

1. Introduction

This guideline sets out the recommended assessment and management process for acute asthma exacerbations in adults, and is based on the Sign Guidelines 2016 Management of Acute Asthma.

<https://www.sign.ac.uk/assets/sign153.pdf>

Please refer to the LLR adult asthma guidelines for the long term management of asthma outside of an acute exacerbation:

<http://267lv2ve190med3l1mgc3ys8.wpenqine.netdna-cdn.com/wp-content/uploads/2016/05/AsthmaAdultGuidelines.pdf>

2. Scope

This guideline applies for use in all adult patients who are admitted to UHL with an episode of acute asthma. It is intended for use by any medical staff treating these patients.

This particularly includes junior doctors and consultants working in acute areas such as, medical assessment units such as CDU (GGH) AMU (LRI) and all inpatient wards (including LRI, GGH and LGH) where patients with asthma may be treated. It may also be useful for nursing staff in these areas.

3. Assessment and Management of Acute Asthma in Adults

Two care bundles have been developed to meet the standards for initial assessment and management of acute exacerbations of asthma; and for management prior to discharge. See Appendix 1 and 2.

4. Monitoring and Audit Criteria

KPI	Method of Assessment	Timescales
100% of staff will be aware of where to locate UHL Asthma Guidelines	Audit (local)	Annual
100% of staff will correctly grade severity of acute asthma attack	Audit (local)	Annual
100% of staff will correctly manage acute attack based on care bundle	Audit (local)	Annual

In addition to this the annual BTS Asthma Audit will measure standards of care compared to national performance. Lead for this Section: Professor P Bradding, Respiratory Consultant.

5. Legal Liability Guideline Statement

Guidelines or Procedures issued and approved by the Trust are considered to represent best practice. Staff may only exceptionally depart from any relevant Trust guidelines or Procedures and always only providing that such departure is confined to the specific needs of individual

circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible healthcare professional' it is fully appropriate and justifiable - such decision to be fully recorded in the patient's notes

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT			
Author / Lead Officer:	Prof Ruth Green		Job Title: Consultant Physician
Reviewed by:	Dr Onyeka Umerah (Asthma Consultant)		
Approved by:	Respiratory	PGC 29.7.22 (v3)	
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25/05/2022		Dr Onyeka Umerah	Asthma assessment & management care bundle (Appx-1) updated
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Appendix 1: Asthma assessment and Management Care Bundle

