Asthma Review for GP Practices

2012-13

The purpose of this review is to support practices in having a consistent approach in reviewing asthma patients ensuring all patients are reviewed annually and maintained on the most appropriate safe and effective medication for them.

Year 2012/13 (Year One) - Review of Inhaled Corticosteroid and Long-Acting Beta$_2$Agonist therapy in Adults and Children over 5 with Chronic Asthma currently on Step 3 or Step 4 of the BTS/SIGN guidelines

Year 2013/14 (Year Two) – Review widen to include Step 2 of the BTS/SIGN guidelines
Review of Inhaled Corticosteroid and Long-Acting Beta\(_2\) Agonist therapy in Adults and Children over 5 with Chronic Asthma currently on Step 3 or Step 4 of the BTS/SIGN guidelines

**Background**

Asthma is a chronic inflammatory disease which causes reversible narrowing of the airways leading to cough, wheezing, chest tightness and breathlessness\(^1\). Management of asthma aims to diminish or eliminate symptoms and improve lung function with minimal therapy and least possible side effects.

Please refer to the NHS Lothian ‘Steps to better Asthma Care, a guide for primary care’. This is available on the Lothian Respiratory MCN website: -


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**Complete asthma control is defined in the BTS/SIGN guideline\(^2\) as:**

- No daytime symptoms
- No night-time awakening due to asthma
- No need for rescue medication
- No exacerbations
- No limitations to normal activity including exercise
- Normal lung function (in practical terms FEV1 and/or PEF>80% predicted or best)
- Minimal side effects from medication

Current asthma guidelines recommend a stepwise approach to symptom management; stepping up therapy to achieve control of symptoms and stepping down treatment to a lower dose when control is good\(^2\).

Anecdotally evidence suggests that GPs and practice nurses do not often step-down medication. It is often assumed that if a patient does not have symptoms then they are well controlled.

Patients are often started on too high a strength of inhaler while it is recommended that the first prescription of combined inhalers should be the lowest dose available e.g. LJF 1\(^{st}\) choice Fostair\(^\circledR\) (one puff twice daily) or LJF 2\(^{nd}\) choice Seretide\(^\circledR\) 50 (two puffs twice daily). If no improvement is seen in the patients’ symptoms after one month then a higher dose can be tried.

Poor asthma control is indicated by use of a short acting beta\(_2\) agonist (SABA), three times a week or more, symptoms three times a week or more or the patient experiencing one disturbed night per week due to breathing difficulties\(^2\).

Treatment with an Inhaled Corticosteroid (ICS) should be considered in adults and children experiencing any of the above symptoms despite SABA use; this equates to Step 2 on the treatment ladder. Patients should be titrated to the lowest dose of inhaled steroid to effectively control their asthma symptoms\(^2\).

Prior to altering treatment, compliance with current therapy and inhaler technique should be checked and where possible any trigger factors eliminated\(^2\).
The BTS/SIGN (101) guideline suggests many patients will benefit from doses of ICS ≥ 200 micrograms of beclometasone dipropionate-hydrofluoroalkane (BDP-HFA*) plus a long-acting beta_2_agonist (LABA), (Step 3), rather than increasing the dose of ICS^2.

High doses of ICS plus a LABA, (Step 4), are indicated for patients who only partially respond to standard doses of ICS and a LABA or other long-acting bronchodilator^3. High dose ICS therapy should only continue where a clear benefit over the lower dose is demonstrated^3.

Prolonged use of high dose ICS therapy increases the risks of adverse side-effects e.g. osteoporosis, adrenal suppression^2, 3, 4. Co-prescribing of steroids via other administration routes e.g. nasal, skin or oral (over 3 short courses per year) increases the total steroid burden and exposes patients (including those prescribed licensed doses of ICS) to greater risk of adrenal suppression^4.

