



# CARDIAC FIRST RESPONDER *guide*

March 2008

A **guide** to the development of Community  
Cardiac First Response Programmes

# ACKNOWLEDGEMENTS

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- Order of Malta Ireland Ambulance Corps

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### 1.1. Background to the guide

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The sudden unexpected death of a loved one, work colleague, friend, neighbour or member of your local community is a very distressing and emotional situation to come to terms with. Emotions of grief are often compounded by a sense of ‘*if only I could have done something*’ or ‘*I felt so helpless not knowing what to do*’. Following the sudden death of a person we know and love, people often feel the need to respond in a positive way. This could be by learning how to do cardiopulmonary resuscitation (CPR) or by fundraising for an automated external defibrillator (AED) for the local community.

There has been growing national interest in the way sudden collapse is responded to and managed in the pre-hospital or community setting. In March 2006 the Department of Health and Children published *Reducing the Risk: A Strategic Approach. The Report of the Task Force on Sudden Cardiac Death*. The report recognised the need to provide information and advice to communities, councils and organisations who may wish to establish first responder programmes and recommended that a guide be developed.

### 1.2. Purpose of the guide

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This information guide has been designed to provide practical advice and information on all aspects of developing a Cardiac First Response Programme and on the use of an AED, in order that you and your community can make an **informed** decision. The guide provides definitions and discusses the different types of programmes that can be developed setting out the main issues for you to carefully and objectively consider in developing a programme and using an AED.

# SCD & FIRST RESPONSE PROGRAMMES

The guide is not a comprehensive handbook on how to run a community first responder programme nor is it a policy and standards document.

The development of Cardiac First Response programmes requires careful planning, significant time commitment, effort and dedication. Implementing and participating in such programmes can be stressful, challenging and demanding but also offers a rewarding and worthwhile experience in providing the opportunity for your community to play an important role in the fight against sudden cardiac death.

We hope that this guide answers the majority of the questions you may have but if you still have questions or concerns, please contact the Pre-Hospital First Responder Coordinator in your area (contact details in **Appendix A**) for further advice.

*Please note: When we talk about the 'community' in this guide, we not only mean a geographical community but also the broader community, such as, work colleagues in an office or factory, team members at the GAA club or staff and students in a third level institution.*

## 2.1. What is a Sudden Cardiac Death (SCD)?

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Sudden cardiac death (SCD) is defined as: *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. Pre-existing heart disease may have been known to be present but the time and mode of death are unexpected. The death may be witnessed or not witnessed.*

SCD can be caused by a number of conditions, but the majority of deaths occur from late middle age onwards and are as a result of coronary heart disease. Other causes of SCD include viral infections of the heart muscle and inherited genetic conditions including cardiomyopathy (heart muscle disease) and channelopathy (abnormal heart muscle electrical behaviour).

In the majority of cases, SCD occurs due to the sudden disturbance of the heart's electrical conduction system, resulting in a chaotic heart rhythm, called ventricular fibrillation (VF). If ventricular fibrillation is not treated, death ensues within minutes.

The treatment for VF is the delivery of an electrical shock to stabilise the heart's rhythm. This is known as defibrillation. The chances of successful defibrillation decline at a rate of 7 to 10% with each minute. If a patient is defibrillated within 5 minutes, survival rates are approximately 50% and potentially higher with younger people. If time to defibrillation is 10 minutes, survival rates approach zero percent without CPR and 10 to 20% if CPR has been used.

This underlines the need for knowledge and skills in CPR and AED use to be more widespread in our community along with availability of AEDs.

## 2.2. Why do we need Cardiac First Response Programmes?

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Cardiovascular disease is Ireland's biggest killer disease accounting for over 10,000 deaths each year. Although difficult to determine, approximately 5,000 to 6,000 of these fatalities are thought to be as a result of SCD. Seventy percent of these sudden deaths occur in an out-of-hospital setting. The current Irish survival rate from an out-of-hospital cardiac arrest is thought to be as low as 1%.

Cardiac arrest is defined as: 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.

