LABA), review that there has been anticipated response to treatment with anti-inflammatory medication (i.e.ICS) to support diagnosis of asthma
- LABA should only be prescribed in addition to ICS after patients have been optimised on step 2 of BTS asthma guidance
- before stepping up treatment to Step 3, it is important to check the patient's prescription record to see if patient is adherent to their ICS
- a combination ICS/LABA inhaler should be used when moving to Step 3 to ensure that LABA is always taken with ICS
- LABA should be initiated before increasing steroid dose in adults and children over 5 years
- patients initiated on a LABA should be advised to report worsening symptoms
- **LABA should be stopped if there is no response**
- patients receiving salmeterol or formoterol should be advised not to use it to relieve symptoms of acute attack (exception being MART dosing - see below)

Spacer devices

- should be replaced at least every 12 months but no more than 6 monthly and should not be on repeat prescriptions
- ensure the spacer is compatible with the inhaler prescribed
- patients should be counselled that spacers should be cleaned no more than monthly in warm, soapy water and left to dry in air
- face masks should be provided with spacers for children until they can comfortably use the mouthpiece
- the use of a nebuliser is no more effective than using a spacer and MDI

Combination ICS/LABA inhaler for maintenance and reliever therapy (MART)

- Fostair® pMDI, Symbicort® 100/6 & 200/6 and DuoResp® Spiromax® 160/4.5 inhalers are licensed for use as maintenance and reliever, but for patients aged 18 years and over only.
- can be useful in selected patients poorly controlled on step 3 or selected patients on step 2 (poorly controlled and on 400 micrograms BDP/day) of the BTS asthma guidance
- patients should be carefully selected for this treatment option and this regimen should not be used as an alternative regimen in patients with poor compliance
- should be prescribed as number of puffs BD *plus* as needed and patients counselled appropriately
- very occasionally, patients with exercise-induced broncho-constriction may require addition of SABA to ICA/LABA treatment regimen.
- any patients using their ICS/LABA combination as rescue therapy once a day or more on a regular basis should have their treatment reviewed

Guidance based on SIGN/BTS QRG 141 October 2014