Growth retardation may also be seen in children taking ICS doses of ≥400 micrograms BDP-HFA* or equivalent daily^2. Whilst not recommended as an indicator of adrenal suppression in isolation, BTS/SIGN (101) do recommend growth monitoring (height and weight centile) of asthmatic children (at least annually) ^2. In Lothian, children receiving high ICS doses (>500 micrograms of fluticasone daily or equivalent) should be assessed for adrenal suppression using a short Synacthen® test ^6. This is done at the RHSC. (For further information please contact Ann McMurray, Asthma nurse Specialist at RHSC.)

Ensuring asthmatic patients receive the lowest effective dose of ICS to maintain symptom control will minimise exposure to risk and given that high dose ICS/LABA combination inhalers in particular are expensive, may be associated with significant financial savings.

* Not all BDP-HFA inhalers are equipotent and some require dosage adjustments e.g. Qvar® is approximately twice the potency of Clenil Modulite®. All BDF-HFA inhalers should be prescribed by brand^2.
**Aims**

The aims of the review are

- To review the dose of inhaled corticosteroid (ICS) prescribed to adults and children (over 5 years) on Step 3 or 4 of the SIGN/BTS guidelines and to step-down well controlled patients to the lowest effective dose of ICS which controls their asthma symptoms (in accordance with current national and local guidelines)\(^2,3,5\) thus minimising the risk of adverse effects including adrenal suppression in children\(^4\).

- To review the devices prescribed and assess they are
  a. appropriately licensed for the age of the patient.
  b. being used at an appropriate licensed dose.

- To check patients have satisfactory inhaler technique ensuring maximal benefit is gained from the medication.
This review should support the current review of patients with asthma registered within the practice by practice nurse(s) or GPs on a rolling basis as part of the annual QoF requirement.

**Year One:** Review of Inhaled Corticosteroid and Long-Acting Beta\(_2\)Agonist therapy in Adults and Children over 5 with Chronic Asthma currently on Step 3 or Step 4 of the BTS/SIGN guidelines

**Year Two:** Review widen to include Step 2 of the BTS/SIGN guidelines

**Method**

1. **Identify appropriate patients**

   When undertaking an asthma review, identify adults and children (over 5 years) on standard or high dose ICS and long acting beta\(_2\) agonist (LABA) therapy, either in a combination* or as individual inhalers.

   *Combination inhalers are recommended to guarantee LABA is not taken without inhaled steroid and to improve inhaler adherence\(^1\). Combination products should only be used in patients who have first demonstrated benefit and are established on individual products\(^3\).

2. **Conduct asthma review**

   The Respiratory MCN BlueBay application should be used where possible to optimise patient assessment e.g. review asthma control and treatment concordance.

   The application provides useful information to assist in assessing the patient’s suitability for step-down of ICS. This includes details of recent exacerbations requiring hospitalisation, a record of current respiratory medication including any recent courses of oral steroids and a reminder to check inhaler technique.

   **Appendix 1** is the Asthma Control Test which patients can use to make their own assessment of their symptoms.

   An example of the step-down process is given in **Appendix 2**.

   Please refer to **Appendix 3**, Good Practice Points, for guidance on ICS dose reduction.

   For information on equivalent ICS doses and current licensed age indications please refer to Table 8b, Section 4.2.1; Comparison of Inhaled Steroids, page 39, BTS/SIGN 101 Asthma management guideline\(^2\) available at:


3. **Optimise inhaler choice and technique.**

   An In-check DIAL\(^\circledR\) pulmonary air flow meter has been recognised to be helpful in assessing the inspiratory flow rate (IFR). This along with other training aids maybe used to ensure inhaler devices are used optimally. Standardise choice of device for different inhaled medication where possible.
4. **Record all interventions and changes**

Record review information on the BlueBay application and in consultation manager on the computer system and any changes to therapy on the Pharmacy Asthma review datasheet **Appendix 4**.

5. **Self Management Plan**

Ensure the patient has an asthma self management plan. (**Appendix 5**)

6. **Communicate changes**

Inform the patient and community pharmacy of any alterations to therapy. If the review is completed by a non-prescriber, present any recommendations to the GP for consideration and implementation.

