

SIMULATION CASE PC-5

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. Severe hypothermia

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*

You have received a pre-alert from the non-paramedic crew bringing in a 2 year old girl who was found in a shallow pond.

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 2 year old girl who was found in a shallow pond.	
Background	A 2 year old child is brought in to the department having been found in a shallow pond. It is cold weather. Basic life support is in progress, but no advanced interventions have been performed. The mother was brought in with the child but does not speak English. A rescuer on scene said the child may have been lost for 25 minutes.	
Assessment	A	Apnoeic
	B	
	C	Pulseless
	D	
	E	
Recommendation	Needs resuscitation	

Clinical course {to be given as the simulation progresses}

When ECG is available ventricular fibrillation is seen on the monitor.

The child remains in ventricular fibrillation, despite correct treatment protocols, until active rewarming is undertaken. Initial temperature 27°C.

Key treatment points



Airway	Establish airway patency		
	Oral endotracheal intubation		
Breathing	Bag and mask with added O ₂		
	Bag and TT with added O ₂		
Circulation	IV/IO access		
	VF protocol		
General therapy	Uninterrupted BLS		
	Resus until T at least 32 degrees		
Specific therapy	Active gradual rewarming		
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	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 encouraged to discuss the use of therapeutic hypothermia to maintain a temperature of 32 and 34 degrees for 12-24 hours post cardiac arrest

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.