There is significant information to suggest that early intervention can have a major impact on survival rates from sudden cardiac arrest. Delays in response to a cardiac event can be the result of a multitude of reasons, including:

- Lack of public knowledge regarding the symptoms of cardiac disease
- The victim either ignores symptoms or delays seeking treatment in the lead up to collapse
- Bystanders may be unaware of the urgency of seeking help when a person becomes unwell or collapses
- Bystanders do not know what to do when they witness a collapse
- The collapse is not witnessed

- There is a delay in calling for an ambulance perhaps as a result of either:
  - Time is consumed in searching for a local doctor; or
  - Bystander is initially unaware of how to call an ambulance
- The person collapses in a remote or isolated area
- Delay in the time an ambulance might take to reach the collapsed person

Efficient and well organised early response mechanisms, including Cardiac First Response (CFR) Programmes will support more positive outcomes for people at risk.

## 2.3. What is a First Responder and a Cardiac First Responder?

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### First responder

The description of the term 'first responder' in this information guide is based on the interpretation by the Task Force on Sudden Cardiac Death:

*A person trained as a minimum in basic life support and the use of an AED, who attends a potentially life threatening emergency. This response may be by the statutory ambulance service or complementary to it. If complementary, first responders can be linked with the statutory emergency services or they can be independent and stand alone. In any single event the first responder may be an individual who happens to be present or part of a first response service. Trained first responders may or may not participate in a first responder programme.*

## Cardiac first responder

According to the Pre-Hospital Emergency Care Council (PHECC) in their Education and Training Standards:

A Cardiac First Response – Responder is:

*A person who has successfully completed a PHECC 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.*

A Cardiac First Response - Practitioner is:

*A person who has successfully completed a PHECC approved Cardiac First Response course – Practitioner level, within the last two years. This is the second level of the PHECC Cardiac First Response standard and is aimed at healthcare professionals and PHECC registered practitioners. There are additional skills taught to these course participants.*

## 2.4. What is the ‘Chain of Survival’?

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The chances of survival following a cardiac arrest are considerably improved if there is a rapid, coordinated response to the emergency. The HSE supports the American Heart Association’s ‘Chain of Survival’ concept which is a process of four steps to be enacted to ensure an effective response to an acute cardiac emergency.

### 1. Early access to Emergency Medical Services (EMS)

This involves recognising that a person is in cardiac arrest and calling for help by phoning 112 (the single European emergency call number) or 999. There is considerable lack of awareness in the community as to the appropriate action to be taken in the event of a collapse. It is advisable to always contact the ambulance service first before moving on to the next step so that professional help can be dispatched immediately. In addition, once connected to the emergency service, immediate assistance can be given by way of telephone advice to support you.

### 2. Early cardiopulmonary resuscitation (CPR)

This is a manual technique for attempting to revive collapsed individuals using rescue breathing and chest compressions. When someone has a cardiac arrest this procedure is undertaken in order to keep the person’s brain, heart and other vital organs supplied with blood and oxygen until medical help arrives. In order to be effective, training in the use of CPR is essential. From the moment of collapse to defibrillation the chance of survival decreases by 7 to 10% per minute when CPR is not being performed.

### 3. Early defibrillation

Defibrillation is the delivery of an electric shock to a person’s chest to help restore the normal function of the heart. In order to be effective and safe, training in the use of a defibrillator is essential.

### 4. Early Advanced Cardiac Life Support (ACLS)

Advanced medical care is usually given in a hospital setting, however ACLS can also be delivered in a pre-hospital or community setting by trained personnel. In the out of hospital setting in Ireland, this is most commonly delivered by General Practitioners, but increasingly by Advanced Paramedics.

The Chain is only as strong as its weakest link and if any of the links are missing when someone suffers a sudden cardiac arrest, the chance of survival is limited.



## 2.5. Types of Cardiac First Response programmes

In the Irish context there are eight identified models of Cardiac First Response Programmes. There is no one type of programme to suit all communities. After very careful consideration, the type of programme you develop should depend on the specific needs of your community.

Some of the models are linked with the emergency medical service (EMS) to deliver an improved coordinated response. Other models are not linked to the EMS and are known as 'stand alone' programmes. If the need for a programme has been identified locally, these stand alone programmes can also be very effective if managed properly and are better than no programme at all.

