

# PCRS-UK Protocols



## Management of acute asthma in primary care

This protocol has been developed specifically to be utilised by primary care nurses delivering respiratory care. It has also been produced in Microsoft Word™ format as a general guide only, to allow for local adaptation. It must be stressed that the use of all, or part, of this protocol must be sanctioned and approved by the appropriate authorised individual from the practice or primary care organisation in which it is to be used.

The PCRS-UK is neither responsible or liable, directly or indirectly for any form of damage or injury caused as a result of information provided in this document.

*Note: This protocol should be used in conjunction with the Patient Group Directive for administration of salbutamol – see [http://www.pcrs-uk.org/resources/nurse\\_tools\\_m.php](http://www.pcrs-uk.org/resources/nurse_tools_m.php)*

**People die of asthma attacks relating to the disease, the patient’s behaviour, psychosocial factors and because of medical management, and these deaths usually occur outside of hospital. In adults and children with acute severe or life threatening asthma this must be treated as a medical emergency and immediate transfer to hospital must be arranged whilst commencing emergency treatment. Whilst a fuller assessment may be important, first of all establish the severity of the attack and seek additional medical support and/or arrange urgent transfer to hospital if required.**

### Recognising asthma severity

#### In adults:

Life threatening asthma	Acute severe asthma	Moderate asthma exacerbation
<ul style="list-style-type: none"> <li>• Silent chest</li> <li>• Cyanosis</li> <li>• Bradycardia or exhaustion</li> <li>• Feeble respiratory effort</li> <li>• PEF less than 33% of predicted or best</li> </ul> <p><i>N.B. Patients with severe or life-threatening attacks may not appear distressed and may not have any of these signs/symptoms; healthcare professionals should be alert to any of the above signs/symptoms.</i></p>	<ul style="list-style-type: none"> <li>• Cannot complete sentences in one breath</li> <li>• Respiratory rate more than or equal to 25 breaths/minute</li> <li>• Pulse rate more than or equal to 110 beats / minute</li> <li>• PEF 50% or less of predicted or best</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing symptoms</li> <li>• Speech normal</li> <li>• Pulse less than 110 beats/minute</li> <li>• PEF more than 50% of best recorded result or 50% more than predicted if patient's best not available</li> <li>• Respiration less than 25 breaths/minute</li> </ul>

#### In children of 2 years and over:

Life threatening asthma	Acute severe asthma	Moderate asthma exacerbation
<p>Life threatening asthma in children of 2 years and over, signs include:</p> <ul style="list-style-type: none"> <li>• Cyanosis, silent chest or poor respiratory effort</li> <li>• Fatigue or exhaustion</li> <li>• Hypotension</li> <li>• Confusion</li> <li>• SpO<sub>2</sub>&lt;92%</li> <li>• In older children, PEF less than 33% of best or predicted</li> </ul> <p><i>In these cases, arrangements should be made for immediate hospital admission giving continuous nebulised salbutamol (oxygen driven ideally) while waiting for transfer</i></p>	<ul style="list-style-type: none"> <li>• Too breathless to feed</li> <li>• Use of accessory muscles for breathing</li> <li>• Pulse rate:                             <ul style="list-style-type: none"> <li>- 2-5 yrs more than 140 bpm</li> <li>- Over 5 years 125 bpm</li> </ul> </li> <li>• Respiration:                             <ul style="list-style-type: none"> <li>- 2-5 yrs more than 40 breaths/min</li> <li>- Over 5 years more than 30 breaths/min</li> </ul> </li> <li>• In older children, PEF 50% or less of predicted with poor response to emergency treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Speech normal</li> <li>• Pulse rate:                             <ul style="list-style-type: none"> <li>- 2-5 years, less than or equal to 130 beats/minute (bpm)</li> <li>- Over 5 years, less than or equal to 120bpm</li> </ul> </li> <li>• Respiration:                             <ul style="list-style-type: none"> <li>- 2-5 years, less than or equal to 50 breaths/minute</li> <li>- Over 5 years, less than or equal to 30 breaths/minute</li> </ul> </li> </ul>

### Management

Following a quick initial assessment of severity give urgent treatment

- Administer salbutamol in accordance with the PGD (See [http://www.pcrs-uk.org/resources/nurse\\_tools\\_m.php](http://www.pcrs-uk.org/resources/nurse_tools_m.php)) and for severe and life threatening asthma attacks continue

nebulising until help arrives. (If a nebuliser is used for the salbutamol the driving force should be oxygen at a flow rate of 6-8L

