

# **ACUTE ASTHMA (WARD)**

**MODULE: BREATHING** 

TARGET: ALL PAEDIATRIC TRAINEES; ED NURSING STAFF

#### **BACKGROUND:**

Acute asthma is a common presentation in the Emergency Department, and many of these children are admitted to the Paediatric Wards. Every 17 minutes a child is admitted to hospital in the UK because of their asthma (Asthma UK). In 2009 there were 12 children under the age of 14 years old who died from acute asthma exacerbation.

It is not uncommon for a child with asthma to deteriorate whilst an inpatient, and so recognition and management of a deteriorating child is important for any paediatric trainee or children's nurse.

Version 9 – May 2015 Editor: Dr Andrew Darby Smith

Original Author: Dr R Furr (adapted from Bristol Key Competencies)





### **INFORMATION FOR FACULTY**

#### **LEARNING OBJECTIVES**

At the end of the session participants should:

- 1. Recognise asthma and classify severity (moderate, severe and life-threatening)
- 2. Have familiarity with BTS Guideline for management of acute severe asthma
- 3. Understand when inhalers vs nebulisers indicated
- 4. Be aware of indication for IV therapy (salbutamol vs aminophylline, and magnesium)

#### **SCENE SETTING**

Location: Paediatric Ward

Expected duration of scenario: 15 mins Expected duration of debriefing: 30 mins

#### **EQUIPMENT AND CONSUMABLES**

#### PERSONNEL-IN-SCENARIO

Mannequin (child or adult)

Monitoring

Resuscitation trolley

O<sub>2</sub> facemask Nebuliser mask Bag and mask

IV cannula and sticker fixation

Simulated drugs:

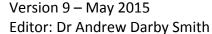
Salbutamol neb 2.5mg, 5mg
Hydrocortisone 250mg, 500mg
Salbutamol bolus 15mcg/kg over 10 min
Salbutamol infusion 1-4mcg/kg/min
Aminophylline bolus 5mg/kg over 20 min
Aminophylline 1mg/kg/hr

SORT Emergency drug chart (if requested – see appendix)

1 x ST1-3 trainee and/or 1 x ST4-8 trainee

1 x nurse (faculty or participant)

1 x mother (faculty)







#### **PARTICIPANT BRIEFING**

It is 3am. Christopher is 8 years old and was admitted to the ward from ED 6 hours earlier with a diagnosis of acute asthma. He has been on hourly salbutamol nebulisers and facemask oxygen.

His nurse has asked you to see him because his oxygen saturations are getting lower and he doesn't want to have the oxygen mask on.

#### **FACULTY BRIEFING**

#### 'VOICE OF THE MANIKIN' BRIEFING

Conscious but agitated – "can't breathe", "I'm scared", "I don't want that mask on my face". Not able to speak in full sentences.

#### IN-SCENARIO PERSONNEL BRIEFING (MOTHER)

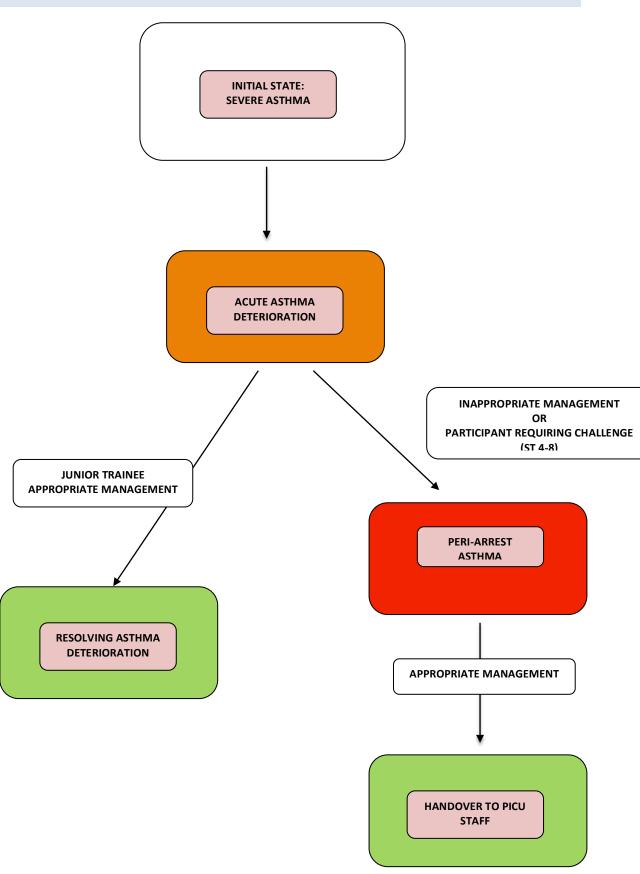
You are worried that Christopher is getting worse. You've tried to calm him down but he's getting more upset.