The models are:

### 1. Emergency Medical Services (EMS)

In Ireland, emergency medical services are provided by the HSE, either directly or indirectly.

### 2. Cardiopulmonary Resuscitation (CPR) responder programmes

A CPR responder programme can be implemented in any community. They can be implemented in areas which may be well serviced by the Emergency Medical Service (EMS) or even where a community first responder programme has been established. CPR is as important a link as defibrillation in the chain of survival and the importance of CPR training should not be overlooked. By training members of the wider community to recognise a cardiac arrest, to contact the EMS and in the basic skills of CPR it increases the chances that all the links in the chain of survival will be implemented promptly giving the best chance of survival to any victim of a cardiac arrest.

### 3. GP first responders

A GP first responder programme is one whereby GPs are equipped and trained to use an AED to respond to an acute cardiac event. In rural Ireland in particular, GPs are often the first to arrive at the scene of an acute cardiac event. To ensure an effective response in remote areas, such a programme should be linked to the EMS.

### 4. Uniformed first responders

There are two types of uniformed programmes, for 'on-duty' and 'off-duty' personnel.

- **On-duty** – these include the Gardaí, fire brigade (full-time, part-time and retained personnel) and other emergency personnel acting as first responders during the course of their work
- **Off-duty** – off-duty health professionals, including PHECC registered practitioners and members of voluntary and auxiliary organisations, who are used to responding to emergencies, are an ideal group to organise on a voluntary basis as first responders linked to the EMS.

### 5. Community first responders

A community first responder programme can stand alone or be linked with the EMS. In either of the community models it is suggested that recruitment of uniformed first responders, that is, members of the community who are used to responding to emergencies in their working environment, should be a priority.

- **Linked:** in a linked model, the ambulance service on receiving the 112 or 999 call, in addition to the usual ambulance/EMS personnel, simultaneously dispatches a rostered on-call community based first responder. The ambulance service has developed comprehensive guidelines to support linked models.

- **Stand alone:** a stand alone model would consist of defibrillators that are easily accessed by trained people in the community. In an event, after contacting 112 or 999, the local response would be according to locally agreed protocols. This may involve setting up an on-call rota, carrying a mobile phone/pager, designated contact points, etc.

## 6. Site specific

This is similar to a community programme but is site specific in a defined area/facility, such as, workplace, sports club, airport or shopping centre. The first responders could be uniformed or non-uniformed but models using uniformed people have been shown to be effective, such as, cabin attendants in aircraft, and security personnel in shopping centres and sports grounds.

## 7. Public access defibrillation (PAD)

AEDs that are overtly available for use by members of the public. Internationally there are very few true public access defibrillator programmes, and those that are in place are mainly in the USA. The majority of so called 'public access' defibrillation programmes involve training identified personnel and are usually site specific.

## 8. Individual/home

Some individuals at high risk, may establish their own programme within the home.

## 2.6. Priority areas/sites for developing programmes

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In recent years there has been a substantial increase in awareness and demand for community defibrillation. When planning the development of such programmes, it is essential that a structured and coordinated approach is taken using the information outlined in this guide. There is considerable enthusiasm across all sectors - health professionals, voluntary organisations and communities - to be involved in such programmes. The HSE is developing a national approach in assisting programmes and this will take time.

## Priority by geographical area

The HSE and PHECC are in the process of conducting studies to identify the geographic areas of priority that should be supported with EMS linked first response programmes. Some of the areas currently identified have already developed their own community programmes and will be invited to link with the EMS over a planned time period. Areas that have not developed programmes will be encouraged to do so on a phased basis.

Programmes developed in geographical areas that are not identified as priority areas by the HSE will most likely not be linked to the EMS. However it is important that close contact with the EMS is maintained.

Examples of priority geographical areas may include areas in the north western, western and south western seaboard, the peninsulas and their inhabited islands. Ultimately geographical priorities would only be determined in consultation with your Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**).

