

**Procedure Title      Automatic External Defibrillator (AED) and  
Cardiac First Response Procedure**

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**1. Purpose**

The purpose of this procedure is to outline the details of the Cardiac First Response programme at IT Sligo. It gives details on the training requirements for persons involved in the programme. It also details the locations of the Automatic External Defibrillators (AED's) together with their maintenance requirements. Finally the procedure give details on the actions to take in the event of having to use an AED, the steps to be followed during the incident and the steps to be followed post the use of the AED.

**2. Scope**

The IT Sligo Cardiac First Response programme is a site specific stand alone programme covering all the IT Sligo owned campus buildings. The programme is coordinated by Cardiac First Response Committee and its primary goal is to assist in the case of on-site suspected cardiac arrest amongst IT Sligo, staff, students and visitors. IT Sligo maintains a panel of suitably trained Cardiac First Responders and a number of AED units are deployed across the campus in key locations. The units are NOT intended for off-site use (with the exception of AED units which have been specifically purchased for use at off campus matches etc) or by those without current training and certification.

**3. Definitions and Reference Documents**

**Automated External Defibrillator (AED)** – a small portable piece of equipment that can deliver an electric shock to a person in order to convert a cardiac arrhythmia (ventricular fibrillation) into a natural rhythm.

**Cardiac First Response (CFR)** – the standard of training required by PHECC to respond to a potentially life threatening cardiac event when providing basic life support.

**Cardiac First Response Responder** is a person who has successfully completed a PHECC (Pre-Hospital Emergency Care Council) approved Cardiac First Response course – Responder level, within the last two years. It includes citizens or emergency medical volunteers/rescuers and uniformed personnel who may be dispatched or come across the following cardiac emergencies: cardiac arrest, heart attack and foreign body airway obstruction.

**Basic life support (BLS)** – the techniques used to maintain adequate ventilation and circulation in the absence of adequate breathing or pulse. This includes initial assessment of the patient, providing CPR and (under new PHECC guidelines) defibrillation with an AED.

Revision No: 0

**Cardiac arrest** - a medical emergency with absent or inadequate contraction of the heart usually due to ventricular fibrillation that causes circulatory failure, loss of consciousness and brain death within about 10 minutes if normal heart rhythm is not restored.

**Chain of Survival** – a process of four steps to be enacted to ensure an effective response to an acute cardiac emergency.

1. Early access to Emergency Medical Service ∞ 2. Early CPR ∞ 3. Early Defibrillation ∞ 4. Early Advanced Cardiac Life Support

**Sudden Cardiac Death (SCD)** – death due to natural causes within an hour of the onset of symptoms, in the absence of any other cause and assumed to have a cardiac cause.

**Ventricular Fibrillation (VF)** – a disorganised heart rhythm that results in chaotic contraction of the lower chamber of the heart (ventricle) that fails to effectively eject blood from the heart.

**Cardiac First Response Committee** – a small group of staff whose role is to manage and administer the programme. They will also take part in the review of any event which involved the use of an AED. The group is overseen by the Health and Safety Officer.

PHECC - Pre-Hospital Emergency Care Council

#### 4. Roles and Responsibilities

##### 4.1 IT Sligo Management

Must ensure that they put in place and provide the appropriate resources and training to ensure that this programme is implemented in order to protect the safety of employees and students.

##### 4.2 Human Resources

The human resource department is responsible for the organisation and monitoring of Occupational first aid, Basic first Aid and Cardiac First Responder training to designated staff. They should liaise directly with the Health and Safety Officer who will guide them as to such requirements.

**4.3 A Cardiac first responder/Occupational First Aider** would be expected to recognise a collapsed person and respond by:

- Ensuring personal safety and the safety of the collapsed person;
- Checking for a response from the collapsed person;
- Calling for help (112 or 999) use RED CARD
- Obtaining AED (or sending someone to get the AED);
- Performing cardiopulmonary resuscitation (CPR);
- Using the AED (as per training);
- Completing relevant sections of a cardiac first response report (CFRR) – Appendix 2; and
- Handing over to the emergency services with relevant history, treatment given and any response

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**Procedure No: SAF004/173**

- Completing relevant sections of a Cardiac First Response Report (CFRR) Top copy (1) is given to EMS Second copy (2) retained and filed as per PHECC guidelines.
- Cardiac first responders need to ensure that they are tactful, sympathetic, patient and respectful. A patient's clothing must not be removed unnecessarily.  
NB: For Heart Attack victim OFA/CFR may administer Aspirin.