You have never seen his asthma so bad. He has never been to PICU or PHDU, and has only had one previous admission when he required nebulisers overnight and was discharged after 48 hours.

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### **CONDUCT OF SCENARIO**



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### **BASELINE STATE: SEVERE ASTHMA**

VITAL SIGNS					
Rhythm	SR	HR	130	ВР	98/52
Resp rate	40	SaO <sub>2</sub>	90%	ETCO <sub>2</sub>	
Temp	36.5	AVPU	А	Pupils	ERL
Other	Wt = 30kg				
ASSESSMENT					
Pulses	Normal	Cap refill	3 sec	Skin	No rash
Airway	Maintained	Breathing	Prolonged expiration	Breath sounds	Wheezy
Work of breathing	Increased	Recession	Subcostal & intercostal	Neuro	
Other	Equal air entry Unable to speak in full sentences				
EXPECTED OUTCOMES					
Participants should:	<ol> <li>Administer high-flow O<sub>2</sub> via facemask with reservoir bag</li> <li>Ask for cardiac monitoring</li> <li>Assess ABCD</li> <li>Commence nebuliser salbutamol (5mg) and atrovent (500mcg)</li> <li>Obtain IV access, take bloods and venous gas</li> <li>Consider IV fluid bolus 10ml/kg 0.9% saline</li> <li>Consider hydrocortisone 4mg/kg IV</li> <li>Consider IV aminophylline/IV salbutamol/IV magnesium</li> </ol>				
Facilitators should:	Provide further information if requested: - Cap refill time 3 sec - Peripheral pulses normal - Not able to speak in full sentences - Wt 30kg (on wristband)  Progression: - Patient continues to deteriorate despite nebulised salbutamol - Progress to 'Acute Asthma Deterioration State'				

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### STATE: ACUTE ASTHMA DETERIORATION

VITAL SIGNS					
Rhythm	SR	HR	80 gradual drop	ВР	98/52
Resp rate	12 then 4	SaO <sub>2</sub>	70% gradual drop	ETCO <sub>2</sub>	
Temp	36.5	AVPU	V -> P	Pupils	ERL
Other					
ASSESSMENT					
Pulses	Normal	Cap refill	3 sec	Skin	No rash
Airway	Initially maintained	Breathing	Minimal effort	Breath sounds	Quiet
Work of breathing	Reducing	Recession	Minimal effort	Neuro	GCS dropping
Other	Increased agitat Chest silent on a		, then decreased	conscious level	
EXPECTED OUTCOMES					
Participants should:	<ol> <li>Administer high-flow O<sub>2</sub> via facemask with reservoir bag</li> <li>Ask for cardiac monitoring</li> <li>Assess ABCD</li> <li>When minimal ventilatory effort, call 2222 'respiratory arrest on paediatric ward'</li> <li>Ask for bag and mask to support ventilation</li> <li>Ask for arrest trolley</li> <li>Reposition patient and flatten bed to help with airway positioning</li> <li>Give dose IV salbutamol +/- IV magnesium if not already given</li> <li>Assign someone to explain to mum what is happening</li> </ol>				
Facilitators should:	Provide further information if requested:  - Cap refill time 3 sec  - Peripheral pulses normal  - Deteriorating conscious level  - Work of breathing reducing, and quiet breath sounds bilaterally  - Equal chest movement  Progression:  - If competent senior participant present, or if inappropriate/insufficient treatment initiated, patient continues to deteriorate  Progress to 'Peri-arrest asthma'  - If participant junior or less able, then patient begins to improve if IV therapy instituted. Progress to 'Resolving asthma deterioration'				