- Give oxygen if available and appropriate (to maintain oxygen saturation >94-98%)
- Measure, respiratory rate, blood pressure, pulse and

pulse oximetry (SpO<sub>2</sub>) and continue to monitor these

- Monitor patient colour, use of accessory muscles and level of respiratory distress throughout the intervention
- Give a stat dose of prednisolone as per PGD and provide a prescription to commence course of oral steroids in accordance with BTS/SIGN guidelines (subject to relevant approval from authorised prescriber)
- Monitor response to treatment
- Stay with the patient/carer/guardian at all times
- PEF is useful if the patient can perform the manoeuvre and should be taken as a percentage of the patients best not their predicted best (Unless there is no record in the last two years)
- Routine antibiotics are not recommended for acute asthma - see British Thoracic Society/SIGN guidelines <http://www.sign.ac.uk/guidelines/fulltext/101/index.html>

### Assessment

If the patient's condition allows, assessment includes:

- Confirming the diagnosis of asthma
- Taking a general medical history, including assessment of colour, use of accessory muscles, ability to speak, any distress, and level of consciousness
- Measure peak flow rate (PEF), respiratory rate, blood pressure, pulse and pulse oximetry (SpO<sub>2</sub>)
- Medication history especially response to usual reliever medication
- Any known drug allergies
- Cause of acute episode if known (i.e. exposure to allergens e.g. pets, drugs, etc.) and effectiveness of intervention used prior to presentation
- Hypersensitivity to salbutamol or any other ingredient
- Children under 2 years should be referred as a matter of urgency, giving supplemental oxygen if available

### Cautions of Salbutamol

- Thyrotoxicosis
- Pregnancy, but benefit will outweigh risk in this emergency situation and inhalation minimises exposure to the foetus
- Breast-feeding. Probably present in breast milk but benefit outweighs risk in acute asthma
- Do not allow the solution or mist to enter the eyes

For additional cautions (see summary of product characteristics (SPC) or British National Formulary (BNF)). These are unlikely to be a problem in this emergency situation.

### Action if excluded from treatment

- Seek further medical guidance from GP or on-site duty doctor
- Refer immediately to A&E via an ambulance, ensuring ambulance staff know the reasons for exclusion
- Document details in patient's clinical records.

### Action if patient declines treatment

- Refer immediately to A&E via an ambulance
- Document in patient's clinical records

### For the Clinical Records

Confirm patient details, and record in the patient's clinical records:

- Details of clinical assessment
- Pre- (if appropriate) and post-salbutamol PEF
- Name, strength, dose and quantity of medicine administered
- Reasons for inclusion or exclusion
- Advice given to patient, including written advice where appropriate
- Document any concerns about precipitating factors

### Patient Advice

- Explain that the administration of salbutamol and management of the acute episode is a rescue measure and that the patient must see a healthcare professional for a detailed review of treatment and management advice
- Ensure access to product information e.g. Patient Information Leaflet (PIL) and discuss, if appropriate
- Provide written details to all patients and also for parents / carers on the care of children and vulnerable adults
- Give information on who to contact in the event of an adverse reaction or concerns
- Provide personal written asthma action plan to include information on the medication to be taken, how to recognise worsening asthma and the appropriate follow up information

### Follow Up

Follow-up should be arranged with an asthma trained healthcare professional (HCP) within 48 hours.

### Referral for Medical Advice

- The HCP must feel confident to refer at any time to a medical practitioner. This would usually be the general practitioner at the practice
- Patients should be given the option of seeing a doctor, if they wish

It is important to ensure that all relevant information is given to the GP and/or ambulance staff.

### Management of adverse events

See PGD ([http://www.pcrs-uk.org/resources/nurse\\_tools\\_m.php](http://www.pcrs-uk.org/resources/nurse_tools_m.php))

In addition, record in the patient's clinical records:

- The nature of the reaction;
- The time of onset of the symptoms
- The name of medicine, including brand name
- The batch number and expiry date, if available
- The dose and route of administration
- Any other medication being taken, including over-the-counter medical (OTCs) and herbal preparations.

### References

British Thoracic Society/SIGN guidelines  
<http://www.sign.ac.uk/guidelines/fulltext/101/index.html>

The PCRS-UK is not able to review or endorse any changes to this protocol.

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