### **4.4 Person calling EMS use RED CARD information**

- Ensure that the ambulance is directed to the entrance door closest to the victim.
- Give a call back number for the incident.
- WAIT to hang up last- additional information may be required
- Report to CFR/OFA that the call has been made
- Do not use YOUR phone in the event of the EMS trying to contact you.

### **4.5 IT Sligo Security**

The security personnel should

- Ensure that the ambulance is directed to the entrance door closest to the victim.
- In the event In the event of a serious accident, incident or fatality security should preserve the scene until the relevant authorities arrive
  - They should also notify the Health and Safety Officer at 0851632744

### **4.6 Health and Safety Officer**

To manage and coordinate the Cardiac First Response Programme at IT Sligo.

## **5. Equipment Type, Location, Signage and Maintenance**

### **5.1 AED Equipment Type**

IT Sligo owns a number of AED units, all of which are a "Defibtech DDU-100" see figure 1 below. New units purchased will, as far as possible, be similar in type and operation, in order to provide continuity and consistency across campus.



Figure 1

### **5.2 Location of AED's**

- Careful consideration has been given to the best location for AED's within IT Sligo buildings, bearing in mind possible distances of travel, accessibility and security issues.
- A central record of the location of each AED and its serial number is maintained by the Health & Safety Office.
- At present we have eleven defibrillators in the Institute and they are located as follows;

AED number	Location
1	Block A Main Reception Area
2	Block A Library Middle Floor
3	Block B Main Student Canteen
4	Block B Health Science Corridor
5	Block D Opposite Coffee Dock
6	Block F Entrance to block F
7	Block G Innovation Centre Main Reception
8	Block H Outside Medical Centre
9	Block L Coffee Dock
10	Block M Coffee Dock
11	Block P Knocknarea Arena main Entrance

### 5.3 AED Storage and Signage

Each AED is stored in clean, dry and moderate temperature conditions. Each AED unit is to be kept in a kit bag, housed inside unlocked wall mounted cabinet. The alarm will sound when the cabinet door is opened and will silence when the door is closed. Each cabinet has signage placed above them which clearly identifies their location see figure 2 below



Figure 2

### 5.4 AED Routine Maintenance

It is essential that regular maintenance checks of the AED units are carried out, as well as regular checks/refurbishment of consumables and accessories. The Health and Safety Officer shall ensure that procedures are in place for the maintenance of the AED's.

Daily Check	Monthly Check	Action	By Whom
✓	-	Visual Check that the Active Status Indicator is Flashing green	Area appointed Cardiac First Responder
-	✓	Record and check the condition of the unit and accessories	Health and Safety Officer
-	✓	Record and check pads and battery pack expiration dates	Health and Safety Officer

All CFR/OFA personnel should check that the green ASI light is flashing when passing AED's

If an AED exhibits an operational problem or a malfunction, it should be removed from service, and the problem reported to the Health and safety officer without delay.

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**Procedure No: SAF004/173**

Monthly inspections should be recorded on the AED Inspection Checklist. Records of same shall be maintained by the Health and Safety Officer or by an appointed member of the Cardiac First Response Team. A copy of same is included in Appendix 1.

If an AED has been used then a specific set of checks must be conducted on the unit as per those detailed in the "Post Use" section below.

The Health and Safety Officer shall keep a supply of additional batteries, pads and other accessories

The following supplies should be kept with each AED.

- AED unit with pre-connected pads
- Spare defibrillator pads in a sealed package
- Paramedic shears/scissors
- Disposable gloves
- Pocket face mask
- Razor
- Small towel
- Clinical waste bag
- CFR Report
- Aspirin 300mgs

### **6. Training of Personnel**

The AED's shall only be used by personnel who have successfully completed the PHECC approved Cardiac First Response Responder training and trained Occupational First Aiders.

IT Sligo relies on employees to volunteer to become involved in the Cardiac First Response programme. Volunteers are sought from the areas where the AED's have been located.

Volunteers are trained on campus by our own approved certified Instructor.