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### STATE: PERI-ARREST ASTHMA

VITAL SIGNS					
Rhythm	SR	HR	40 on monitor	ВР	Unable to pick up
Resp rate	0	SaO <sub>2</sub>	70% gradual drop	ETCO₂	
Temp	36.5	AVPU	V -> P	Pupils	ERL
Other	Reduced chest r	novement and re	duced air entry or	n right side	
ASSESSMENT					
Pulses	Not palpable	Cap refill	5 sec	Skin	No rash
Airway	Maintained with support	Breathing	None	Breath sounds	Unequal with bagging
Work of breathing	None	Recession	N/A	Neuro	Unresponsive
Other	Reactive pupils I	out child otherwis	se unresponsive.		
EXPECTED OUTCOMES					
Participants should:	<ol> <li>Continue bag-valve ventilation</li> <li>Reassess ABCD (sinus bradycardia on monitor)</li> <li>External cardiac massagen15:2 (pulses not palpable)</li> <li>Consider pneumothorax. Differential is severe bronchospasm and mucus plugging</li> <li>Give dose IV salbutamol +/- IV magnesium if not already given</li> <li>Give IV adrenaline (0.1ml/kg of 1 in 10,000)</li> <li>Handover patient effectively to anaesthetist/PICU team</li> </ol>				
Facilitators should:	Provide further information if requested:  - Cap refill time 5 sec  - Peripheral pulses not palpable  - Not responding to pain, but pupils equal and reactive  - Reduced air entry on right side  Progression:  - Saturations, heart rate and peripheral pulses improve with effective bag valve-mask support. Progress to 'handover to PICU staff'				

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### STATE: RESOLVING ASTHMA DETERIORATION

VITAL SIGNS	VITAL SIGNS				
Rhythm	SR	HR	110	ВР	94/60
Resp rate	38	SaO <sub>2</sub>	98%	ETCO <sub>2</sub>	
Temp	36.5	AVPU	V	Pupils	ERL
Other	Bilateral wheeze	e (improving)			
ASSESSMENT					
Pulses	Normal	Cap refill	2 sec	Skin	No rash
Airway	Maintained	Breathing	None	Breath sounds	Wheezy; equal
Work of breathing	Increased	Recession	Subcostal and intercostal	Neuro	Responds to voice
Other					
EXPECTED OUTCOMES					
Participants should:	<ol> <li>Recognise improving state of patient</li> <li>Discontinue bag and valve ventilation once patient breathing effectively on their own with normal O<sub>2</sub> saturations</li> <li>Arrange for transfer to PHDU for further management, and inform consultant of transfer</li> </ol>				
Facilitators should:	Provide further information if requested: - Cap refill time 2 sec - Responding to voice  Progression: - Continues to improve following bag-and-mask (likely mucus plugging causing acute deterioration) - PICU and anaesthetic team arrive and receive handover – end of scenario.				

