

# Wheeze and Asthma

## Key Facts and Updates

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# Outline

- Scale of the problem
- Viral Induced Wheeze vs Asthma
- How to approach an asthma (annual) review
- Acute presentation
- Scenarios



# The scale of the problem

- 1.1 Million children in the UK are currently receiving treatment for asthma
- 2 in every class (1 in 11 children have asthma)
- Every 17 minutes a child is admitted to hospital in the UK because of their asthma
  - 75% preventable
  - 30,000 – 40,000 admissions a year
- 1/3 of preschool children have a wheezy episode

## What Impact is it having?

- 40% of children said their asthma **stops them having fun**
- 51% had problems **visiting friends**
- 98% said their asthma stopped them doing “**something**”
- 87% of children have **missed at least one day of school** because of their asthma
- 49% had problems **joining in with general lessons**
- 48% had problems **going on school trips**
- 73% had problems **joining in PE lessons**
- **10% of children under 15 with asthma symptoms experience attacks so severe they can't speak**

# Asthma Death Review Summary



## The National Review of Asthma Deaths (NRAD)

### Key findings

#### Use of NHS services

- 1 During the final attack of asthma, 87 (45%) of the 195 people were known to have died without seeking medical assistance or before emergency medical care could be provided.
- 2 The majority of people who died from asthma (112, 57%) were not recorded as being under specialist supervision during the 12 months prior to death. Only 83 (43%) were managed in secondary or tertiary care during this period.
- 3 There was a history of previous hospital admission for asthma in 47% (90 of 190).
- 4 Nineteen (10%) of the 195 died within 28 days of discharge from hospital after treatment for asthma.
- 5 At least 40 (21%) of the 195 people who died had attended a hospital emergency department with asthma at least once in the previous year and, of these, 23 had attended twice or more.

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## Medical and professional care

- 1 Personal asthma action plans (PAAPs), acknowledged to improve asthma care, were known to be provided to only 44 (23%) of the 195 people who died from asthma.
- 2 There was no evidence that an asthma review had taken place in general practice in the last year before death for 84 (43%) of the 195 people who died.
- 3 Exacerbating factors, or triggers, were documented in the records of almost half (95) of patients; they included drugs, viral infections and allergy. A trigger was not documented in the other half.

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# Wheezing in the preschool child (< 5 years)

- Common presentation to paediatric services
- **1/3 of preschool children will have a wheezy episode**
- **Only about 20% of these will go onto have a diagnosis of asthma**

Tucson Children's Respiratory Study: 1980 to present

- Wheeze for many pre-school children is not associated with atopy and resolves by school age in the vast majority of cases

# Wheezing Patterns

## Temporal pattern of wheeze

- **Episodic (viral) wheeze** Wheezing during discrete time periods, often in association with clinical evidence of a viral cold, with absence of wheeze between episodes
- **Multiple-trigger wheeze** Wheezing that shows discrete exacerbations, but also symptoms between episodes

## Duration of wheeze

- **Transient wheeze** Symptoms that commenced before the age of 3 yrs and are found (retrospectively) to have disappeared by the age of 6 yrs; transient wheeze may be episodic or multiple-trigger wheeze
- **Persistent wheeze** Symptoms that are found (retrospectively) to have continued until the age of 6 yrs; persistent wheeze may be episodic or multiple-trigger wheeze
- **Late-onset wheeze** Symptoms that start after the age of 3 yrs; late-onset wheeze may be episodic or multiple-trigger wheeze

# Treatment options for Viral Induced Wheeze

<b>Preventer</b>	<b>Yes</b>	<b>No strong evidence of beneficial effect</b>	<b>-</b>
<b>Start URTI</b>	<b>Yes</b>	<b>High dose ICS may work- Height (?)</b>	<b>No strong evidence of beneficial effect</b>
<b>Wheeze/DIB</b>	<b>Too late</b>	<b>No strong evidence of beneficial effect</b>	<b>Reserved for those needing HDU or strong atopy history</b>



## Four key Steps:

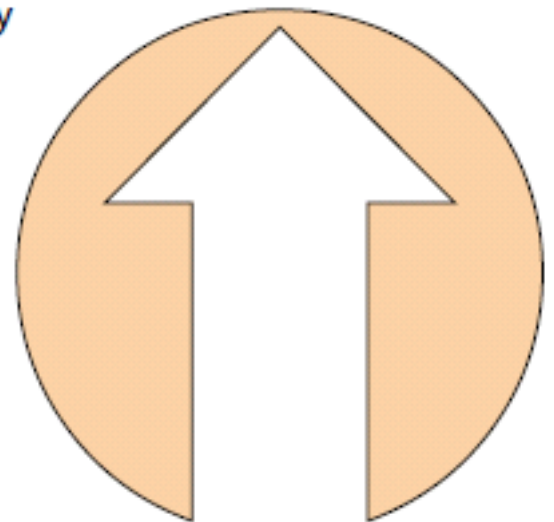
- Is this asthma?
- Is there good control?
- What is impacting on control?
- What action needs to be taken?