**Children over 5 years**

1. For children (over 5 years), not under secondary care review, ensure the device(s) and dose(s) are appropriate (within licence) for the patient’s age. Record all information as above.

2. Monitor children (under 12 years) on ICS therapy for signs of adrenal suppression using centile (height and weight) charts. Children on high dose ICS should be referred to RHSC where they will be followed up and monitored.

**Exclusions:**

Patients who are currently exception coded on QOF.
Patients who have been difficult to stabilise even with secondary care input over the years.

**Health, Equality and Diversity Statement**

Please be aware that communication, including patient letters, may require modification to meet the needs of patients with limited English proficiency or those with sensory impairment. NHS Lothian provides translation, interpretation and communication support (TICS) and clinical interpretation is centrally funded. Information on TICS services is available at **NHS Lothian Intranet: Translation, Interpretation and Communication Support**
References


Appendix 1: Asthma Control Test

Asthma UK is the only charity dedicated to the health and well-being of the 5.2 million people in the UK with asthma. By taking control of their asthma, most people's day-to-day lives should be free from disruption such as troubled sleep or not being able to exercise.

Why take the Asthma Control Test™?
The Asthma Control Test™ will provide you with a snapshot of how well your asthma has been controlled over the last four weeks, giving you a simple score out of 25. Asthma symptoms can vary from month to month, so it is worth keeping the test handy to see if your score changes. You can also share your results with your doctor or asthma nurse to help explain just how your asthma affects you.

Are you in control of your asthma? Or is your asthma in control of you? Here’s how to find out

Step 1: Read each question below carefully, circle your score and write it in the box.
Step 2: Add up each of your five scores to get your total Asthma Control Test™ score.
Step 3: Use the score guide to learn how well you are controlling your asthma.

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 During the past 4 weeks, how often did your asthma prevent you from getting as much done at work, school or home?</td>
<td>Score:</td>
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<tr>
<td>All of the time 1</td>
<td>Most of the time 2</td>
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<tr>
<td>Some of the time 3</td>
<td>A little of the time 4</td>
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<tr>
<td>None of the time 5</td>
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<td>Q2 During the past 4 weeks, how often have you had shortness of breath?</td>
<td>Score:</td>
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<tr>
<td>More than once a day 1</td>
<td>Once a day 2</td>
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<tr>
<td>3-6 times a week 3</td>
<td>1-2 times a week 4</td>
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<td>Not at all 5</td>
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<td>Q3 During the past 4 weeks, how often did your asthma symptoms (wheezing, coughing, chest tightness, shortness of breath) wake you up at night or earlier than usual in the morning?</td>
<td>Score:</td>
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<td>0 or more times a week 1</td>
<td>2-3 nights a week 2</td>
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<td>Once a week 3</td>
<td>Once or twice 4</td>
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<tr>
<td>Not at all 5</td>
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<td>Q4 During the past 4 weeks, how often have you used your reliever inhaler (usually blue)?</td>
<td>Score:</td>
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<tr>
<td>Not more than 2 times a day 1</td>
<td>1-2 times a week 2</td>
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<td>2-3 times a week 3</td>
<td>Once a week or less 4</td>
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<td>Not at all 5</td>
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<td>Q5 How would you rate your asthma control during the past 4 weeks?</td>
<td>Score:</td>
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<td>Not controlled 1</td>
<td>Poorly controlled 2</td>
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<tr>
<td>Somewhat controlled 3</td>
<td>Well controlled 4</td>
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<tr>
<td>Completely controlled 5</td>
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</tbody>
</table>

What does your score mean?

Score: 25 – WELL DONE
- Your asthma appears to have been UNDER CONTROL over the last 4 weeks.
- However, if you are experiencing any problems with your asthma, you should see your doctor or nurse.

Score: 20 to 24 – ON TARGET
- Your asthma appears to have been REASONABLY WELL CONTROLLED during the past 4 weeks.
- However, if you are experiencing symptoms your doctor or nurse may be able to help you.

Score: less than 20 – OFF TARGET
- Your asthma may NOT HAVE BEEN CONTROLLED during the past 4 weeks.
- Your doctor or nurse can recommend an asthma action plan to help improve your asthma control.