Asthma Assessment and Management Care Bundle	University Hospitals of Leicester NHS Trust
Patient name:	S No:
Step 1—Diagnosis	
<p>Likely asthma – typical symptoms of wheeze, breathlessness, cough, nocturnal and early morning symptoms, family history of asthma or atopy, Low PEF, raised eosinophils. Go to step 2</p> <p>Possibly not asthma - No wheeze on examination, normal PEF (when symptomatic). Heavy smoker for prolonged period (over 20 years). Voice disturbance, cardiac disease, productive cough. Consider other diagnosis</p>	
Step 2—Assessment	
<ul style="list-style-type: none"> ⊗ Document clinical examination, including <i>Respiratory rate, SpO2, Heart rate</i> ⊗ Request ECG to rule out arrhythmias. ⊗ CXR not routinely required, unless consolidation or pneumothorax suspected. CXR indicated for patients with life threatening features or those who fail to improve. ⊗ Has the patient had 40mg prednisolone (or equivalent dose of hydrocortisone) in the last 6 hours? Yes <input type="checkbox"/> No <input type="checkbox"/> <p style="text-align: center;">Peak Flow:</p> <p>Admitting PEF: _____ l/min Best/Predicted PEF in last 12 months: _____ l/min Patient's PEF as% of Best: _____ l/min</p>	
Step 3—Severity and Management	
<p>MODERATE EXACERBATION</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <input type="checkbox"/> PEF 50-75% of best or predicted <input type="checkbox"/> No features of severe asthma present </div> <p>SEVERE EXACERBATION (any 1)</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <input type="checkbox"/> PEF 33-50% of best or predicted <input type="checkbox"/> Cannot complete sentences in 1 breath <input type="checkbox"/> Respiratory Rate >25/min <input type="checkbox"/> Heart Rate >110/min </div> <p>LIFE THREATENING or NEAR-FATAL (any 1 feature)</p> <div style="border: 1px solid black; padding: 5px;"> <input type="checkbox"/> PEF <33% of best or predicted <input type="checkbox"/> Sats <92% or ABG pO₂<8kPa <input type="checkbox"/> ABG CO₂ normal or high <input type="checkbox"/> Cyanosis, poor respiratory effort, near or fully silent chest <input type="checkbox"/> Exhaustion, confusion or arrhythmias </div>	<p>TREATMENT</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <input type="checkbox"/> Oxygen to maintain saturation 94-98% <input type="checkbox"/> Inhaled salbutamol MDI 4-10 puffs via spacer device and assess response. Repeat every 10-20 minutes as necessary up to 20 puffs <input type="checkbox"/> Oral/iv steroids-give stat within an hour if not received within the last 6 hours <input type="checkbox"/> Consider nebulised salbutamol 2.5mg (via oxygen-driven nebuliser) if there is not a rapid response to salbutamol MDI + spacer after 20 puffs </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <input type="checkbox"/> Oxygen to maintain saturation 94-98% <input type="checkbox"/> Inhaled salbutamol MDI 4-10 puffs via spacer device and assess response. Repeat every 10-20 minutes as necessary up to 20 puffs <input type="checkbox"/> Oral/iv steroids-give stat within an hour if not received within the last 6 hours <input type="checkbox"/> Consider nebulised salbutamol 2.5mg and 6-hourly nebulised ipratropium 500 micrograms (via oxygen-driven nebuliser) if there is not a rapid response to salbutamol MDI + spacer after 20 puffs <input type="checkbox"/> Inform senior, perform ABG </div> <div style="border: 1px solid black; padding: 5px;"> <input type="checkbox"/> Oxygen to maintain saturation 94-98% <input type="checkbox"/> Oral/iv steroids-give stat within an hour if not received within the last 6 hours <input type="checkbox"/> Give nebulised salbutamol 2.5-5mg back-to-back and 6-hourly nebulised ipratropium 500 micrograms (via oxygen-driven nebuliser) <input type="checkbox"/> Inform senior, perform ABG <input type="checkbox"/> Arrange assessment by ITU <input type="checkbox"/> Urgent portable CXR <input type="checkbox"/> Consider iv Magnesium 2g stat <input type="checkbox"/> Consider iv Aminophylline-see aminophylline guideline </div>
<p><small>*Usual oral steroid dose in acute asthma is prednisolone 40mg once a day for at least 5 days. Consider using 50mg once a day for an acute exacerbation if the patient is on maintenance steroids. If the patient is unable to have oral prednisolone, give iv hydrocortisone 100mg qds</small></p> <p><small>*If nebulised ipratropium is prescribed for severe or life threatening exacerbations, stop the LAMA inhaler whilst on ipratropium nebs</small></p>	
Completed by: Name & Sign:	Date:

Appendix 2: Asthma Discharge Care Bundle

Asthma Discharge Care Bundle		University Hospitals of NHS Leicester NHS Trust
Patient Name:		S. No.:
<p>1. Current Peak Flow Rate > 75% of patients predicted or best and has been <u>off</u> nebulisers for 24 hours</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>2. If the patient is a smoker offer smoking cessation via ICM.</p> <p style="text-align: right;">N/A <input type="checkbox"/> Yes <input type="checkbox"/></p> <p>Has NRT been prescribed ?</p> <p style="text-align: right;">N/A <input type="checkbox"/> Yes <input type="checkbox"/></p>		
<p>3. Asthma triggers discussed</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Inhaled preventer and reliever treatment prescribed together with prednisolone.</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Inhaler technique checked and satisfactory</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>4. Education about the importance of adherence to treatment particularly inhaled corticosteroids has been given and understood.</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>5. A Personal Asthma Action Plan (PAAP) has been given/reviewed by trained nurse OR</p> <p>A PAAP has been given to the patient who has been advised to take it to PN for completion. Download from: http://www.asthma.org.uk - search PAAP</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>6. Follow up: Patient has been advised to see GP within 48 hours of discharge.</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Peak Flow Meter given to patient</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>7. Patient has been referred to Asthma Nurses via ICE</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>8. Patient has been referred for Consultant follow-up (recommended for all patients) - paper referral form.</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
<p>If any criteria are not being met, please discuss the case with your immediate senior.</p>		
<p>Doctors Name and Signature</p> <p>Date</p>	<p>Nurse Name and Signature</p> <p>Date</p>	<p>Date completed</p>