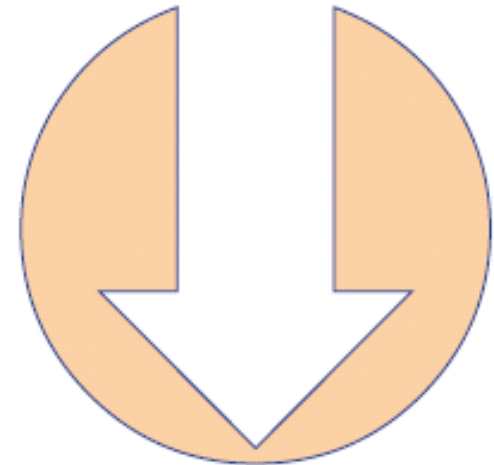
## CLINICAL FEATURES THAT INCREASE THE PROBABILITY OF ASTHMA

- More than one of the following symptoms - wheeze, cough, difficulty breathing, chest tightness - particularly if these are frequent and recurrent; are worse at night and in the early morning; occur in response to, or are worse after, exercise or other triggers, such as exposure to pets; cold or damp air, or with emotions or laughter; or occur apart from colds
- Personal history of atopic disorder
- Family history of atopic disorder and/or asthma
- Widespread wheeze heard on auscultation
- History of improvement in symptoms or lung function in response to adequate therapy.



## CLINICAL FEATURES THAT LOWER THE PROBABILITY OF ASTHMA

- Symptoms with colds only, with no interval symptoms
- Isolated cough in the absence of wheeze or difficulty breathing
- History of moist cough
- Prominent dizziness, light-headedness, peripheral tingling
- Repeatedly normal physical examination of chest when symptomatic
- Normal peak expiratory flow (PEF) or spirometry when symptomatic
- No response to a trial of asthma therapy
- Clinical features pointing to alternative diagnosis



With a thorough history and examination, a child can usually be classed into one of three groups:

- high probability – diagnosis of asthma likely
- low probability – diagnosis other than asthma likely
- intermediate probability – diagnosis uncertain.

# Is (My) Asthma Controlled

***Lung Function***

***>80% predicted or best***

Daytime symptoms

NONE

***Night time awakenings due to asthma***

***NONE***

Limitations on activity including exercise

NONE

***Exacerbations***

***NONE***

Need for rescue medication

NONE

# Asthma Control Test (ACT)

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.

Asthma  
Control  
Test™



## 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.

During the past 4 weeks:

1. How often did your asthma **prevent** you from getting as much done at work, **school** or home?
2. How often have you had **shortness of breath**?
3. How often did your asthma (wheezing, coughing, chest tightness, shortness of breath) **wake you up**?
4. How often have you **used your reliever inhaler**?
5. How would **you rate your asthma control**?

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.

Q1	During the past 4 weeks, how often did your asthma prevent you from getting as much done at work, school or home?	Score:
	All of the time 1 Most of the time 2 Some of the time 3 A little of the time 4 None of the time 5	
Q2	During the past 4 weeks, how often have you had shortness of breath?	Score:
	More than once a day 1 Once a day 2 3-4 times a week 3 5-7 times a week 4 Not at all 5	
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?	Score:
	4 or more times a week 1 2-3 nights a week 2 Once a week 3 Once or twice 4 Not at all 5	
Q4	During the past 4 weeks, how often have you used your reliever inhaler (usually blue)?	Score:
	3 or more times a day 1 1-2 times a day 2 1-2 times a week 3 Once a week or less 4 Not at all 5	
Q5	How would you rate your asthma control during the past 4 weeks?	Score:
	Not controlled 1 Poorly controlled 2 Somewhat controlled 3 Well controlled 4 Completely controlled 5	

## What does your score mean?

Total Score

### 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 any 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 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.

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- However, if you are experiencing any symptoms your doctor or nurse may be able to help you.

Total Score





### 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.





# Children's ACT

Have your child complete these four questions.