## Priority by facilities/sites

To be most effective, site specific programmes should be developed where the incidence of cardiac arrest is highest. There has been significant research conducted internationally to show that the following facilities warrant consideration:

- inpatient health facilities;
- GP surgeries and primary care facilities;
- major airports, major shopping centres, major sports venues and golf courses, major bus/rail terminals, major ferries/ferry terminals, major concert and conference venues;



- universities and colleges;
- gyms and fitness clubs; and
- other venues for major public events.

In addition consideration should also be given to developing programmes in private/industry sites, such as large offices, hotels and night clubs.

If you are unsure as to whether or not your community/site/facility should consider developing a programme, please contact the Pre-Hospital First Responder Coordinator in your area (contact details in **Appendix A**).

## **2.7. Linking your programme with the EMS**

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There may be the opportunity for first responder programmes to become linked with the National Ambulance Service. Where appropriate such first responder programmes providing pre-hospital Cardiac First Response (CFR) may be contacted by the Health Service Executive (HSE) and asked to be linked to the National Ambulance Service.

In a linked First Responder programme, the programme will be requested to provide evidence to the HSE's satisfaction of the following:

1. Justification of the requirement for a First Responder programme.
2. Procedures for the recruitment and induction of members/volunteers (to include screening as appropriate, and a Code of Conduct).
3. A profile of the training status of members/volunteers against the PHECC Standards - level 1 to 6.
4. Capacity for, or access to, training to facilitate currency of CFR certification and revalidation.

5. Systems and procedures for:
  - monitoring currency of training;
  - maintenance of equipment;
  - supply of consumables;
  - disposal of clinical waste;
  - incident monitoring and reporting; and
  - handling of complaints.
6. Appropriate communications system(s) and procedures for activation.
7. Willingness to complete clinical records on all patients who receive pre-hospital emergency care, including the PHECC CFR Report or Patient Care Report (PCR) as appropriate.
8. An appropriate system for clinical record management.
9. An appointed medical advisor/director.
10. A system of clinical audit.
11. Arrangements for the management of Critical Incident Stress.
12. Appropriate insurance arrangements.

# DEVELOPING A PROGRAMME

## 3.1. Issues to consider when developing a programme

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A good starting point for a programme would be to do an analysis of your community in respect of what emergency medical services are currently available and accessible. It is of little benefit buying several AEDs and planning a responder initiative if your community already has rapid access to a hospital, ambulance service or a GP with defibrillation. Conduct a survey on who in the area is trained, when they undertook their training and, what other AEDs are in the area, such as in local sports clubs, gyms or hotels.

If your community is already well served with AEDs it might be better to promote a CPR responder programme within the community and concentrate resources in CPR training as opposed to buying equipment that may not be used. Recent literature suggests that good CPR skills alone can save lives.

Voluntary organisations can also help and support you. For example, Croí in the West of Ireland have been involved in establishing first response (CPR and defibrillator) programmes for some years. Voluntary ambulance groups throughout the country have also been involved in establishing first response programmes. Alternatively you may wish to become part of the Irish Heart Foundation (IHF) community initiative Heartsafe™. Contact information for these groups can be found in **Appendix A**.

When considering developing a Cardiac First Response Programme including defibrillation, it should be remembered that even in a well-targeted, structured programme, the defibrillator may never be used. Furthermore, on the rare occasion that it is used, the life may not be saved, not due to shortcomings of the programme or the individual but due to an underlying medical condition. This may be a difficult situation for the 'responder' and the community to come to terms with. This is why it is important to include plans for debriefing after an event in any programme procedures.

Another issue that will need careful consideration by the group will be how to manage long term motivation, especially if there are no incidents to respond to over a long period of time. This can lead to a situation where the community becomes de-motivated, de-skilled and loses interest in the programme. There is a danger that when an event then does occur, no one is willing or able to respond. To help motivation and also for the longer term benefit of the community, we recommend that your group adopt a broader approach to heart health, rather than focusing solely on the management of an acute cardiac event. A community approach to heart health promotion will complement the focus on managing cardiac events and will help maintain long term motivation. Further information on accessing health promotion services can be found in **Appendix A**.

You will need to also consider the ongoing costs of your programme, particularly regarding training and re-certification.