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### STATE: HANDOVER TO PICU

VITAL SIGNS					
Rhythm	SR	HR	140	ВР	96/52
Resp rate	12	SaO <sub>2</sub>	96% with bagging	ETCO <sub>2</sub>	
Temp	36.5	AVPU	Р	Pupils	ERL
Other	Equal chest mov	ement and equal	air entry		
ASSESSMENT					
Pulses	Normal	Cap refill	2-3 sec	Skin	No rash
Airway	Maintained with support	Breathing	Some spontaneous breaths	Breath sounds	Equal with bagging
Work of breathing	Increased	Recession	Subcostal	Neuro	
Other	Reactive pupils; responding to pain.				
EXPECTED OUTCOMES					
Participants should:	<ol> <li>Continue bag-valve ventilation (pt's own respiration not enough)</li> <li>Recognise improving state</li> <li>Reassess ABCD</li> <li>Continue IV therapy algorithm</li> <li>Handover patient effectively to anaesthetist/PICU team</li> </ol>				
Facilitators should:	Provide further information if requested: - Cap refill time 2-3 sec - Responding to pain, but pupils equal and reactive - Air entry now equal  Progression: - Saturations, heart rate and peripheral pulses stabilise with effective bagging - PICU and anaesthetic team arrive and receive handover — end of scenario Participant should discuss (at debrief) role of team debrief after emergency events				

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#### APPENDIX 1 - BLOOD GAS - ACUTE ASTHMA DETERIORATION

#### RADIOMETER ABL SIMULATION SERIES

ABL725 ICU 00 00 C0 08-12-2012 PATIENT REPORT Syringe - S 195uL Sample# 90396

#### **Identifications**

Patient ID 10183365
Patient First Name Christopher
Patient Last Name Jenkins
Date of Birth 04/04/2004
Sample type Venous
Operator Intensive Care

#### **Blood Gas Values**

pН	7.16		[7.340 - 7.450]
pCO2	10.21	kPa	[ 4.70 - 6.00 ]
<i>p</i> O <sup>2</sup>	4.03	kPa	[ 10.0 - 13.3 ]
$pO^2(A-a)e$		kPa	

#### **Oximetry Values**

<b>c</b> tHb	13.3	g/dL	[ 12.0 - 16.0]
sO <sup>2</sup>		%	[ 95.0 - 98.0]
<i>F</i> O²Hb		%	[ 94.0 - 99.0]
FC OHb		%	[ - ]
<i>F</i> HHb		%	[ - ]
<i>F</i> metHb		%	[ 0.2 - 0.6 ]
Hct <i>c</i>		%	

#### **Electrolyte Values**

cK+	3.5	mmo1/L [ 3.0 - 5.0 ]
cNa+	137	mmo1/L [ 136 - 146 ]
<i>c</i> Ca²+	1.2	mmoq/L [ 1.15 - 1.29 ]
<i>c</i> C1−	101	mmo1/L [ 98 - 106 ]

#### **Metabolite Values**

<i>c</i> Glu	15.8	mmo1/L	[	3.5 - 10.0]
<i>c</i> Lac	1.7	mmo1/L	[	0.5 - 1.6 ]

#### **Oxygen Status**

ctO<sup>2</sup>c vol% p50c kPa

#### **Acid Base Status**

*c*Base(Ecf)c -4.9 mmo1/L *c*HCO³-(P,st)c 19.2 mmo1/L

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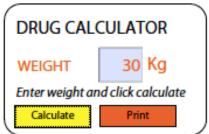
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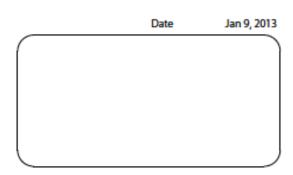