1. How is your asthma today?

 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	<b>Score</b> <input type="text"/>
Very Bad	Bad	Good	Very Good	





2. How much of a problem is your asthma when you run, exercise or play sports?

 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	<b>Score</b> <input type="text"/>
It's a big problem, I can't do what I want to do.	It's a problem and I don't like it.	It's a little problem but it's okay.	It's not a problem.	

3. Do you cough because of your asthma?

 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	<b>Score</b> <input type="text"/>
Yes, all of the time.	Yes, most of the time.	Yes, some of the time.	No, none of the time.	

4. Do you wake up during the night because of your asthma?

 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	 <input type="radio"/>	<b>Score</b> <input type="text"/>
Yes, all of the time.	Yes, most of the time.	Yes, some of the time.	No, none of the time.	

Please complete these questions on your own.

5. During the last 4 weeks, how many days did your child have any daytime asthma symptoms?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<b>Score</b> <input type="text"/>
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

6. During the last 4 weeks, how many days did your child wheeze during the day because of asthma?

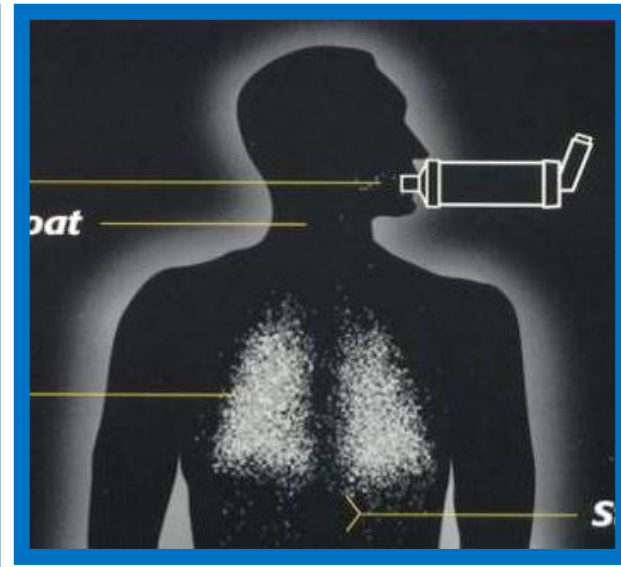
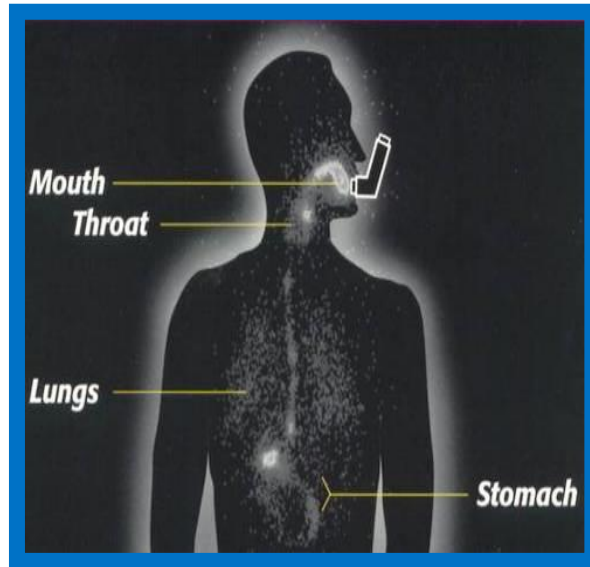
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<b>Score</b> <input type="text"/>
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

7. During the last 4 weeks, how many days did your child wake up during the night because of asthma?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<b>Score</b> <input type="text"/>
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