What can you do now?
Like many other people in the UK, it is possible that your asthma could have less impact on your everyday life. You can get a free pack full of information about how to take control of your asthma, including an action plan to fill in with your doctor or asthma nurse, from Asthma UK.

©2002, by QualifyMetric Incorporated. Asthma Control Test is a trademark of QualifyMetric Incorporated.

"US English version modified for use in UK. The production of this leaflet has been supported by glue/SmithKline Beecham" Registered charity number 802364
Appendix 2: Step-down Flowchart for Adults & Children Over 5 on Inhaled Corticosteroid (ICS) and Long-acting Beta2-agonist (LABA) Therapy for Asthma

Is the patient’s asthma well controlled on current ICS and LABA therapy?

Yes

Is patient suitable for step-down of ICS dose?

No

Assess compliance/concordance with current therapy and check inhaler technique

Record review on computer system (using BlueBay where possible)

Give patient self management plan

Yes

Assess compliance/concordance with current therapy and check inhaler technique is satisfactory. Consider step-up of treatment as per BTS/SIGN101 guidelines ensuring dose and device are appropriate for age.

Reduce dose of ICS by approximately 25-50% every 3 months to lowest level that maintains good symptom control eg. Seretide 250 Evohaler (two puffs BD) is reduced to Seretide 125 Evohaler (two puffs BD). Record any dose changes.

Explain reason for step-down, reinforce inhaler technique, and use same inhaler devices where possible

Record review on computer system (using BlueBay where possible)

Give patient an asthma self management plan

Arrange a follow up appointment
Appendix 3: Good Practice Points

ICS Dose Reduction
Evidence based recommendations on the optimal dose reduction and timing for ICS step-down varies between published guidelines (GINA and BTS/SIGN);

GINA (based on the current evidence) suggests ‘when asthma is controlled with a combination of ICS and LABA, the preferred approach is to begin by reducing the dose of ICS by approximately 50% while continuing the LABA. If control is maintained, further reductions in the ICS should be attempted until a low-dose is reached, when the LABA may be stopped. An alternative is to switch the combination to a once-daily dosing’

BTS/SIGN 101 however suggests the ‘reduction in inhaled steroid dose should be slow as patients deteriorate at different rates. Reductions should be considered every three months, decreasing the dose by approximately 25-50% each time’

For the purpose of this review, the BTS/SIGN 101 guidance should be used for ICS dose reductions.

ICS/LABA combination inhaler

Fostair® is the LJF 1st choice ICS/LABA combination inhaler for the control of asthma in adults and should be used 1st line whenever possible.
The maximum licensed dose of Fostair® is two puffs twice daily. At this dose, Fostair® has been shown to be comparable to Symbicort 200/6 Turbohaler® (two puffs twice daily) and Sertetide 125 Evohaler® (two puffs twice daily)

NHS Lothian Fostair® Prescribing Guidance for General Practice is available on the LJF website at: http://www.ljf.scot.nhs.uk/EducationAndTraining/Documents/Fostair%20Guidance%20Sept%202011%20FINAL.pdf

Patients who require higher ICS doses (at the top of Step 4) to control symptoms should be prescribed an alternative combination inhaler. In this instance, to maximise cost effectiveness, Seretide 500 Accuhaler® (one blister twice daily) or Symbicort 400/12 Turbohaler® (to a maximum of two puffs twice daily) should be prescribed.
Seretide 250 Evohaler® (two puffs twice daily) and Symbicort 200/6 Turbohaler® (to a maximum of four puffs twice daily for asthma maintenance) are NOT cost effective choices. In addition the Symbicort® Smart® regime (use of Symbicort® 200/6 and 100/6 Turbohalers® as needed in response to symptoms) is ‘Not Preferred’ in Lothian as suitable alternatives exist.