#### **APPENDIX 5 - EMERGENCY DRUG CALCULTOR**

Southampton Oxford Retrieval Team





Emergency		Respiratory	
Adrenaline 1:10,000	3 ml (0.1 ml/kg)	Magnesium Sulphate	1200 mg (40 mg/kg over 20 minutes)
Atropine 600mcg/ml	1 ml (20mcg/kg, min 100mcg)	Salbutamol load	250 mcg (15 mcg/kg over 10 minutes)
Atropine 100mcg/ml	6 ml (20mcg/kg min 100mcg)	Hydrocortisone	100 mg (4 mg/kg , max 100mg)
Sodium Bicarbonate 8.4%	30 ml (1 ml/kg)	Aminophylline load	150 mg (5 mg/kg over 20 minutes)
Caldum Gluconate 10%	10 ml (0.5 ml/kg)	Adrenaline 1:1000 Nebulised	5 ml (0.5 ml/kg, max 5 mls) Make up to 5 ml with saline
Cardiac			
Cardioversion (sync)	30 Joules (1J/kg) (use 2J/kg If falls)	Anaesthesia	
Shockable rhythm (async)	120 Joules (4J/kg)	Ketamine	60 mg (2mg/kg)
Adenosine	3000 mcg (100 mcg/kg)	Thiopentone 30	to 150 mg (1-5mg/kg)
Amiodarone Load	150 mg (5 mg/kg over 30 minutes to 4hrs)	Fentanyl 60	to 150 mcg (2-5mcg/kg)
Neuro		Morphine	3 mg (0.1 mg/kg)
Lorazepam	3 mg (0.1 mg/kg)	Rocuronium	30 mg (1mg/kg)
Midazolam Buccal	3 mg (0.1 mg/kg)	Atracurium	15 mg (0.5mg/kg)
Phenytoin	600 mg (20 mg/kg over 20 minutes)	Vecuronium	3 mg (0.1mg/kg)
Phenobarbitone	600 mg (20 mg/kg)	Suxamethonium	45 mg (1.5mg/kg)
Paraldehyde PR	10 ml (0.4 ml/kg, mix 1:1 with oil)	Anaphylaxis	
3% Saline	90 ml (3ml/kg)	Adrenaline IM	0.3 ml of 1:1000
Mannitol 10%	150 ml (5ml/kg, eqivalent to 0.5g/kg)		

Infusions	Calculations based on Southampton PICU	infusions guideli	nes (2011)
Dopamine (central)	200 mg in 50ml of 0.9% Saline or 5% Glucose	4.5 ml/hr =	10 mcg/kg/min
Dopamine (peripheral)	20 mg in 50ml of 0.9% Saline or 5% Glucose	4.5 ml/hr =	1 mcg/kg/min
Adrenaline	4 mg in 50ml of 0.9% Saline or 5% Glucose	2.3 ml/hr =	0.1 mcg/kg/min
Noradrenaline	4 mg in 50ml of 0.9% Saline or 5% Glucose	2.3 ml/hr =	0.1 mcg/kg/min
Milrinone	10 mg in 50ml of 0.9% Saline or 5% Glucose	4.5 ml/hr =	0.5 mcg/kg/min
Dinoprostone (Prostin E2)	0 mcg in 50ml of 0.9% Saline or 5% Glucose	0 ml/hr =	0 ng/kg/min
Morphine	30 mg in 50ml of 0.9% Saline or 5% Glucose	1 ml/hr =	20 mcg/kg/hr
Midazolam	30 mg in 50ml of 0.9% Saline or 5% Glucose	1 ml/hr =	20 mcg/kg/hr
Salbutamol	10 mg in 50ml of 0.9% Saline or 5% Glucose	9 ml/hr =	1 mcg/kg/min
Aminophylline	500 mg in 500ml of 0.9% Saline or 5% Glucose	15 ml/hr =	0.5 mg/kg/hr

It is the prescribers responsibility to ensure the correct dose is prescribed Compiled by Tom Bennett - May 2012

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#### APPENDIX 6 - SORT GUIDELINE FOR ACUTE SEVERE ASTHMA

# Guideline for the management of severe asthma

#### STEP 1

 $15 \text{L/min O}_2 \text{ via NRBM} \\ 3 \times \text{Salbutamol nebulisers (2.5-5 mg)} \\ 3 \times \text{Ipratroprium nebulisers (250 mcg)} \\ \text{PO Prednisolone (20 mg < 5yrs, 20/40 mg > 5 yrs)} \\ \text{OR IV Hydrocortisone (4mg/kg)} \\$ 

