

# SIMULATION CASE PI-7

## Learning outcomes:

By the end of this simulation the candidates will:

- Recognise acute severe asthma
- Implement resuscitation of the child with acute severe asthma

**Simulation focus:** Acute severe asthma – first attack

**Timing:** 0-3 minutes: introduction; remaining time: split equally between simulation and debrief

## Introduction [Environment and Set]

Prior to the start of the simulation: one instructor to:

### 1. [Environment] Brief candidate group to *check the Environment:*

Room	Candidates to set up the room appropriately	
Equipment	Candidates to check required equipment present and accessible	

### Equipment list:

In addition to generic equipment list:

- Appropriate size manikin to be ready for simulation in room and covered until simulation commences
- Nebuliser

### 2. [Set] Give *History*

The triage practitioner asks you to see an 8 year old girl with a three hour history of respiratory distress.

*Then leave the room for candidate group to prepare and after 2 minutes, return with instructor team and commence simulation*

## [Dialogue] Simulation

**Initial handover** *{to tell candidate on your arrival with the child as Paramedic SBAR to Team Leader}*

<b>Situation</b>	8 year old, respiratory distress	
<b>Background</b>	An eight year old girl, who has been previously well, presents with a 3 hour history of respiratory distress. She has had eczema in the past and both her older brothers have asthma. She has been coughing at night for 2 weeks.	
<b>Assessment</b>	A	Airway patent
	B	RR 55/min – slight expiratory wheeze
	C	Pulse 170/min
	D	Agitated and uncooperative
	E	Pale, no rashes or fever
<b>Recommendation</b>	Needs resuscitation and emergency management	

**Clinical course** *{to be given as the simulation progresses}*

There is no improvement after her first dose of nebulised salbutamol and she is unable to swallow tablets. After nebulised salbutamol is repeated, combined with ipratropium, she seems to get worse.

### Key treatment points



Airway	Assess	
Breathing	High flow oxygen via face mask	
	PEFR	
Circulation	IV access	
Specific therapy	Refer to latest BTS guidance	
<b>Handover to PICU Consultant</b>	S	
	B	
	A	
	R	

## [Closure] Debrief

Using the learning conversation, carry out the debrief of both the technical and non-technical elements of the simulation. The debrief will be for the team as a whole and should focus on some or all of the following:

- Technical skills in an A, B, C, D, E format and guided by the KTPs; in particular the safe and effective demonstration of all continuously assessed skills:
  - BLS
  - Defibrillation
  - Airway management
- Non-technical skills, including qualities of team membership and leadership:

Team members	<ul style="list-style-type: none"> <li>• Clear communication</li> <li>• Respect</li> <li>• Flexibility</li> <li>• Assertiveness</li> <li>• Ability to listen</li> </ul>
Team leaders	All of the above, plus <ul style="list-style-type: none"> <li>• Full overview of all aspects associated with child, parents and team</li> <li>• Prioritises according to KTPs</li> <li>• Summarises and re-evaluates</li> </ul>

- Feedback on Environment, where required

### Potential issues that may be raised for this specific simulation

- diagnostic issues: if rash, consider anaphylaxis; if high fever, consider lower respiratory infection
- threshold for escalating treatment in severe / life-threatening asthma: e.g. no response to nebuliser
- uncertainty over which intravenous bronchodilator to use and in what order
- criteria for intubation: e.g. exhaustion, fear, poor air entry, rising CO<sub>2</sub>
- if BMV or endotracheal ventilation are provided, to use slow rates with long expiration

At the end of the debrief, give the opportunity for candidates to ask questions, answer these and then summarise the key points

### Discussion Points

- Candidates should refer to the updated ILCOR guidelines for 2021 which state oxygen saturations should be maintained between 94-98%

## Assessment

Refer to the *Instructor guidance on simulations* document for a guide to the assessment of the simulation station. These assessments should be documented on the paper-based or electronic system for the final faculty meeting. Any scores of *serious concern* should be reported immediately to the course director.