

# Primary Care Guidelines for the Management of Asthma in Adults

DATE DEVELOPED JUNE 1999

## GRADING OF EVIDENCE

- A** Randomised control trials
- B** Controlled studies
- C** Robust experimental or observational studies
- D** National expert consensus opinion
- E** Local expert consensus opinion

Adapted for local use across Bradford and Airedale Health Authority District from the British Thoracic Society (BTS) guidelines and the North of England evidence based asthma guidelines by BHT, AHT, BHA, MAAG, CHC and PCGs

Diagnosis may be based on a history of symptoms and the identification of aetiology **E**

## DIAGNOSIS

Diagnosis can be confirmed if the patient demonstrates one of the following **E**

### SYMPTOMS

- Nocturnal cough or wheeze **D**
- Allergen induced cough, wheeze, chest tightness or breathlessness **D**
- Exercise, cold air induced cough, wheeze, chest tightness or breathlessness **D**

### AETIOLOGY

- Family history of atopy and/or asthma **D**
- Trigger factors **D**
- Environmental factors **D**
- Occupational factors **D**
- Psychosocial factors **D**
- Medication e.g. aspirin,  $\beta$  blockers or NSAIDS **D**

### INVESTIGATIONS

- A diurnal variation in peak expiratory flow rate  $PEFR \geq 15\%$  **E**
- Reversibility in  $PEFR$  of  $\geq 15\%$  after inhaled short acting  $\beta_2$  agonist (Calculations of percent reversibility only apply when  $PEFR \geq 200$  l/min) **E**
- An improvement of  $\geq 15\%$  in  $PEFR$  after a trial of high dose steroids - either prednisolone 30-40mg daily for 2 weeks **D** or inhaled corticosteroids 800 $\mu$ g daily for six weeks **E**
- A fall of  $\geq 15\%$  in  $PEFR$  up to 15 mins after a six minute exercise test **E**

## PRESCRIBING FOR ASTHMA

- The recommendations outlined in the BNF apply for all drugs
- Start treatment at the step most appropriate to the initial severity **D** and teach patients to use their inhalers adequately **D**
- \*\*Treat patients with the cheapest  $\beta_2$  agonist and inhaled steroid preparation they can effectively use and controls symptoms **D**
- Inhaled steroids are usually given on a bd basis, however if symptoms are not controlled, consider increasing to qds rather than increasing the total daily dosage **A**
- Regularly review the need to 'step down' treatment **D**
- Before altering a treatment step ensure that the patient is: complying with treatment **D** and has a good inhaler technique **D**
- Enquire regularly about side effects, especially at higher doses **A**
- A 3 month period of stability on inhaled steroids is recommended before decreasing by 25-50% at each step **D**

STEP 1		STEP 2		STEP 3	STEP 4	STEP 5
Occasional use of relief bronchodilators		Regular inhaled anti-inflammatory agents		High doses inhaled steroids or inhaled steroids plus long acting inhaled $\beta_2$ agonist bronchodilator	Optimise dose of steroids and bronchodilators	Addition of regular steroid tablets or referral to the Chest Physician is always appropriate at this step <b>D</b>
Inhaled short acting $\beta_2$ agonist as required for symptom relief <b>B</b>		Inhaled short acting $\beta_2$ agonist as required <b>B</b>		Inhaled short acting $\beta_2$ agonist as required <b>B</b>	Inhaled short acting $\beta_2$ agonist as required <b>B</b>	Inhaled short acting $\beta_2$ agonist as required <b>B</b>
Evidence suggests that if $\beta_2$ agonists are needed more than 2-3 times daily move to step 2 <b>A</b> . There may be some benefits however from moving to step 2 when $\beta_2$ agonists are taken once daily <b>D</b>		<b>PLUS</b> **Beclomethasone or budesonide 200-800 $\mu$ g daily or fluticasone 100-400 $\mu$ g daily <b>D</b>		<b>PLUS</b> **Beclomethasone or budesonide increased to 800-2000 $\mu$ g daily or fluticasone 400-1000 $\mu$ g daily via holding chambers <b>D</b>	<b>PLUS</b> **Beclomethasone or budesonide 800-2000 $\mu$ g daily or fluticasone 400-1000 $\mu$ g daily via holding chambers <b>D</b>	<b>PLUS</b> **Beclomethasone or budesonide 800-2000 $\mu$ g daily or fluticasone 400-1000 $\mu$ g daily via holding chambers and one or more of the long acting bronchodilators <b>D</b>
		<b>OR</b> in patients unable or unwilling to take corticosteroids then use cromoglycate or nedocromil sodium instead <b>D</b>		<b>OR</b> consider the introduction of long acting $\beta_2$ agonists such as salmeterol (50 $\mu$ g bd) or eformoterol (12 $\mu$ g bd)	<b>PLUS</b> a sequential trial of one or more of the following: Oral bronchodilators e.g. sustained release theophylline <b>A</b> Long acting $\beta_2$ agonist tablets <b>D</b> Inhaled ipratropium/oxitropium <b>D</b> High doses inhaled bronchodilators <b>D</b> Leukotriene antagonist <b>A</b>	<b>PLUS</b> Regular prednisolone tablets in a single daily dose <b>D</b>