#### STEP<sub>2</sub>

IV **Salbutamol** bolus (15 mcg/kg) Salbutamol nebulisers (every 20 mins)

#### STEP 3

IV **Magnesium** bolus (40 mg/kg) (0.4 mls/kg of 10% solution over 20 mins) Salbutamol nebulisers (every 20 mins)

#### STEP 4

If improves following Salbutamol bolus IV **Salbutamol** infusion(0.5- 2mcg/kg/min) Discontinue Salbutamol nebulisers

#### STEP 5

If **NO** improvement following Salbutamol bolus
IV **Aminophylline** bolus (5mg/kg)
Followed by **Aminophylline** infusion
< 9 years 1 mg/kg/hour
9-16 years 800 mcg/kg/hr
16-18 years 500 mcg/kg/hr

#### IMPENDING CARDIO-RESPIRATORY ARREST

Worsening agitation/level of consciousness  $SaO_2 \leq 90\%$  in  $15L\ O_2$  via NRBM Poor respiratory effort High  $CO_2$  + Acidaemia (pH  $\leq 7.2$ ) Hypotension

**INTUBATE AND VENTILATE** 

### HIGH RISK CLINICAL SIGN

Agitated
Altered level of consciousness

Unable to talk/feed

 $SaO_2 \le 92\%$  in air,  $PaO_2 < 8$  kPa  $PaCO_2$  'normal' (4.6 – 6 kPa)

Silent chest

Exhaustion/Poor respiratory effort

#### INDICATIONS FOR CXR

SaO<sub>2</sub> ≤ 92% in 15L O<sub>2</sub>

To exclude a pneumothorax/consolidation

To exclude FB/mediastinal mass

#### SALBUTAMOL TOXICITY

Tachycardia/tachyarrhythmia

Hyperglycaemia

Metabolic acidosis

Elevated LACTATE

Hypokalaemia

#### INTUBATION

Often difficult to ventilate post intubation

Senior anaesthetic assistance

Rapid sequence induction

10-20 mls/kg fluid bolus pre induction

Ketamine 1-2 mg/kg Suxamethonium 2 mg/kg Or Rocuronium 1 mg/Kkg

Cuffed ETT

Continue paralysis

Consider disconnection and manual deflation if haemodynamic collapse

#### **INITIAL VENTILATOR SETTINGS**

PCV - may need high PIP

 $\begin{array}{c} \text{Rate 8-15/min} \\ \text{Allow completion of expiration} - \text{watch} \\ \text{$E_{T}CO_{2}$ trace / ventilator flow loops} \\ \text{$\left(\text{Age independent}\right)$} \end{array}$ 

Inspiratory time 0.8 -1 sec

PEEP 3-5 cm $\rm H_2O$  FiO<sub>2</sub> 1

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#### **DEBRIEFING**

#### POINTS FOR FURTHER DISCUSSION

#### Background risk factors for intensive care admission/mortality:

- Previous PHDU/PICU admissions
- Poorly controlled chronic symptoms
- 3 or more classes of medication
- Poor socioeconomic background
- Poor compliance and appointment non-attendance

#### Salbutamol vs aminophylline as choice of IV medication

- Both are equivalent in terms of effectiveness
- Both have significant side effects (tachycardia, vomiting)
- Depends on local policy. Trusts should ideally choose one IV medication to use regularly to increase staff familiarity with drug and prevent medication errors

#### Magnesium sulphate IV

Intravenous magnesium sulphate is a safe treatment for acute asthma although current evidence is limited.

#### **Chest X-rays and antibiotics**

No role in moderate asthma or acute severe asthma that is responding appropriately to treatment. Should be reserved for children in whom pneumothorax is suspected. Unequal air entry is a common finding in acute asthma and is due to transient mucus plugging, not consolidation due to bacterial infection.

