

ACUTE ASTHMA (ED)

MODULE: ACUTE CARE

TARGET: FY1 & FY2 TRAINEES AND FINAL YEAR MEDICAL STUDENTS

BACKGROUND:

In the UK there are more than 1000 deaths each year from asthma (approximately 3 every day). It is estimated that up to 90% of these deaths are preventable. Healthcare professionals must be able to recognise the signs of life-threatening and near-fatal asthma, be able to implement immediate treatments and know when to refer to critical care. FY2 trainees should be able to work within and lead a team to safely assess and treat asthmatic patients in a timely manner.

RELEVANT AREAS OF THE FOUNDATION PROGRAMME CURRICULUM

<p>1 Professionalism</p>	<p>1.4 Team Working:</p> <ul style="list-style-type: none"> • Demonstrates clear and effective communication within the team <p>1.5 Leadership:</p> <ul style="list-style-type: none"> • FY2 demonstrates extended leadership role by making decisions and dealing with complex situations across a greater range of clinical and non-clinical situations
<p>7 Good clinical care</p>	<p>7.5 Safe prescribing</p> <ul style="list-style-type: none"> • Prescribes drugs and treatments appropriately, clearly and unambiguously in accordance with Good Practice in Prescribing Medicines (GMC, 2008) • Uses the BNF plus pharmacy and computer-based prescribing-decision support to access information about drug treatments, including drug interactions • Performs dosage calculations correctly and verifies that the dose is of the right order • Chooses appropriate intravenous fluids as vehicles for intravenous drugs and calculates the correct volume and flow rate • Prescribes oxygen appropriately including to patients with the risk of carbon dioxide retention • Relates prescribing activity to available prescribing guidelines / audit data eg antibiotic usage <p>7.7 Infection control and hygiene</p> <ul style="list-style-type: none"> • Demonstrates correct techniques for hand hygiene with hand gel and with soap and water • Takes appropriate microbiological specimens in a timely fashion • Follows local guidelines / protocols for antibiotic prescribing <p>7.9 Interface with different specialties and with other professionals</p> <ul style="list-style-type: none"> • Understands the importance of effective communication with colleagues in other disciplines

<p>8 Recognition and management of the acutely ill patient</p>	<p>8.1 Promptly assesses the acutely ill, collapsed or unconscious patient</p> <ul style="list-style-type: none"> • Uses Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach to assessing the acutely unwell or collapsed patients • Uses the GCS or Alert, Voice, Pain, Unresponsive (AVPU) to quantify conscious level • Investigates and analyses abnormal physiological results in the context of the clinical scenario to elicit and treat cause • Uses monitoring (including blood glucose) to inform the clinical assessment • Asks patients and staff appropriate questions to prioritise care • Seeks senior help with the further management of acutely unwell patients both promptly and appropriately • Summarises and communicates findings to colleagues succinctly • Appropriately communicates with relatives/friends and offers support <p>8.2 Responds to acutely abnormal physiology</p> <ul style="list-style-type: none"> • Formulates treatment plan in response to acutely abnormal physiology taking into account other co-morbidities and long-term conditions • Administers and prescribes oxygen, fluids and antimicrobials as appropriate (see Good Clinical Care: Safe Prescribing and Infection Control) • Recognises when arterial blood gas sampling is indicated, identifies abnormal results, interprets results correctly and seeks senior advice • Plans appropriate action to try to prevent deterioration in vital signs • Reassesses ill patients appropriately after starting treatment • Recognises the indicators for intensive care unit review when physiology abnormal <p>8.3 Manages patients with impaired consciousness, including seizures</p> <ul style="list-style-type: none"> • Assesses conscious level (GCS or AVPU) • Treats ongoing seizures • Recognises causes of impaired consciousness and seizures and seeks to correct them • Recognises the potential for airway and respiratory compromise in the unconscious patient (including indications for intubation) • Understands the importance of supportive management in impaired consciousness • Seeks senior help for patients with impaired consciousness in an appropriate and timely way
<p>11 Investigations</p>	<p>11.1 Investigations</p> <ul style="list-style-type: none"> • Requests investigations appropriate for patients' needs in accordance with local and national guidance to optimise the use of resources • Seeks out, records and relays results in a timely manner • Plans/organises appropriate further investigations to aid diagnosis and/or inform the management plan • Provides concise, accurate and relevant information and understands the diagnostic question when requesting investigations • Understands what common tests (Table 1) and procedures entail, the diagnostic limitations and contraindications, in order to ensure correct and relevant referrals/requests • Interprets the results correctly within the context of the particular patient/presentation e.g. plain radiography in a common acute condition • Prioritises importance of investigation results

