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Version History

Version	Date	Details
1	2014	This standard supersedes previous CFR Advanced (RCS002-V2) and includes course approval criteria previously set out in in Council Rules (RUL006 V4). Content of standard unchanged.

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Role and responsibility of the Cardiac First Responder – Advanced Level

A cardiac first responder Advanced level is a person trained in cardiopulmonary resuscitation and in the use of an automated external defibrillator (AED) who can respond to someone who has suddenly collapsed.

Entry to the CFR Advanced level is aimed at persons who may be working in the emergency medical services, fire and rescue services or a healthcare professional working in healthcare facilities or in the community. CFR Advanced level is the pre or co-requisite for entry to PHECC's Fire First Response, Emergency First Response, EMT and paramedic courses. In addition to responding to patients in the course of their duties responders can provide lifesaving skills in their homes and communities.

In addition to the competencies taught at CFR Community level, the Advanced level course teaches the use of an oropharyngeal airway (OPA), supraglottic airway (SGA) uncuffed devices, bag valve mask (BVM), pulse checks, 2-person CPR, oxygen administration and post resuscitation care. If there is a concern about maintaining competency in all the required CFR Advanced level skills (in particular BVM), Council recommends that an individual consider seriously that CFR Community level is more appropriate.

Successful completion of the CFR Advanced standard leads to the award of the joint recognised institution and PHECC award. This award ensures that the responder has fulfilled the educational and training requirements as prescribed by PHECC, thereby possessing the knowledge, skills and professionalism in line with the expectations of the public and the profession. It is recommended that the cardiac first responder ensure their ongoing competency by participation in annual refresher training and certification every two years.

Learning Outcomes for Cardiac First Response – Advanced Level

The CFR Advanced standard is the expected competency of the student upon completion of a recognised course. A person, at the end of a recognised CFR Advanced course, will be able to:

1. **Recognise** the signs of a life threatening emergency.
2. **Respond** in an effective, safe and appropriate manner, to a life threatening emergency, utilising basic life support skills including airway and ventilation management.
3. **Retrieve** and appropriately use, if required, an automated external defibrillator during a cardiac arrest.
4. **Report and Record** their actions and interventions appropriately and handover to emergency medical services.

Framework for Cardiac First Response Standard	
Learning outcome	Modules
Recognise the signs of a life threatening emergency	Basic Emergency Care Airway and ventilation
Respond in an effective, safe and appropriate manner, to a life threatening emergency, utilising basic life support skills	
Retrieve and appropriately use, if required, an automated external defibrillator during a cardiac arrest	Accessing and Use of an Automated External Defibrillator
Report and Record their actions and interventions appropriately and handover to emergency medical services	Safety and Communication

The learning objectives in the standard refer to adults and paediatric patients unless stated otherwise. The standard of care management for patients with cardiac chest pain, cardiac arrest, stroke and choking is outlined in the PHECC Clinical Practice Guidelines (CPGs). The CPGs may be accessed from the website of the PHECC www.phecc.ie.

Module 1: Basic Emergency Care

On completion of Module 1 the student will be able to recognise the signs of a life threatening emergency and can initiate basic life support to the person who suddenly collapses or is choking. The student will also learn the indications and administration of Aspirin.

Knowledge Objectives

At the completion of this module, the student will be able to:

1. State the importance of early cardiopulmonary resuscitation (CPR) and defibrillation
2. List the obvious signs of death and when resuscitation is not indicated.
3. List the signs of heart attack, stroke, cardiac arrest and choking
4. List the steps in a FAST assessment (Face, Arms, Speech & Time assessment)
5. Outline the importance of carrying out a pulse check within 10 seconds
6. List the steps in one-responder and two-responder CPR
7. List the steps in the management of a choking patient who is responsive and then becomes unresponsive
8. List the steps to be taken prior to Aspirin (acetylsalicylic acid) 300 mg tablet administration for cardiac chest pain as per the PHECC Clinical Practice Guideline
9. Outline the post resuscitation care management for patients following return to spontaneous circulation (ROSC)¹

Attitudinal Objectives

At the completion of this module, the student will be able to:

1. Demonstrate a caring attitude toward the patient, patient's family or bystanders

Skills Objectives

At the completion of this module, the student will be able to:

1. Assess responsiveness including absence of normal breathing to confirm cardiac arrest
2. Demonstrate chest compressions maximising the number of compressions delivered per minute
3. Demonstrate opening an airway using the head-tilt chin-lift manoeuvre
4. Demonstrate rescue breathing using the techniques of mouth-to-mouth (using face shields), mouth-to-mouth and nose (infants only) and mouth-to-mask (pocket mask with disposable valves)
2. Perform one-responder and two-responder CPR
3. Demonstrate the care management for a responsive choking patient who becomes unresponsive
4. Demonstrate the recovery position
5. Demonstrate the administration of Aspirin (acetylsalicylic acid) 300 mg tablet for a patient suspected of having cardiac chest pain
6. Demonstrate post resuscitation care management following ROSC

¹ Care management is outlined in full on PHECC CPGs.

