

Advanced Cardiac Life Support (CPR) Online Course



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Accreditation: RACGP (Activity Number 195771) & ACRRM (Activity Number: 19911) for the 2020-2022 triennium

Learning Outcomes:

At the completion of the workshop the participants should be able to:

1. Discriminate the clinical features that indicate cardiac arrest
2. Prioritise the immediate management of the patient with cardiac arrest
3. Discriminate management of shockable and non-shockable arrest
4. Differentiate the reversible causes for cardiac arrest
5. Structure management of patient with return of spontaneous circulation (ROSC)
6. Prioritise the management of foreign body airway obstruction
7. Differentiate the management of the child with cardiac arrest

Summary of the e-Learning Program

The e-learning is interactive and requires the clinician to consider a range of the clinical problems and scenarios and provide a response. At the end of each topic a summative quiz is used to evaluate learning and understanding of the topic material. There are four topics, with a total course time of 8.5 hours.

The four topics are:

1. Basic Life Support
2. Advanced Cardiac Life Support
3. Airway: Foreign body Airway Obstruction
4. Paediatric CPR

Outline of the Program

Pre – course Quiz

1. Basic Life Support

Module Summary: Cardiac arrest results in generalised ischaemic hypoxic injury to body organs. The brain is the most sensitive body organ with loss of function occurring within 1 minute. In adults, cardiac arrhythmia associated with myocardial ischaemia is the most common cause for cardiac arrest. In contrast children are more likely to develop cardiac arrest as a result of hypoxia due to airway obstruction (eg. foreign body, drowning) or severe lung disease (eg. asthma).

In Australia, the Basic Life Support algorithm is summarised by the mnemonic "DRS ABCD" and emphasises the need to get hands on the chest without delay and to continue cardiac compressions with minimal interruption.

Interaction/Assessment:

- Interactive Clinical Casebook: Principles of Basic Life Support (Formative assessment: 75 mins)
- Topic Quiz – Basic Life Support (Summative assessment: 30 mins)

2. Advanced Cardial Life Support

Module Summary: Arrest rhythms are divided into Shockable and Non-Shockable. In the first interactive case we examine the management of Shockable rhythms (Ventricular fibrillation and Pulseless Ventricular tachycardia) and review the management of the patient with return of spontaneous circulation (ROSC). In the second interactive case we consider Non-shockable rhythms (Pulseless electrical activity (PEA) and Asystole) and consider the question of when to cease CPR.

Interaction/Assessment:

- Interactive Clinical Casebook: Advanced Cardiac Life Support (ALS) 1 (Formative assessment: 75 mins)
- Interactive Clinical Casebook: Advanced Cardiac Life Support (ALS) 2 (Formative assessment: 75 mins)
- Topic Quiz – Advanced Life Support (Summative assessment: 30 mins)

3. Foreign Body Airway Obstruction

Module Summary: Foreign body airway obstruction is common. It may occur in adults (eg cafe coronary due to a food bolus) but is most often seen in the toddler where lollies, peanuts, toys are common causes.

Complete airway obstruction can lead to cardiac arrest in as little as 4 to 10 minutes and irreversible CNS damage within 3 to 5 minutes. Knowledge of the procedure for managing foreign body airway obstruction is an important and potentially life saving skill for all health professionals and is reviewed in this module.

Interaction/Assessment:

- Interactive Clinical Casebook: Foreign Body Airway Obstruction (Formative assessment: 75 mins)
- Topic Quiz – FB Airway Obstruction (Summative assessment: 30 mins)

4. Paediatric Arrest

Module Summary: Cardiorespiratory arrest in the child is most commonly the result of severe hypoxaemia or hypotension and may be caused by a wide variety of life-threatening conditions including trauma, drowning, upper airway obstruction, congenital heart disease and sepsis. Cardiac arrest results in generalised ischaemic hypoxic injury to body organs. Irreversible neuronal injury occurs after four minutes.

Cardiac arrest should be suspected in the child who is unresponsive to voice or touch (eyes closed, no verbal response, no movement) and who is not breathing or has gasping respirations. In a child the pulse may be checked but should not be allowed to delay initiating CPR. Cardiac compressions should be commenced in the child if no pulse can be identified within 10 secs or the pulse rate is < 60 beats/minute.

Interaction/Assessment:

- Interactive Clinical Casebook: Paediatric Cardiac Arrest (Formative assessment: 75 mins)
- Topic Quiz – The Child in Cardiac Arrest (Summative assessment: 30 mins)

5. Final Post Course Assessment Quiz

- Final Course Quiz – Advanced Cardiac Life Support (CPR) (Summative assessment: 30 mins)