#### Severity of asthma (from BTS/SIGN guideline):

	Clinical Signs	Measurements
Life-Threatening Asthma	Silent chest	SpO₂/Pulse/Resps as for
	Cyanosis	'acute severe asthma'
	Poor respiratory effort	(below)
	Hypotension	PEF <33% best/predicted
	Exhaustion	
	Confusion	
Acute Severe Asthma	Can't complete sentences	SpO <sub>2</sub> <92%
	Too breathless to feed	PEF 33-50% best/predicted
		Pulse >140 (age 2-5)
		Pulse >125 (age >5)
		Resps >40 (age 2-5)
		Resps >30 (age >5)
Moderate Asthma	Able to talk in sentences	SpO <sub>2</sub> >92%
		PEF >50% Best/predicted
		None of 'acute severe asthma'
		features

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### **ACUTE ASTHMA - HANDOUT**

#### INFORMATION FOR PARTICIPANTS

#### **KEY POINTS**

#### Background risk factors for intensive care admission/mortality:

- Previous PHDU/PICU admissions
- Poorly controlled chronic symptoms
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#### ASSESSMENT OF SEVERITY OF ASTHMA:

	Clinical Signs	Measurements
Life-Threatening Asthma	Silent chest	SpO₂/Pulse/Resps as for
	Cyanosis	'acute severe asthma'
	Poor respiratory effort	(below)
	Hypotension	PEF <33% best/predicted
	Exhaustion	
	Confusion	
Acute Severe Asthma	Can't complete sentences	SpO <sub>2</sub> <92%
	Too breathless to feed	PEF 33-50% best/predicted
		Pulse >140 (age 2-5)
		Pulse >125 (age >5)
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## Guideline for the management of severe asthma

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3 × Ipratroprium nebulisers (250 mcg)
PO Prednisolone (20 mg < 5yrs, 20/40 mg >5 yrs)
OR IV Hydrocortisone (4mg/kg)

### STEP 2

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Followed by
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(Age independent)

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### RELEVANT AREAS OF THE CURRICULUM

### Level One

Effective responses to challenge, complexity and stress in paediatrics
Advanced neonatal and paediatric life support skills
Effective skills in paediatric assessment
Skills in formulating an appropriate differential diagnosis in paediatrics
Safe practical skills in paediatrics
Knowledge of common and serious paediatric conditions and their management
Effective communication and interpersonal skills with colleagues
Professional respect for the contribution of colleagues in a range of roles in paediatric practice
Effective handover, referral and discharge procedures in paediatrics
Ethical personal and professional practice in providing safe clinical care
Reliability and responsibility in ensuring their accessibility to colleagues and patients and their families
Be able to respond appropriately to cardiac arrest
Be familiar with the British Thoracic Society guidelines for management of acute asthma
Be able to assess the severity of an asthma attack
Be able to institute appropriate emergency treatment (of acute asthma)
Recognise when more senior help is needed (in acute asthma)

### Level Two (as above plus):

<u> </u>	
L2_GEN_STA_02	Increasing credibility and independence in response to challenge and stress in paediatrics
L2_GEN_STA_03	Leadership skills in advanced neonatal and paediatric life support
L2_GEN_STA_04	Responsibility for conducting effective paediatric assessments and interpreting findings appropriately
L2_GEN_STA_06	Improving skills in formulating an appropriate differential diagnosis in paediatrics
L2_GEN_STA_09	Effective skills in performing and supervising practical procedures in paediatrics ensuring patient safety
L2_GEN_STA_15	Extended knowledge of common and serious paediatric conditions and their management
L2_GEN_STA_29	Skill in ensuring effective relationships between colleagues
L2_GEN_STA_32	Effective skills in ensuring handover, referral and discharge procedures in paediatrics
L2_GEN_STA_34	Sound ethical, personal and professional practice in providing safe