Asthma in Children (over 5 years)

In children over 5, currently being prescribed high dose ICS, for whom dose reduction to within licensed range is not achievable at present should be read coded 663g2-Using inhaled steroids-high dose. These children should be reviewed regularly and treatment stepped down whenever good symptom control is achieved.
Appendix 4: Pharmacy asthma review datasheet

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>CHI number</th>
<th>Patient under 16 yrs</th>
<th>Current ICS</th>
<th>ICS Strength</th>
<th>Dose</th>
<th>Oxy issued in last 12 months</th>
<th>Current LABA</th>
<th>LABA Strength</th>
<th>Dose</th>
<th>Oxy issued in last 12 months</th>
<th>Current Combination</th>
<th>Combination Strength</th>
<th>Dose</th>
<th>Oxy issued in last 12 months</th>
<th>Inhaler changed in combination</th>
<th>Combination Strength</th>
<th>Dose</th>
<th>Inhaler technique checked</th>
<th>Relevant comments</th>
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Please remove column with CHI number before returning the sheet to your Primary Care Pharmacist - Thank you.
How to recognise if your asthma is getting worse:

- Have you had difficulty sleeping because of your asthma symptoms (including coughing)?
- Have you had your usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?
- Has your asthma interfered with your usual activities (e.g. housework, work or school)?

If you have answered ‘yes’ to one or more of the above, then arrange an asthma review with your GP or practice nurse.

See your nurse or GP once a year even when your asthma is well controlled. Take this plan to each visit so it can be updated. Take your symptom or peak flow diary to each visit.

Your local pharmacist is available to give asthma advice.

Get a copy of “Asthma Attacks and Emergency Care” from Asthma UK free of charge by calling the number overleaf

Do not stop taking your asthma medicines without talking to your doctor first.

For further information contact:

**Asthma UK Scotland**
www.asthma.org.uk
0800 121 6244 (Helpline)
Monday – Friday, 9am – 5pm
(calls free from a BT landline)

**Chest Heart & Stroke Scotland**
www.chss.org.uk
0845 0776000 (Advice Line)
Monday – Friday, 9.30am – 4pm
(calls charged at local rates)
adviceline@chss.org.uk

**My Condition, My Terms, My Life**
www.myconditionmylife.org

**NHS Inform**
www.nhsinform.co.uk

**Smokeline**
www.canstopsmoking.com

With thanks to NHS Lanarkshire for permission to adapt their Asthma Action Plan

June 2012
Green Zone
Your asthma is well controlled when:
- Your sleep is not disturbed by asthma symptoms (cough, wheeze, chest tightness or breathlessness)
- Your usual activities are not affected by asthma symptoms
- You have no asthma symptoms during the day
- Your peak flow reading is above ...........

Action
Continue to take your usual asthma medicines:

<table>
<thead>
<tr>
<th>Inhaler/tablet name</th>
<th>Preparation/Colour</th>
<th>Dose and frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventer – should be used every day, even when well</td>
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<tr>
<td>Reliever – should be used if you have symptoms</td>
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<tr>
<td>Other asthma medication</td>
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Amber Zone
Your asthma is getting worse if:
- You have difficulty sleeping because of asthma symptoms (cough, wheeze, chest tightness or breathlessness)
- You have difficulty doing normal activities because of asthma symptoms
- You are using your reliever inhaler more or it lasts a shorter time
- Your peak flow is less than 80% of best.

Action
Take full dose of inhalers:
- Reliever up to 12 puffs daily
- Maximise dose of any other inhalers. If this does not help, contact your GP or nurse for advice.

If your symptoms do not improve within ____ days see your GP and start steroids as directed.

Take ____ steroid tablets (5mg each) immediately and again each morning for ____ days or as directed.

Always let your GP or nurse know if you have started taking your steroid tablets.

Red Zone
Asthma emergency:
- Your symptoms are getting worse (breathless, wheeze, cough or tight chest)
- You are too breathless to speak easily (cannot speak full sentences)
- Your blue reliever inhaler does not help
- Your peak flow reading is below 50% of best.

