

SIMULATION CASE PSC-1

Learning outcomes:

By the end of this simulation the candidates will:

- Understand management of VF
- Understand the importance of a team approach to cardiac arrest management
- Understand the importance of effective communication during cardiac arrest management

Simulation focus: Cardiorespiratory arrest: ventricular fibrillation

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

2. [Set] Give *History*

A 3-year-old who had been admitted for gastroenteritis and was being observed has suddenly collapsed and is being rushed into the resuscitation room.

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 a Non-Paramedic SBAR to Team Leader}

Situation	A 3-year-old who had been admitted for gastroenteritis and was being observed has suddenly collapsed and is being rushed into the resuscitation room.	
Background	A 3-year-old, who had been admitted for gastroenteritis, and had been improving, has suddenly collapsed. A nurse is performing chest compressions, and another is giving bag valve mask ventilation with oxygen. The child had been born with transposition of the great vessels and had had a successful switch operation in the first year of life.	
Assessment	A	Apnoeic
	B	Not breathing
	C	Pulseless
	D	
	E	
Recommendation	Needs resuscitation	

Clinical course {to be given as the simulation progresses}

Monitor shows VF. The child remains in ventricular fibrillation until the third shock and adrenaline and amiodarone are given Sinus rhythm and output is then restored.

Key treatment points



Airway	Establish airway patency		
	Oro-tracheal intubation		
Breathing	Bag and mask with added oxygen		
	Bag via TT with added oxygen		
Circulation	VF protocol		
Specific therapy	Uninterrupted BLS		
Handover to PICU Consultant	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	<p>All of the above, plus</p> <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:

- Discuss the potential vulnerability of children who have had previous heart surgery.

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.