## What can impact on Asthma Control?



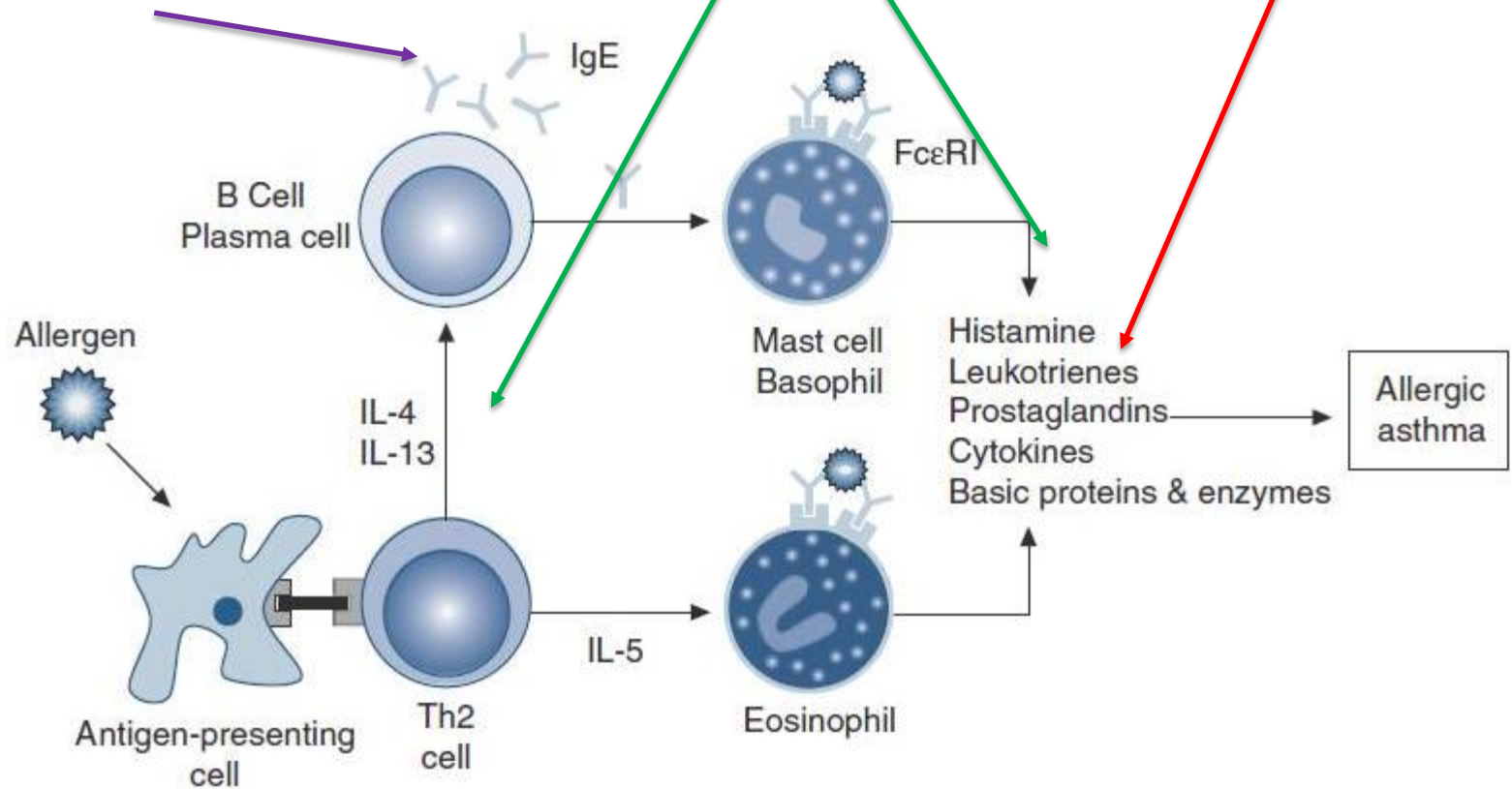


# Pharmacotherapy

Monoclonal anti-IgE  
(omalizumab, Xolair)

Steroids

Montelukast





Patients should start treatment at the step most appropriate to the initial severity of their asthma. Check concordance and reconsider diagnosis if response to treatment is unexpectedly poor.

MOVE UP TO IMPROVE CONTROL AS NEEDED

MOVE DOWN TO FIND AND MAINTAIN LOWEST CONTROLLING STEP

Inhaled short-acting  $\beta_2$  agonist as required

## STEP 1

Mild intermittent asthma

Add inhaled steroid 200-400 mcg/day\* (other preventer drug if inhaled steroid cannot be used) 200 mcg is an appropriate starting dose for many patients

Start at dose of inhaled steroid appropriate to severity of disease.

## STEP 2

Regular preventer therapy

1. Add inhaled long-acting  $\beta_2$  agonist (LABA)
2. Assess control of asthma:
  - good response to LABA - continue LABA
  - benefit from LABA but control still inadequate - continue LABA and increase inhaled steroid dose to 400 mcg/day\* (if not already on this dose)
  - no response to LABA - stop LABA and increase inhaled steroid to 400 mcg/day.\*If control still inadequate, institute trial of other therapies, leukotriene receptor antagonist or SR theophylline

## STEP 3

Initial add-on therapy

Increase inhaled steroid up to 800 mcg/day\*

## STEP 4

Persistent poor control

Use daily steroid tablet in lowest dose providing adequate control

Maintain high dose inhaled steroid at 800 mcg/day\*

Refer to respiratory paediatrician

## STEP 5

Continuous or frequent use of oral steroids



British Thoracic Society

\* BDP or equivalent

SYMPTOMS

vs

TREATMENT



Patients should start treatment at the step most appropriate to the initial severity of their asthma. Check concordance and reconsider diagnosis if response to treatment is unexpectedly poor.