INFORMATION FOR FACULTY

LEARNING OBJECTIVES:

- ABCDE assessment and initial management of patient with life-threatening asthma
- Early recognition of progression to life-threatening / near-fatal asthma
- Appropriate call for help and concise transfer of information
(+/- assisting critical care team if continue to phase (b) of scenario)

SCENE INFORMATION:

- Location: Emergency Department
- Expected duration of scenario: 15 mins (a), 20-30 mins (b)
- Expected duration of debriefing: 20-30 mins (a), 15-20mins (b)

EQUIPMENT & CONSUMABLES

- Mannequin: On ED bed, IV Access
- Stocked airway trolley
(Specifically: Airway adjuncts (OPA, NPA))
- O2 and selection of masks incl. NRB
- Monitoring equipment (SpO2, ECG, NIBP)
- Syringes, flushes, IV fluid and giving sets
- Simulated drugs (Salbutamol, Ipratropium, Aminophylline, Magnesium Sulphate, Antibiotics as per local guidelines)
- Blood bottles, culture bottles, request forms
- Observation chart, medical note paper, drug chart
- Stocked crash trolley
- Mock-up anaesthetic equipment/drugs

PERSONS REQUIRED

- FY Trainee to lead scenario
- ED staff member as assistant
- Medical Registrar (If requested)
- ITU Registrar (If requested)

PARTICIPANT BRIEFING: (TO BE READ ALOUD TO PARTICIPANT)

1. Scene-setting: Recognition and initial management of the acutely unwell patient are essential skills to develop during FY training. Today we would like one of you to assess a patient in the Emergency Department who has been brought in by ambulance. Please assess the patient methodically and treat the problems / symptoms that you find.
2. Assistance: An assistant will be present as the scenario begins (faculty will tell you who this is and what experience they have). If other (appropriate) help is needed at any stage, ask for it (the faculty will let you know how to request it).
3. The scenario will run until a natural conclusion, after which we will regroup to discuss the scenario and any related subjects that the group raises. This is not a test of the person who participates in the scenario and they will not be judged in any way on their performance.
4. We may then move back to the manikin again for the next steps in the management of the patient, followed by a further discussion of any matters that arise.

‘VOICE OF MANIKIN’ BRIEFING:

Your name is Keith (Karen) Williams. You are a 29 year old hairdresser. You suffer from asthma and usually take blue and brown inhalers. You have had one previous hospital admission because of asthma, but have never been to ITU. You have no other medical history and no allergies. You do not smoke.

Today your breathing has been getting worse for 3 hours and you have used all your remaining blue inhaler. You are initially very short of breath and speak in short sentences. You quickly deteriorate and manage to only speak single words at a time. If prompted by the faculty, you will become exhausted and drowsy.

IN SCENARIO BRIEFING:

Mr Keith (Miss Karen) Williams is a 29 year old hairdresser who has a history of asthma who got short of breath a few hours ago and didn't improve with use of usual inhalers. Colleagues called an ambulance.

Please role play an Emergency Department nurse or FY1 doctor as directed by the faculty. Please assist the FY doctor who comes to assess the patient in the Emergency Department.

If asked, tell the FY doctor that the patient has no other past medical history, takes blue and brown inhalers for asthma and has no allergies.