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	clinical care
L2_GEN_STA_35	Continued responsibility and accessibility to colleagues, patients and
	their families
PAED_L2_CARD_GEN_01	Be able to provide advanced life support and lead the team at a
	cardiac arrest
PAED_L2_RESP_GEN_01	Have the knowledge and skills to be able to assess and initiate
	management of patients presenting with respiratory problems in
	acute and outpatient settings
PAED_L2_RESP_GEN_03	Understand the life threatening nature of some of these conditions
	and when to call for help
PAED_L2_RESP_GEN_04	Recognise factors which suggest underlying or serious pathology
PAED_L2_RESP_ACU_ASTH_01	Be able to lead treatment of severe asthma and review ongoing
	treatment before discharge

#### Level Three (as above plus):

L3_GEN_STA_02	Responsibility for an effective response to complex challenges and stress in paediatrics
L2_GEN_STA_03	Leadership skills in advanced neonatal and paediatric life support
L3_GEN_STA_06	Effective skills in making safe decisions about the most likely diagnoses in paediatrics
L3_GEN_STA_09	Expertise in a range of practical procedures in paediatrics specific to general and sub-specialist training
L3_GEN_STA_15	Detailed knowledge of common and serious paediatric conditions and their management in General Paediatrics or in a paediatric subspecialty
L3_GEN_STA_29	Positive and constructive relationships form a wide range of professional contexts
L3_GEN_STA_32	Effective leadership skills in the organisation of paediatric teamworking and effective handover
L3_GEN_STA_34	Exemplary professional conduct so as to act as a role model to others in providing safe clinical care
L3_GEN_STA_35	Responsibility for ensuring their own reliability and accessibility and that of others in their team

### **FURTHER RESOURCES**

- 1. Supporting material for BTS/SIGN Guidelines: http://www.sign.ac.uk/guidelines/fulltext/101/index.html
- Full BTS/SIGN guideline on treatment of Asthma: http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/sign101%20
   Jan%202012.pdf
- Quick reference guide to BTS/SIGN guidelines: <a href="http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20">http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20</a>
   <a href="http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20">http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20</a>
   <a href="http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20">http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20</a>
   <a href="http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20">http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20</a>
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   <a href="http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20">http://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20</a>
   <a href="https://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20">https://www.britthoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%20</a>
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   <a href="https://www.britthoracic.org.uk/Portals/0/Guidelines/qrg10%20</a>
   <a href="https://www.britthoracic.org.uk/Portals/0/Guidelines/qrg10%20</a>
- 4. SORT (Southampton Oxford Retrieval Team) Guideline for Acute Asthma <a href="http://www.sort.nhs.uk/Media/Guidelines/Guidelineforthemanagementofsevereast">http://www.sort.nhs.uk/Media/Guidelines/Guidelineforthemanagementofsevereast</a> hma.pdf

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### PARTICIPANT REFLECTION

What have you learned from this experience? (Please try and list 3 things)
How will your practice now change?
What other actions will you now take to meet any identified learning needs?

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# PARTICIPANT FEEDBACK Date of training session:.... Profession and grade:..... What role(s) did you play in the scenario? (Please tick) Primary/Initial Participant Secondary Participant (e.g. 'Call for Help' responder) Other health care professional (e.g. nurse/ODP) Other role (please specify): ..... ..... Observer Strongly Agree Neither Disagree Strongly

	Julongly	Agree	NCILICI	Disagree	Julian
	Agree		agree nor		Disagree
			disagree		
I found this scenario					
useful					
I understand more about					
the scenario subject					
I have more confidence					
to deal with this					
scenario					
The material covered					
was relevant to me					

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Please write down one thing you have learned today, and that you will use in your clinical practice.
How could this scenario be improved for future participants? This is especially important if
you have ticked anything in the disagree/strongly disagree box.

Original Author: Dr R Furr (adapted from Bristol Key Competencies)





### FACULTY DEBRIEF - TO BE COMPLETED BY FACULTY TEAM

What went particularly well during this scenario?
What did not go well, or as well as planned?
Why didn't it go well?
How could the scenario be improved for future participants?

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Original Author: Dr R Furr (adapted from Bristol Key Competencies)