Action
- Get help – call 999 urgently
- Sit up and loosen tight clothing
- Take your reliever inhaler: 4 puffs to start and 1 puff every minute up to 20 puffs until symptoms improve or help arrives.
About your child’s asthma action plan

The goals of asthma treatment are:
- Freedom from symptoms
- An unrestricted lifestyle
- Be able to get the best possible peak flow
- As few asthma attacks as possible
- Miss as little school as possible

Green Zone – All clear to go
Your child’s asthma is under control and this is where you want to be most of the time. If your child is in this zone all the time it may be possible for your doctor or asthma nurse to reduce the medicines.

Amber Zone – Caution
Your child’s asthma is not under control and the medication may need to be changed. Make a note of your child’s symptoms and peak flows if appropriate so that the doctor or asthma nurse can assess your child properly.

Red Zone – Red Alert
If your child is in this zone follow the Red Zone Action and inform your doctor or asthma nurse, as the regular treatment may also need adjusting.

Other Advice
Make sure your child:
- Sees their practice nurse or GP twice a year even when their asthma is well controlled
- Takes this plan to each visit so it can be updated
- Takes their symptom or peak flow diary to each visit.

Useful Numbers

Asthma UK Scotland
4 Queen Street
Edinburgh EH2 1JE
Phone: 0131 226 2544
www.asthma.org.uk

Asthma UK helpline
Open Monday – Friday, 9am-5pm
Calls free from a BT landline
0800 121 6244

If your child is having any problems with their asthma make an appointment to see

GP phone number

NHS24 contact number: 08454 242424

Date: .........................................................
Predicted peak flow: ..................................
Best ever peak flow: .................................

June 2012
Green Zone  ➤  Go
Your child’s asthma is under control when:
- Breathing is good
- No cough or wheeze
- Can play games and sport normally
- No sleep disturbance
- Can do normal activities.
Peak flows are greater than 80%.

**Green Zone Action – Take medicines as normal**
Continue with the usual asthma medicines:

1. **Preventer**
   - Strength
   - Device
   - Take................. puffs (doses)
   - (Continue to take this medication even when well)

2. **Reliever (Blue)**
   - Device
   - Take................. puffs (doses) as required and if necessary take........ puffs (doses) 10 to 15 minutes before sport or activity

3. **Other Medicines**

Amber Zone  ➤  Caution
Your child’s asthma is getting worse if he or she:
- Is waking at night with asthma symptoms
- Has cough, wheeze and/or tight chest
- Needs to use the reliever inhaler regularly – once a day or more than usual
- Has a cold.

Peak flow recordings are between 50% and 80%.

**Amber Zone Action**
Start using or increase your child’s reliever (blue) inhaler 4 puffs, 4 times a day for 4 days.

The normal dose of preventer inhaler should be continued alongside the regular use of the reliever inhaler. Increasing the preventer inhaler is not recommended.

If there is no improvement make an appointment to see your doctor or asthma nurse.

If your child has a peak flow diary, start filling in morning and evening peak flows, the symptoms they get each day and how often the reliever inhaler is needed. Take the diary with you if a visit to the doctor or asthma nurse is necessary.

Red Zone  ➤  Red Alert

- Breathing is a real effort (e.g. chest, tummy or neck muscles pulling in with each breath)
- Too breathless to speak a full sentence
- The reliever (blue) is not helping or not lasting 2 to 3 hours.

Peak flow is below 50%.
Take 1 puff (dose) of reliever every minute for 10 minutes using a spacer.

If there is no improvement or if the reliever does not last 3 to 4 hours seek urgent medical advice from your GP or A&E.

**Call 999 if your child is very pale or has blue lips, is losing consciousness or gasping for breath, or if you are concerned.**

**Action**
While waiting you can
- Continue giving one puff (dose) of the reliever inhaler every minute until help arrives, using the spacer device
- If your child has steroid tablets give them as directed
- Try to keep calm and reassure your child
- Sit your child upright to help them breathe, loosen tight clothing and do not put your arm around them.

If the emergency dose of the reliever inhaler is needed more than TWICE in any 24 hour period seek medical advice. Giving repeated emergency doses of reliever without medical review is NOT safe.