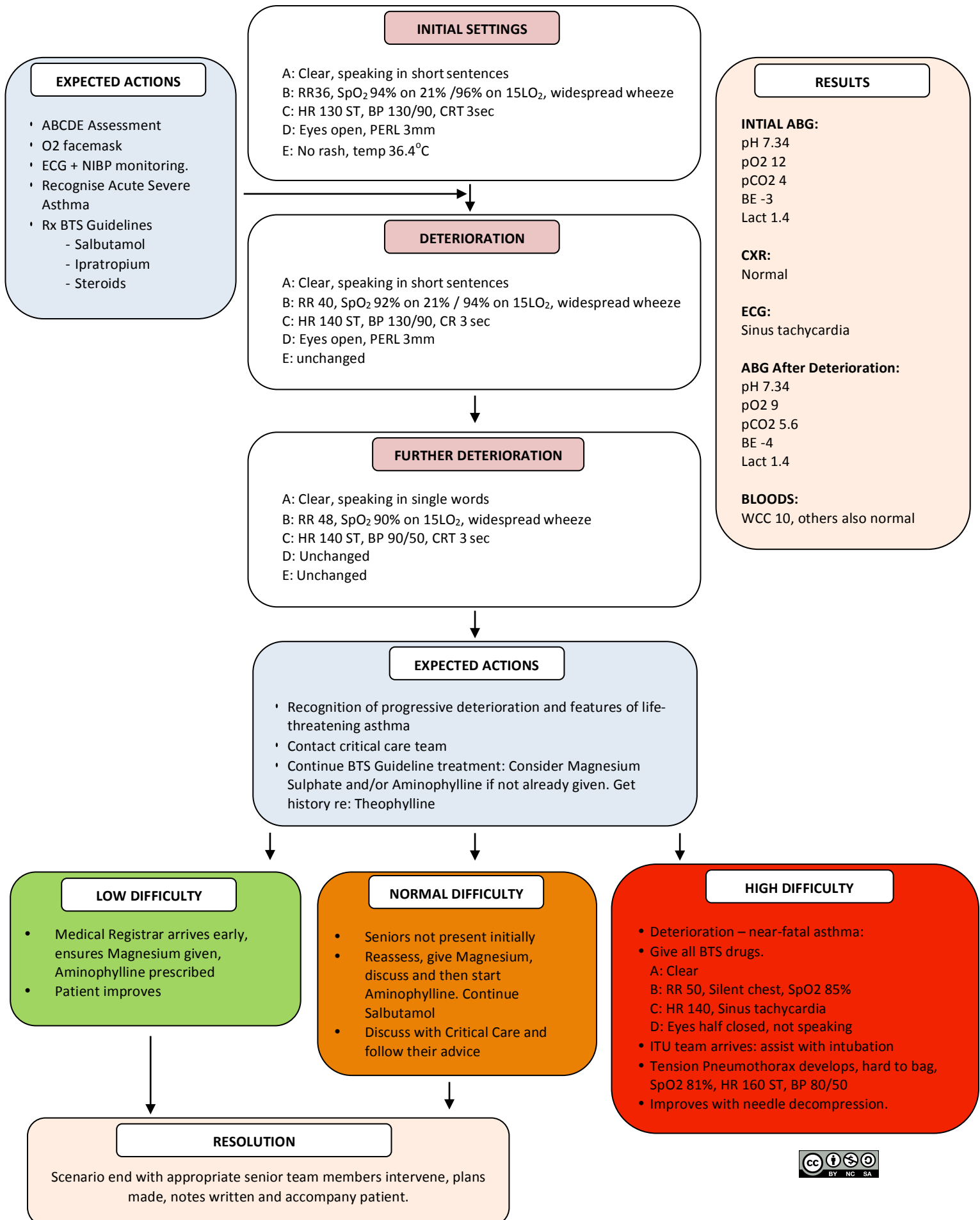
ADDITIONAL INFORMATION:

The main focus of the first part of this encounter is the timely recognition of features of life-threatening asthma.

If the participant doesn't recognise this and treat quickly according to BTS guidelines then the patient should deteriorate, however, this may make the scenario too complex for some participants to manage. Instead, the medical / ITU senior medical staff may arrive to continue care or the faculty could choose to pause for a discussion and then continue with another participant managing the further deterioration.

If the participant is doing really well and faculty wish to expand the clinical challenge, then the patient could deteriorate before the senior medical staff arrive. The participant should then expand the treatments being administered. They should also be prepared to assist the critical care team if requested.

CONDUCT OF SCENARIO



DEBRIEFING

POINTS FOR FURTHER DISCUSSION:

Recognition of signs of acute severe asthma, life-threatening asthma and near-fatal asthma
Time-critical administration of medications as per BTS guideline (review guideline)
Recognition of severity of illness and appropriate call for senior assistance
Appropriate direction of junior medical team members / nursing team re urgency of treatment and signs of deterioration

DEBRIEFING RESOURCES

1. British Guideline on the Management of Asthma, a National Clinical Guideline available at <http://www.brit-thoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/sign101%20Jan%202012.pdf>
2. BTS quick reference guide available at <http://www.brit-thoracic.org.uk/Portals/0/Guidelines/AsthmaGuidelines/qrg101%202011.pdf>

INFORMATION FOR PARTICIPANTS

KEY POINTS:

- Early recognition of life-threatening asthma.
- Recognise signs of deterioration and involve seniors early – asthma still kills!
- Continue to treat aggressively as per guidelines while waiting for support.

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PARTICIPANT REFLECTION:

What have you learnt from this experience? (Please try to list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?

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	Agree	Neither agree nor disagree	Disagree	Strongly 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					

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)



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?