Advanced Cardiac Life Support (CPR) Online Course

Author Dr Peter Stuart FACEM
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Management of cardiac arrest is a critical skill for all health professionals. Regular updates are essential for maintaining the knowledge and practical skills required for CPR. In the following modules, we draw upon the most recent Australian Resuscitation Council recommendations to review the approach to the patient with suspected cardiac arrest. For each topic an eTutorial is used to introduce the topic and provides a useful background to work through the clinical case scenario.

Please note that this course is delivered online only and does not have a practical assessment component. It does not meet the RACGP or ACRRM mandatory training requirements for ACLS/CPR for GPs for the 2026-2028 triennium.

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

1. Describe the priorities and initial management of the patient with cardiac arrest
2. Prioritise the man6gement of foreign body airway obstruction
3. Describe the rationale for "Charge and Check" procedure
4. List important reversible causes that should be considered in the patient with cardiac arrest
5. Describe the steps in managing the child with foreign body airway obstruction
6. List the clinical priorities and steps in the clinical 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 6.5 hours.

The four topics are:

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

Outline of the Program

1. Basic Life Support

Module Summary: Basic Life Support (BLS) is essential to successful Advanced Life Support (ALS)
Cardiac arrest results in generalised ischaemic hypoxic injury to body organs. Immediately after cardiac arrest the heart cells begin producing toxins that will rapidly poison the heart cell resisting defibrillation. Commencing immediate Basic CPR is critical to reducing the rate of cellular deterioration and maximises the likelihood that defibrillation will be successful and that patient recover from the cardiac arrest. The success of Advanced Life Support depends on early and effective Basic CPR.

Interaction/Assessment:

- Chapter Reading: ABCDs of Emergency Medicine – Basic Life Support
- Video eTutorial – Introduction to Advanced Life Support
- Vidoe eTutorial – Basic Life Support
- Interactive Clinical Casebook: Basic Life Support (BLS) during the COVID pandemic
- Topic Quiz – Basic Life Support

2. Foreign Body Airway Obstruction

Module Summary: Foreign body airway obstruction may occur at any age, present suddenly and is unpredictable progressing in some circumstances to complete airway obstruction causing cardiac arrest within minutes. Urgent recognition and intervention are critical.

Complete airway obstruction due to foreign body 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:

- Chapter reading: ABCDs of Emergency Medicine – Foreign Body Airway Obstruction
- Video eTutorial – Foreign Body Airway Obstruction
- Interactive Clinical Casebook: Foreign Body Airway Obstruction
- Topic Quiz – FB Airway Obstruction

3. Advanced Life Support

Module Summary: Arrest rhythms are divided into Shockable and Non-Shockable.
In the first Case Simulation we focus on the management of *Shockable rhythms* (Ventricular fibrillation and Pulseless Ventricular tachycardia) including the procedure for "Charge and Check" and the Algorithm of managing cardiac arrest associated with a Shockable rhythm. The Simulation concludes with a review of the management of the patient with return of spontaneous circulation (ROSC).

In the second Case Simulation we explore *Non-shockable rhythms* (Pulseless electrical activity (PEA) and Asystole) and examine the reversible causes for cardiac arrest, algorithm for managing cardiac arrest associated with a nonshockable rhythm and consider the ethical question of when to cease CPR.

Interaction/Assessment:

- Chapter readings: ABCDs of Emergency Medciine – Advanced Cardiac Life Support
- Video eTutorial – Advanced Cardiac Life Support
- Interactive Clinical Casebook: ALS in Shockable Arrest
- Interactive Clinical Casebook: ALS in Non-Shockable Arrest
- Topic Quiz – Advanced Life Support

4. Paediatric Basic and Advanced Life Support

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. In this module we will consider the management of a child with foreign body airway obstruction and the child with cardiac arrest caused by drowning. With COVID19 the approach to resuscitation has been reviewed and specific recommendations with respect to Basic CPR have been developed by the Australian Resuscitation Council.

Interaction/Assessment:

- Chapter readings: ABCDs of Emergency Medicine – Paediatric Advanced Cardiac Life Support
- Interactive Clinical Casebook: Choking Child
- Interactive Clinical Casebook: Paediatric Life Support
- Topic Quiz – Paediatric Life Support

5. Final Post Course Assessment Quiz

Final Course Quiz – Advanced Cardiac Life Support