MOVE UP TO IMPROVE CONTROL AS NEEDED

MOVE DOWN TO FIND AND MAINTAIN LOWEST CONTROLLING STEP

Inhaled short-acting  $\beta_2$  agonist as required

## STEP 1

Mild intermittent asthma

Add inhaled steroid 200-400 mcg/day\*\* or leukotriene receptor antagonist if inhaled steroid cannot be used.

Start at dose of inhaled steroid appropriate to severity of disease.

## STEP 2

Regular preventer therapy

In those children taking inhaled steroids 200-400 mcg/day consider addition of leukotriene receptor antagonist.

In those children taking a leukotriene receptor antagonist alone reconsider addition of an inhaled steroid 200-400 mcg/day.

In children under 2 years consider proceeding to step 4.

## STEP 3

Initial add-on therapy

Refer to respiratory paediatrician.

Text

## STEP 4

Persistent poor control

SYMPTOMS

vs

TREATMENT

\* BDP or equivalent

† Higher nominal doses may be required if drug delivery is difficult



British Thoracic Society

# BTS Guideline: Major Changes

- More ipratropium bromide in first 2 hours in acute severe or life-threatening asthma
- 1<sup>st</sup> choice add on to inhaled steroids:
  - if <5yo: montelukast
  - If >5yo: long-acting beta-agonist
- Serial PEFr, spirometry or eNO offers little benefit in monitoring over clinical symptom-based assessment in children

# Which Inhaler & What Strength?

## Bronchodilator

## Inhaled corticosteroid (ICS)

## ICS/LABA

## ~~LABA~~

Meter Dose  
inhaler  
Always with  
Spacer

Salbutamol  
100mcg



Beclometasone  
50mcg



Beclometasone  
100mcg



Fluticasone  
50, 125 & 250mcg



Seretide  
50, 125 & 250  
Plus 25mcg Salmeterol



~~Salmeterol  
25mcg~~



Salbutamol  
200mcg



Fluticasone  
50, 100 & 500mcg



Seretide  
100, 250 & 500  
Plus 50mcg Salmeterol



~~Salmeterol  
50mcg~~



Bricanyl  
500mcg



Pulmicort  
100, 200 & 400mcg



Symbicort  
100/6, 200/6 &  
400/12mcg

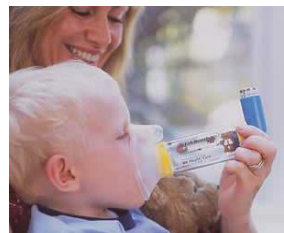


~~Formoterol  
6 & 12mcg~~







Accuhaler

Turbohaler



# A Guide to Selecting an 'Aerochamber Plus'?

Device	Approx Age	Tidal Breathing	Tips
Infant 'Aerochamber plus' 	0-6months	✓	Mask very rigid, not always tolerated, switch to yell if mask will fit
Child 'Aerochamber plus' 	6 months +	✓	Soft mask helps kids tolerate it better
Adult 'Aerochamber Plus' with mask 	10 years + Avoid if possible	✓	Useful for older children <u>with learning disabilities</u> who cannot use the mouth piece
'Aerochamber Plus' with mouthpiece 	4 years plus (approx)	✗	Ensure no musical sounds & nasal flaring if breathing in through nose

# Self management – Getting the Basics right !!

- Asthma Plan
- Inhaler Technique
- Adherence
- Education
- Flu Vaccine
- Avoid triggers
  - (Air pollution, Smoking, Aeroallergens)
- Healthy diet
  - (Studies in adults and children have shown that a high intake of fresh fruit and vegetables is associated with fewer asthma symptoms and better lung function)
- Exercise
  - Warm up and warm down. Use bronchodilator pre-exercise
  - Good evidence that exercise helps asthma\

