

SIMULATION CASE PC-3

Learning outcomes:

By the end of this simulation the candidates will:

- Understand management of PEA
- Understand management of blocked tracheostomy
- Understand the importance of a team approach to cardiac arrest management
- Understand the importance of effective communication during cardiac arrest management

Simulation focus: Pulseless Electrical Activity/ blocked tracheostomy

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
- Emergency tracheostomy box

2. [Set] Give *History*

A 1-year-old child is admitted with shortness of breath and poor feeding.

A chest x-ray has shown lower lobe pneumonia

An IV is in situ but has tissue after the last dose of IV antibiotics

He has a well-established tracheostomy in situ for management of tracheomalacia

This has been producing copious amounts of secretions

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 Triage practitioner SBAR to Team Leader}

Situation	Collapsed child /? Cardiac arrest	
Background	1 year old boy stopped breathing ? blocked tracheostomy	
Assessment	A	Blocked tracheostomy tube
	B	Apnoeic
	C	Pulseless
	D	
	E	
Recommendation	Needs resuscitation	

Clinical course {to be given as the simulation progresses}

The child is in PEA which is reverted to sinus rhythm at 108 per minute with a palpable pulse after tube is changed/unblocked and 2 doses of adrenaline are given.

Key treatment points



Airway & C-Spine	Establish airway patency		
	Change tracheostomy		
Breathing	Bag and mask with added oxygen		
	Ventilate by ETT/tracheostomy with added oxygen		
Circulation	PEA protocol IO access		
Specific therapy	Change tracheostomy		
Handover	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">• Clear communication• Respect• Flexibility• Assertiveness• Ability to listen
Team leaders	All of the above, plus <ul style="list-style-type: none">• Full overview of all aspects associated with child, parents and team• Prioritises according to KTPs• Summarises and re-evaluates

- Feedback on Environment, where required

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 be advised to familiarise themselves with the Tracheostomy Box or Difficult Airway Trolley available in their workplace.

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.