Refresher training is provided to all members of the team on an annual basis. Failure to attend the refresher training will result in that person being removed from the approved Cardiac First Response list.

A list of all trained Cardiac First Response Responders is available at each AED unit, on IT Sligo website and at IT Sligo reception.

### **7. Actions in the case of an emergency**

In the event of a suspected cardiac arrest, members of the campus population should follow the following steps.

### Check, Call and Compress

1. **Check** Is the person unresponsive and not breathing?
2. **Call** or have someone do so for you. ( If you are alone SHOUT for HELP or else you must activate the Emergency Medical Services yourself before commencing CPR)
  - **999 or 112.**
    - Give the phone number you are calling from
    - What emergency services you require
    - Location of the incident be specific
    - Chief complaint
    - Gender
    - Conscious Yes/No
    - Breathing or not Yes/No
    - If >35 years Chest pain Yes/No
    - If Trauma Severe bleeding? Yes/No
  - Call **333 or have someone do so for you** (from an internal phone) so that an in house Cardiac First Response Responder can be called
3. **Compress**
  - Start compressions. Push hard and fast in the centre of the chest
  - Don't stop until help arrives

### **Cardiac First Responder**

- Go to the emergency location
- Collect AED on route
- Assess scene for safety (Ensure own safety and safety of casualty) Use gloves and pocket face mask.
- If unresponsive
  - Check if the Emergency Medical Services have been called if not if not get someone to call 999 or 112
  - Open airway – head tilt/chin lift – look inside mouth
  - Check for signs of life – look, listen and feel for breathing (5 SECONDS AND NOT MORE THAN 10 )
  - Give two breaths
  - Commence CPR (30 compressions:2breaths)
  - Get AED ready (If 2 trained persons are present one does CPR while other prepares AED)
  - Clear and prepare chest – shave chest hair if needed for good contact of electrodes. If the chest is dirty or wet wipe it dry no jewellery or patches
  - Turn on AED (*for step by step instructions*) Ensure leads are connected.
  - Apply electrodes to bare chest ensuring correct location (Diagram on pads). Ensure pads are fully attached.
  - Allow AED to analyse casualty
  - Follow instructions given by AED

### **If shock is advised**

- Clear area making sure nobody is touching the victim
- Call out in a clear voice “**Stand Clear**”
- Push shock button when prompted to do so
- Follow instruction given by AED

**If no shock is advised**

Continue CPR 30 compressions to 2 breaths until victim moves or trained help arrives or someone to take over.

Complete the Cardiac First Response Report (CFRR) which are kept in the AED bag. A copy is included in Appendix 2

- Top Copy to go with the Emergency Medical Services
- Bottom copy to be forwarded to the Health and Safety Officer
- Any clinical waste should be bagged and brought to the medical centre for disposal

**8. Debriefing after an event and post event follow up**

The time after an event is an important opportunity to reflect and learn from the experience in order to further refine and develop the programme on campus.

*8.1 Debriefing meeting and counselling*

The review should take place within 24 hours after the event and should involve those involved in the event and members of the Cardiac First Response Committee.

IT Sligo recognises that if a defibrillator has to be used on campus it will be a traumatic event for all concerned. This is particularly so if the person dies. It is essential that support is given to those who were involved. Counselling will be offered through the employee assistance programme.

*8.2 Post Use Procedure for the AED*

After the AED has been used on a patient the unit should be cleaned and prepared for the next use by a Cardiac First Response Responder. The following steps should be performed:

- Remove battery pack
- Reinsert battery pack. Check that the battery insertion self-test passes.
- Connect a new pad package (check date on new pads)
- Hold On/Off button down for at least 5 seconds to initiate a manually initiated Self-Test. The AED will report status of self-test and shut off.
- Check to ensure that the Active Status Indicator is flashing green.

**9. Records Generated by this Procedure and their location**

The Health and Safety Officer shall hold on file the copies of Cardiac First Response Reports. All records will be held for a minimum of 5 years.

**10. Revision History**

Revision No	Description of Change	Issue Date:
000	New Procedure	16/09/10

AED Monthly Inspector Report													
Date	AED Location and Number	Status Indicator Green In Colour		Unit and accessories free from damage, dirt and Contamination		Spare Pads Available		Pads not past expiration dates		Supplies such a razor, wipes, shears present		Comments	Initials of Person conducting Checks
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		