**ASTHMA ACTION PLAN age 2-5 years**

NAME \_\_\_\_\_ HOSPITAL NO \_\_\_\_\_ DOB \_\_\_\_\_ PLAN BY \_\_\_\_\_ DATE \_\_\_\_\_

SYMPTOMS	ACTION
<b>1</b> 😊 <ul style="list-style-type: none"> <li>I am well</li> <li>I have no cough/wheeze</li> <li>I am doing normal activities</li> </ul>	<b>1</b> I need to take my normal medication of: Preventer: _____ Reliever: _____ Give _____ (via spacer) puffs every morning and evening      Give _____ (via spacer) puffs as needed and before exercise Other Therapy: _____
<b>2</b> 😞 <ul style="list-style-type: none"> <li>I am unwell</li> <li>I am getting a cold</li> <li>I am coughing/wheezing day and/or night</li> <li>My blue inhaler is working via spacer with/without mask</li> </ul>	<b>2</b> I need to take my normal medication of: Preventer: _____ Reliever: _____ Give _____ (via spacer) puffs every morning      Give _____ (via spacer) puffs as needed and before exercise Other Therapy: _____
<b>3</b> 😞 <ul style="list-style-type: none"> <li>My coughing/wheezing is getting worse especially at night</li> <li>My blue inhaler is not lasting four hours and not working within 15 minutes</li> </ul>	<b>3</b> I need to take or come to the Children's Nurse I also need to: • 10 puffs of _____ • Repeat 10 puffs every 4 hours Call 999 or come to the Emergency Department (ED) or ring the Community Children's Nurse or the Hospital Asthma Nurse.
<b>4</b> 😞 <ul style="list-style-type: none"> <li>I am very unwell</li> <li>My blue inhaler is not helping at all</li> <li>I am using my tummy or neck muscles to breathe</li> <li>My breathing rate is more than 40 per minute</li> <li>I am too breathless to talk or eat</li> </ul>	<b>4</b> Call 999 or come to the Emergency Department (ED) or ring the Community Children's Nurse or the Hospital Asthma Nurse. I also need to increase my reliever medication to: • 10 puffs of SALBUTAMOL. Give inhaler via the spacer every 4 hours. • Keep giving 10 puffs of SALBUTAMOL inhaler via the spacer every 10 mins whilst seeking medical assistance.

**WEANING PLAN** When feeling Better - I can reduce my blue inhaler as follows:

**ASTHMA ACTION PLAN aged 5 years and above**

NAME \_\_\_\_\_ HOSPITAL NO \_\_\_\_\_ DOB \_\_\_\_\_ PLAN BY \_\_\_\_\_ DATE \_\_\_\_\_

SYMPTOMS	PEAK FLOW	ACTION
<b>1</b> 😊 <ul style="list-style-type: none"> <li>I am well</li> <li>I have no cough/wheeze</li> <li>I am doing normal activities</li> </ul>	<b>1</b> Best peak flow My peak flow is about _____ (80%+)	I need to take my normal medication of: Preventer: _____ Reliever: _____ Take _____ puffs every morning and evening      Take _____ puffs as needed and before exercise Other Therapy: _____
<b>2</b> 😞 <ul style="list-style-type: none"> <li>I am unwell</li> <li>I am getting a cold</li> <li>I am coughing/wheezing day and/or night</li> <li>My blue inhaler is working via spacer with/without mask</li> </ul>	<b>2</b> My peak flow is between _____ and _____ (70-80%+)	I need to take my normal medication of: Preventer: _____ Reliever: _____ Take _____ puffs every morning and evening      Take _____ puffs every 4 hours Other Therapy: _____
<b>3</b> 😞 <ul style="list-style-type: none"> <li>My coughing/wheezing is getting worse especially at night</li> <li>My blue inhaler is not lasting four hours and not working within 15 minutes</li> </ul>	<b>3</b> My peak flow is between _____ and _____ (60-70%+)	I need to take my medication as in step 2 and also see my GP urgently or come to the Emergency Department (ED) or ring the Community Children's Nurse or the Hospital Asthma Nurse. I also need to increase my reliever medication to: • 10 puffs of SALBUTAMOL. Give inhaler via the spacer. • Repeat 10 puffs of SALBUTAMOL inhaler every 4 hours.
<b>4</b> 😞 <ul style="list-style-type: none"> <li>I am very unwell</li> <li>My blue inhaler is not helping at all</li> <li>I am using my tummy or neck muscles to breathe</li> <li>My breathing rate is more than 30 per minute</li> <li>I am too breathless to talk or eat</li> </ul>	<b>4</b> My peak flow is below _____ (less than 50%)	Call 999 or come to the Emergency Department (ED) urgently. I need to take my medication as in step 2 and also: • 10 puffs of SALBUTAMOL inhaler via the spacer. • Repeat 10 puffs of SALBUTAMOL inhaler via the spacer every 10 mins whilst seeking medical assistance.