Module 2: Airway and Ventilation

On completion of Module 2 the student will be able to describe and demonstrate the use of an oropharyngeal airway (OPA), non-inflatable supraglottic airway (SGA), a bag valve mask (BVM) and oral suctioning to ensure a patent airway and effective ventilations are maintained. A person will also be able to describe the correct and appropriate application of O₂ using a range of devices. The indication for SGA use is limited to adults in cardiac arrest only.

Knowledge Objectives

At the completion of this section, the student will be able to:

1. List the component parts of an oxygen delivery system (oxygen cylinders types, regulators demand valve, constant flow meter etc)
2. Explain the principles of safe operation for an oxygen delivery system and correct/safe storage requirements appropriate to circumstances and list potential hazards
3. Explain how to establish, clear and maintain a patent airway using approved airways² and suction devices
4. Describe how to administer oxygen in accordance with approved airway and ventilation equipment³
5. State when oxygen can be administered in accordance with PHECC CPGs and Medication Formulary
6. Describe the legal restrictions/regulations regarding the administration and possession of medical oxygen

Attitudinal Objectives

No attitudinal objectives

Skills Objectives

At the completion of this section, the student will be able to:

1. Demonstrate how to establish and maintain a patent airway (with and without use of approved airways) and a suction device
2. Demonstrate the preparation and use of approved airway and ventilation equipment
3. Demonstrate oxygen administration using approved airways and ventilation equipment

² Approved airways are set out in full in PHECC CPGs

³ Approved ventilation equipment are listed in PHECC CPGs

Module 3: Accessing and Use of an Automated External Defibrillator

On completion of Module 3 the student will be able to use an automated external defibrillator (AED) without delay in accordance with the appropriate PHECC CPGs.

Knowledge Objectives

At the completion of this module, the student will be able to:

1. Outline the functions of an automated external defibrillator (AED)
2. Describe when to use an AED
3. Describe the steps of AED operation
4. List the safety precautions for using an AED

Attitudinal Objectives

At the completion of this module, the student will be able to:

1. Demonstrate an awareness of the importance of AED retrieval

Skills Objectives

At the completion of this module, the student will be able to:

1. Demonstrate defibrillation with an AED with minimal delay and interruption in CPR

Module 4: Safety and Communication

On completion of Module 4 the student will be able to activate the Emergency Medical Services and communicate effectively with other healthcare professionals in the continuum of care for the patient.

Knowledge Objectives

At the completion of this module, the student will be able to:

1. Describe the links in the chain of survival
2. State the importance of calling 112/ 999
3. Explain how using a RED Card (Request Emergency Dispatch Card) can enhance communication
4. List the elements of scene safety
5. State the benefits of an explicit handover, including documentation as appropriate, between Responders and healthcare professionals
6. Outline the role of the Cardiac First Response Report (CFRR) and the benefits of collecting information for the out of hospital cardiac arrest register (OHCAR)
7. Explain the term patient confidentiality

Attitudinal objectives

At the completion of this section, the student will be able to:

1. Value the contribution and role of the healthcare team emphasising the integration of Cardiac First Responders, Ambulance Services, Primary Care and acute hospital services in the chain of survival
2. Demonstrate an awareness of the legal implications⁴ for those who attempt to provide pre-hospital emergency care.
3. Demonstrate an awareness of the issues regarding insurance and liability⁵ for those who attempt to provide pre-hospital emergency care
4. Demonstrate an awareness of the basic principles of infection prevention and control (e.g. hand hygiene and barrier device use)
5. Identify with the role of critical incident stress management
6. Provide emergency medical care accepting wholly the concept of patient confidentiality

Skills objectives

At the completion of this section, the student will be able to:

1. Assess for scene safety
2. Call 112/999 using a RED Card

⁴ The position paper prepared for PHECC summarising the principal issues in respect of the civil liability of those providing pre-hospital. Craven, C., Legal Opinion, July 2003; Available from the website www.phecc.ie.

⁵ The Cardiac First Responder Guide; A guide to the development of Community Cardiac First Response Programmes. [Chapter 3 Insurance and liability] March 2008; Available from the website www.phecc.ie.