## DRUG DELIVERY DEVICE

- Use cheapest drug delivery device the patient can use effectively **D**
  - Initially consider treatment with a metered dose inhaler MDI **D**
  - If co-ordination and technique is poor, consider adding a holding chamber **C**
  - Consideration should then be given to powder or automatic aerosol devices **D**
- Attention should be given to patient preference - the most expensive inhaler is either the one which is not used, or not used properly **D**
- Chloro-fluoro carbon (CFC) free aerosol inhalers are as effective as those containing CFC propellant **A**

## PRESCRIBING FOR ASTHMA

### CFC-FREE PRESCRIBING

The use of CFC-free inhalers should be encouraged for new and existing patients. The principles recommended for switching patients are that whenever possible substitute the same i.e.

- Drug for Drug - avoid switching patients from salbutamol to terbutaline or beclomethasone to fluticasone or budesonide **E**
- Device for Device - if patients are well controlled on MDIs - do not switch them to other devices e.g. dry powder devices **E**
- Dose for Dose - aim to use products that are licensed for, one to one,  $\mu\text{g}$  for  $\mu\text{g}$  and puff for puff equivalence **E**

### LONG ACTING $\beta_2$ AGONISTS

- Use if overnight relief is required **A**
- May be introduced at lower doses e.g. Beclomethasone 400 $\mu\text{g}$  daily **E**  
The greatest benefit however is achieved at higher doses e.g. Beclomethasone 1000 $\mu\text{g}$  daily **A**

### HOLDING CHAMBERS ('SPACERS') SHOULD BE:

- Used to increase the effectiveness of inhaled drugs without increasing the dose **A**
- Used to reduce oral candidiasis when high dose inhaled steroids are used **A**
- Considered in acute situations as an effective alternative to nebulisers **A** and in preference to intravenous  $\beta_2$  agonists for delivering high dose bronchodilators **A** repeat doses should be considered after 30-60mins **A**
- Used within 10 seconds once 'primed' **D**
- Replaced every 6-12 months **D**
- Washed, rinsed and dried in air once a week (wiping dry increases electrostatic charge) **D**

### ORAL BRONCHODILATORS

- Consider at step 4 **A**

### LEUKOTRIENE ANTAGONISTS

- Therapeutic position unclear - not as effective as low dose inhaled steroids therefore introduce at step 4 **A** May be best initiated by a specialist **E**

### ORAL STEROIDS

A rescue course of prednisolone may be needed at any step - rather than using high dose inhaled steroids **A**

- Prednisolone 30-40mgs is recommended, continued until the episode has resolved, symptoms controlled and PEFR returned to 'previous best' levels - usually 7 days, but may require 21 days **E**
- Oral corticosteroids can then be stopped - no need to taper **D**
- Patients previously on maintenance doses of oral steroids should have dose reduced to their pre-exacerbation levels **D**
- Consider risk factors associated with long term use of corticosteroids eg. osteoporosis **A**

## MANAGEMENT OF ASTHMA IN PRIMARY CARE

- Plan with the patient how to avoid provoking factors where possible e.g. identify smoking status and offer the appropriate advice **D**  
Mite reduction methods should not be routinely recommended as methods to reduce exposure seem to be ineffective **A**
- Identify and manage associated psychosocial aspects of care e.g. anxiety, social isolation and family conflict **A**
- Offer patients a written self management plan **B** and a package of care which includes education **A** and reviews as clinically indicated (perhaps every 6-12 months when repeat medication is reviewed)
- PEFR monitoring for self management is not mandatory **A** but is recommended for poor perceivers of symptoms and those with brittle or life threatening asthma **D**
- Do not rely solely with acupuncture, homeopathy or yoga **A**

### REFERRAL

- Referral to a chest physician is recommended if;
  - Occupational asthma **D**
  - Diagnostic confusion **D**

- Considering long term oral corticosteroids or home use of a nebuliser **D**
- Problem in management e.g. failure to respond to treatment **D**

### DISCHARGE

- Patients discharged from hospital following an acute attack of asthma, should be followed up by their GP within one week and by the specialist within one month **D**

### READ CODES

Practices may wish to identify preferred Read Codes to facilitate future searches of asthma patients. We recommend you record both +ve and -ve responses using the following terms:

Breathlessness which will access Symptom Codes with the stem 173  
Asthma will access Diagnostic Codes with the stem H33 (H43 Read 1)  
PEFR stem 339 Smoking status stem 137  
Inhaler technique 663 Asthma disturbing sleep 663  
Emergency asthma admission stem 8H2  
Asthma admin. monitoring (annual check) stem 90J