**WEANING PLAN** When feeling Better - I can reduce my blue inhaler as follows:

- Day 1 - 8 puffs every 4 hours
- Day 2 - 4 puffs every 6 hours
- Day 3 - 2 puffs as required

**My Asthma/Wheeze Plan for Home, School, and Nursery**

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Hospital No: \_\_\_\_\_ Plan By: \_\_\_\_\_ Date: \_\_\_\_\_

SYMPTOMS	ACTION
<b>1</b> 😊 <ul style="list-style-type: none"> <li>I am well.</li> <li>I have no cough/wheeze.</li> <li>I am doing normal activities.</li> </ul>	I need to take my normal medication of: Preventer: _____ Reliever: _____ Take _____ puffs every morning and evening.      Take _____ puffs as needed and before exercise. Other Therapy: _____
<b>2</b> 😞 <ul style="list-style-type: none"> <li>I am unwell.</li> <li>I am getting a cold.</li> <li>I am coughing/wheezing day and/or night.</li> <li>My blue inhaler is working via a spacer with/without a mask.</li> </ul>	I need to take my normal medication of: Preventer: _____ Reliever: _____ Take _____ puffs every morning and evening.      Take _____ puffs every 4 hours. Other Therapy: _____
<b>3</b> 😞 <ul style="list-style-type: none"> <li>My coughing/wheezing is getting worse, especially at night.</li> <li>My blue inhaler is not lasting four hours and not working within 15 minutes.</li> </ul>	I need to take my medication as in step 2 and also see my GP urgently or come to the EMERGENCY DEPARTMENT (ED) or ring the Community Children's Nurse or the Hospital Asthma Nurse. I also need to increase my reliever medication to: • 10 puffs of SALBUTAMOL. Give inhaler via spacer. • Repeat 10 puffs of SALBUTAMOL inhaler every 4 hours.
<b>4</b> 😞 <ul style="list-style-type: none"> <li>I am very unwell.</li> <li>My blue inhaler is not helping at all.</li> <li>I am using my tummy or neck muscles to breathe.</li> <li>My breathing rate is more than 30 per minute.</li> <li>I am too breathless to talk or eat.</li> </ul>	Call 999 or come to the EMERGENCY DEPARTMENT (ED) urgently. I need to take my medication as in step 2 and also: • 10 puffs of SALBUTAMOL inhaler via the spacer. • Repeat 10 puffs of SALBUTAMOL inhaler via the spacer every 10 minutes whilst seeking medical assistance.

**Weaning Plan:** Day 1: \_\_\_\_\_ Day 2: \_\_\_\_\_ Day 3: \_\_\_\_\_  
 When I am feeling better, I can reduce my blue inhaler as follows:

Based on the wheeze plan developed by the HPA/NIHR together

## NICE quality standard for asthma (2012/13)

1. People with newly diagnosed asthma have a **diagnosis made in line with BTS/SIGN guidance.**
2. Adults who have recently developed asthma are assessed for causes linked to their place of work.
3. People with asthma receive a **written plan** with details of how their asthma will be managed.
4. People with asthma are given **training in using their inhaler before they start any new inhaler treatment.**
5. People with asthma have a **review of their asthma and its management at least once a year.**
6. People with asthma who have symptoms have an **assessment of how well their asthma is controlled.**

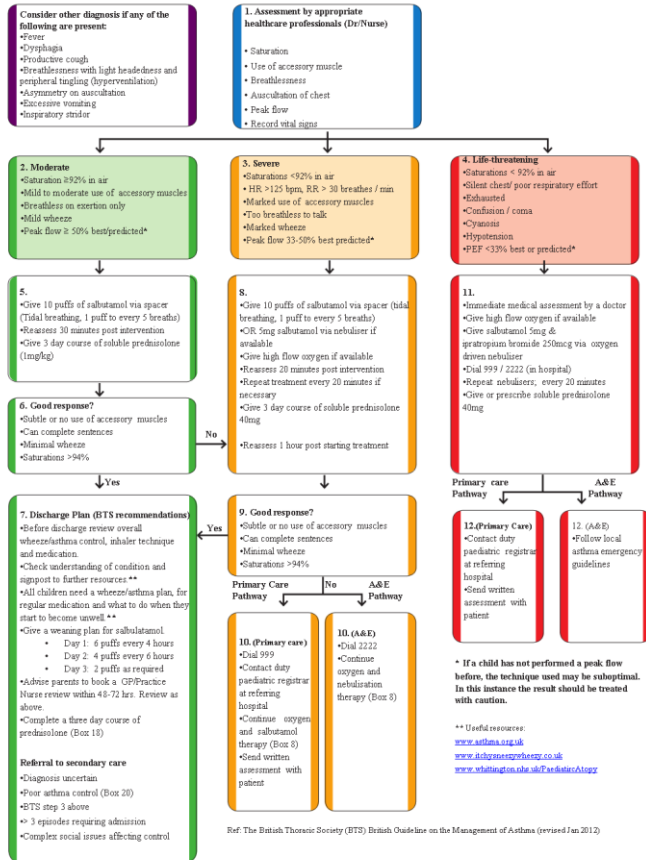
## NICE quality standard for asthma (2012/13)