3. Complete a CFRR

Approval criteria for the course: CFR Advanced

Council set the requirements for submitting an application as well as maintaining status as a PHECC recognised institution in Council Rules. The detailed course recognition criteria are described in subsections below. The information supplied by the Applicant institution against each of the criteria must satisfy Council that arrangements are in place to provide a high quality course ensuring the validity of the joint PHECC/recognised institution award in CFR Advanced.

1. Entry criteria:

- a) The recommended minimum age for entry is eighteen. All course participants should be mature enough to comprehend the knowledge, skills and implications associated with defibrillation and have a maturity to complete assessment to receive certification.
- b) The CFR Advanced standard is designed for persons working or volunteering in the emergency medical services, fire and rescue services and for healthcare professionals. If there is a concern about maintaining competency in all the required CFR advanced levels skills (in particular airway management and bag-valve-mask) PHECC recommends that such individuals certify in CFR Community. CFR Advanced is not designed for teaching basic life support to citizens.

2. **Duration:** *PHECC's CFR DVD* must be used to deliver the CFR Advanced course, its use will allow one instructor deliver a course in 6 hours to 6 students. Additional course participants will therefore extend the overall course duration. Using *PHECC's CFR Student Handbook* and *CFR Instructor Manual* will also facilitate course delivery and support the learning outcomes from the CFR Education and Training Standard.

3. **Ratio:** The CFR instructor student ratio is 1:6/8; 1:8 should be the maximum allowed in exceptional circumstances only and is not the norm. The student to equipment (AED & manikin) 3: 1.

4. **Assessment:** Course participants may have their skills assessed throughout or examined at the end of the course. An assessment sheet has been developed by PHECC. *The Responder Level Examination Handout for Recognised Institutions (PUB004)* can be used to guide assessment. The mandatory components of CFR Advanced assessment are:

- a) Skills assessment using PHECC's CFR Community and Advanced assessment sheets.
- b) A multiple choice question paper exam of 25 questions; 80% pass mark.

5. **Remediation** should be in-line with the recognised institution internal assessment policy and procedures.
6. **Certification:** Award of joint PHECC/recognised institution CFR cards/certificates to successful course participants by the recognised institution is mandatory. Certification lapses after two years.
7. **Design of the CFR Advanced course:** The CFR Advanced course uses a DVD to guide course delivery. Applicant institutions must agree to use of PHECC CFR training materials including the DVD, CFR Student Handbook and CFR Instructor Manuals.
8. **Recertification:** Generally the full CFR course is recommended in order to recertify in CFR, however, the principles of recognition of prior learning apply. Consequently some cohorts may undertake a renewal course of shorter duration.
9. **Refresher training:** In order to maintain a readiness to perform CPR and AED interventions effectively, the standard interval accepted for CFR *refresher training* is one year after the initial certification. However, as the retention of skills in CPR and use of the AED are known to rapidly diminish, it is recommended that CFR refresher training occurs as frequently as possible. A CFR certificate remains valid for 2 years even if a person has not undertaken refresher training.
10. **Content of CFR refresher training** is not standardised and there is no requirement for it to be led by a CFR Instructor. It may include on-line learning and/or a practical skill session. The refresher training may include but is not restricted to the following objectives:
 - indications for AED use and safety measures
 - Airway management practice
 - learning points arising from the group's experiences of CPR and AED use, aspirin administration and CFR's interaction with patients; and
 - a scenario-based assessment of an unresponsive simulated patient and delivery of one shock

Who can teach CFR Advanced courses?

11. The teaching faculty (instructor) requirement for a CFR Advanced course is a CFR Advanced Instructor.
12. The course director requirement for a CFR Advanced course is an experienced CFR Advanced Instructor.
13. Tutors/ assistant tutor (also facilitators) and EFR instructors may teach CFR Advanced courses only if they are certified CFR Advanced instructors.

Approval criteria for the course: CFR Advanced Instructor

Council set the requirements for submitting an application as well as maintaining status as a PHECC recognised institution in Council Rules. The detailed course recognition criteria are described in subsections below. The information supplied by the Applicant institution against each of the criteria must satisfy Council that arrangements are in place to provide a high quality course ensuring the validity of the joint PHECC/recognised institution award in *CFR Advanced Instructor*.

14. Entry criteria:

- a) The minimum age for entry to a CFR Advanced instructor course is 18.
- b) Certification in CFR Advanced within the last 12 months. Note that access to a CFR Advanced course is for persons practicing (volunteering or working) in EMS, fire and rescue services and for healthcare professionals. This is even more important when individuals (CFR Advanced certified) are seeking access to CFR Advanced Instructor courses. If there are any concerns about the individuals capacity to maintain competency in all the required CFR Advanced skills (in particular airway management) PHECC strongly recommends that CFR Community Instructor level is more appropriate. This applies to healthcare and non-healthcare professionals equally.

15. **Duration:** The CFR Instructor Standard is set out in full in the Teaching Faculty Framework. The CFR Instructor Standard includes tuition in instructional methods (IM) and a period of supervised teaching practice. The IM component is no less than 2 days/12 hours. It can be delivered on a full time or part-time/modular basis. The period of supervised teaching practice is not specified and may be extended until the specific learning outcomes are achieved. The typical pathway is to assist on the first course, part teach the second and deliver a third independently while being monitored.

16. **Ratio:** The ratio of CFR instructor trainers to students is 1:6 with and equipment to student ratio of 1:3 (equipment includes manikin and AED).

17. **Assessment** of CFR Advanced provider and instructor skills for student instructors will be undertaken by a CFR instructor trainer using a standard CFR Advanced provider and Instructor evaluation form/s. Assessment must occur as the student instructor progresses through the period of supervised teaching practice.

18. **Remediation** should be in-line with the recognised institution internal assessment policy and procedures.

19. **Certification:** Individuals who successfully complete the 2-day CFR instructor course plus the additional supervised teaching practice and evaluation will be certified as a CFR

Advanced instructor. Award of joint PHECC/recognised institution CFR Advanced Instructor cards/certificates to successful course participants by the recognised institution is mandatory. It is unnecessary for CFR instructors to renew certification as CFR providers.

20. **Design of the CFR Advanced Instructor course:** The Applicant institution must design the course to:
 - a) Balance theory and practice to achieve the learning outcomes (course and domain specific) and competencies specified.
 - b) Utilise a range of teaching/learning strategies providing a balance between presentations, tutorials, small group interactions, demonstrations, practical and self-directed learning including electronic learning approaches.
 - c) Promote a commitment to self-directed and lifelong learning and must be dynamic to reflect ongoing changes in the CFR Advanced instructor standard and in PHECC clinical practice guidelines (CPGs).
21. **Course information:** The applicant institution must provide course information as set out on the current application checklist/form. Such information includes but is not limited to:
 - a) Evidence of recognition of prior learning (RPL) procedures for CFR Advanced Instructor candidates to support the institution's RPL policy.
 - b) Sample lesson plans, timetable and teaching and assessment materials to be used.
 - c) Assessment and awards procedures for the CFR Advanced Instructor course to support the institution's policy.
22. **Recertification:** CFR Instructor certification is valid for 2 years. It is the responsibility of every CFR instructor to recertify before their certificate lapses. The recognised institution may allow a short grace period but should be restricted to extenuating circumstances and considered on a case-by-case basis. This decision lies with an instructor trainer in a recognised institution.
23. **Recertification course:** It is expected that CFR instructors who are faculty members will recertify with their recognised institution. Council also acknowledges that sole traders will have to attend a CFR instructor recertification course at a recognised institution. Such courses should be designed according to the identification of training needs (ITN) of the individuals. Nonetheless, CFR instructor recertification courses should include at a minimum:
 - a) Verification of the CFR Advanced instructor certificate
 - b) Verification of CFR Advanced courses delivered; a minimum 4 courses in the preceding 2 years

- c) Assessment of CFR instructor skills/competencies by a CFR instructor trainer (mock class room set up)
- d) Completion of any CFR Advanced update sessions if applicable following new ILCOR guidelines or new CPGs relevant at CFR level.

Who teaches CFR Instructor courses?

- 24. Faculty required to teach and recertify CFR Advanced instructors are suitably qualified persons having demonstrated appropriate education and experience against PHECC criteria set out in the teaching faculty framework (e.g. tutors with additional 'train the trainer' courses or similar). There is no PHECC award for individuals known as CFR Advanced instructor trainers. Selection of CFR instructor trainers remains the responsibility of senior faculty e.g. a facilitator in the recognised institution.
- 25. CFR Advanced instructor trainers must maintain certification in CFR Advanced at instructor level and are also required to demonstrate by employment or association an ability to keep current with best practice including ILCOR guidelines and PHECC CPGs.

Dual certified Irish Heart Foundation (IHF)/American Heart Association (AHA) and PHECC courses

- 26. Dual IHF/PHECC CFR instructors working or volunteering on behalf of an IHF training site/PHECC recognised institution must be mindful that there are distinct course criteria for delivery of joint Heart Saver/BLS and CFR Advanced courses. Furthermore, dual Instructor certification must be maintained from two distinct certification/ accreditation systems (IHF/AHA and PHECC).
- 27. Students, prospective students and instructors must be fully informed by recognised institutions that are also training site of the IHF about the two separate certificates. Such information will avoid errors and improve the quality of the courses delivered.