7. People with asthma who go to see a healthcare professional because their symptoms have worsened **have their symptoms measured at the time of the appointment.**
8. People aged 5 years or older who see a healthcare professional with severe or life-threatening **asthma are given oral or intravenous steroids within 1 hour.**
9. People **admitted to hospital** with a sudden worsening of asthma have a **review by a member of a specialist team before discharge.**
10. People who received treatment in hospital or through out-of-hours services for a sudden worsening of their asthma see a healthcare professional in **their own GP practice within 2 working days** of treatment.
11. People with asthma that is **difficult to control** are offered an assessment by a **team that specialises in managing 'difficult asthma'.**

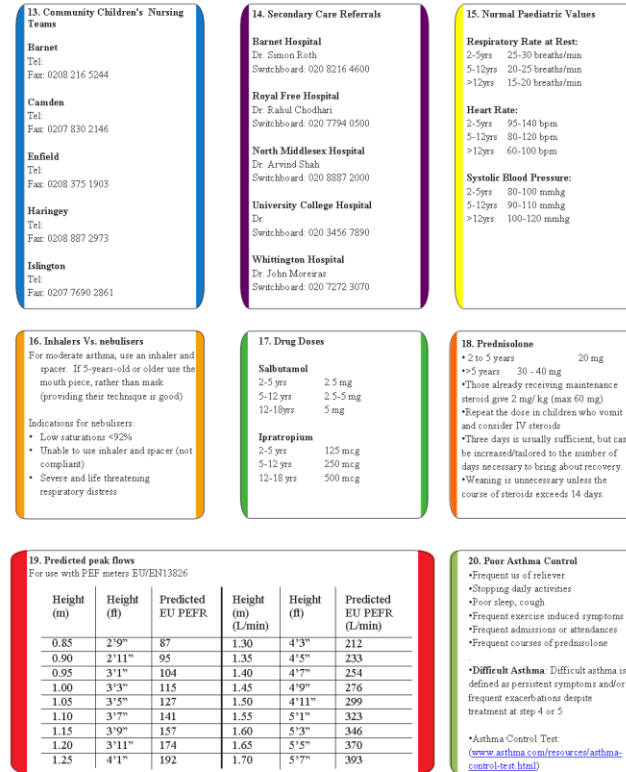


# Assessing & managing the acutely unwell Child

## Acute Asthma Attack Management Pathway for Known Asthmatic Children (5 – 18 Years)



## Acute Asthma Attack Management Pathway for Known Asthmatic Children (5 – 18 Years)



### This guidance is written in the following context:

This pathway was arrived at after careful consideration of the evidence available including but not exclusively using the BTS guidelines. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

# When to refer?

## **Referral to secondary care if:** (See box 14)

- Diagnosis unclear or in doubt
- Symptoms present from birth or perinatal lung problem
- Excessive vomiting or possetting
- Persistent wet or productive cough
- Family history of unusual chest disease
- Failure to thrive
- Nasal polyps

## **Referral to secondary care if:** (See box 14)

- Unexpected clinical findings eg focal signs, abnormal voice or cry, dysphagia, inspiratory stridor
- Failure to respond to conventional treatment (particularly inhaled corticosteroids above beclometasone 400 mcg/day (or equivalent) or frequent use of steroid tablets)
- Parental anxiety or need for reassurance

## **14. Secondary Care Referrals**

### **Barnet Hospital**

Switchboard: 020 8216 4600

### **Royal Free Hospital**

Dr. Rahul Chodhari

R.Chodhari@nhs.net

Switchboard: 020 7794 0500

### **North Middlesex Hospital**

Dr. Arvind Shah

Switchboard: 020 8887 2000

### **University College Hospital**

Dr Eddie Chung

Switchboard: 020 3456 7890

### **Whittington Hospital**

Dr. John Moreiras

John.moreiras@nhs.net

Switchboard: 020 7272 3070

## Summary

- **Asthma is common**
  - large disease burden
  - morbidity & mortality
- **Doing the simple things well**
- **Regular asthma review**
- **Structured approach**