It is important that the programme is well-managed, with clear protocols and procedures. We would recommend that a small group is established to manage and administer the programme. This group should take responsibility for ensuring that the programme has well documented procedures.

These procedures should cover areas such as:

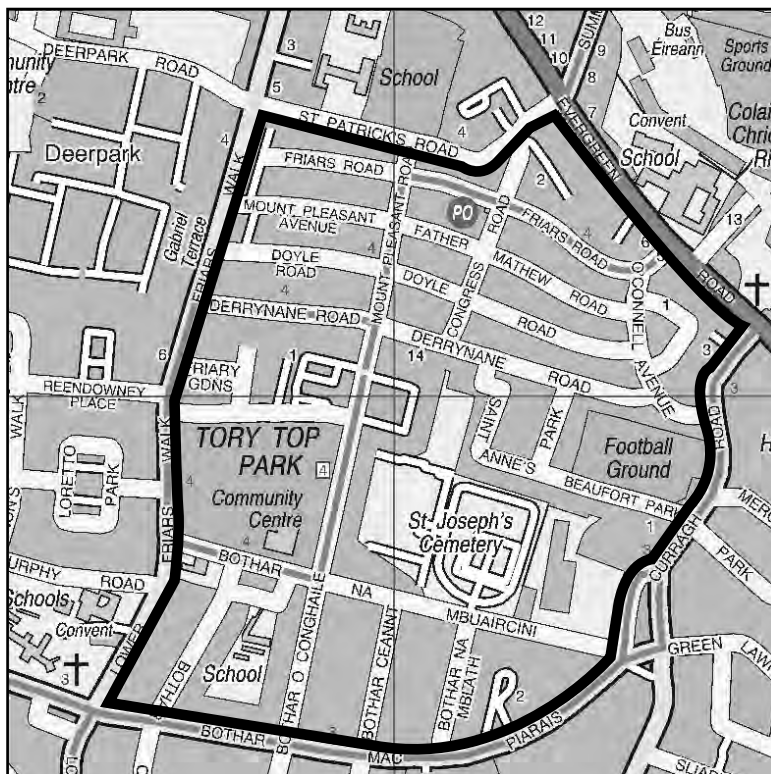
- **Defining the area of cover**
- **Group membership and recruitment**
- **Training**
- **Role of the cardiac first responder**
- **Code of conduct**
- **AED selection, site and maintenance**
- **Equipment - checks and restocking**
- **Disposal of clinical waste**
- **Responding to a call and vehicle use**
- **Communication and mode of activation**
- **Audit and incident reporting**
- **Medical direction of the programme**
- **Complaints/adverse events**
- **Debriefing after an event and post event follow up**
- **Insurance and liability**

*All the above areas are covered in the following sections of this document.*

### 3.2. Defining the area of cover

The area your programme covers should be clear and unambiguous.

Ideally use a map (available free as a download from various internet sites) to show the geographical area that your programme will cover. In the example below, the thick black line is the boundary for an imaginary local community programme.



Remember that the AED should be sited for easy access within 5 minutes of any potential collapse.

### 3.3. Group membership and recruitment

Establish your committee and membership. Roles of the committee and membership must be clear and unambiguous. It is suggested that uniformed first responders, that is, members of the community who are used to responding to emergencies in their working environment, be recruited. What is most important is that anyone who is recruited or involved is motivated and committed to the programme.

It is also essential that a programme has clinical direction with the support of a medical practitioner/local general practitioner (see section 3.13 Medical Direction of the Programme). In addition, the local ambulance service needs to be aware of the geography of the programme and any AED placements. If you have difficulty finding medical supervision, please talk to your Area Pre-Hospital First Responder Coordinator who may be able to assist.

### 3.4. Training

Various statutory, voluntary and private organisations provide a variety of relevant courses of varying duration and content. The cost of this training will depend upon which course you wish to do and who provides the training.

PHECC has approved a Cardiac First Response (CFR) Standard 2007 for BLS/AED training - a notional 6 to 8 hours training. The PHECC CFR Standard is a component of a comprehensive framework of standards designed to facilitate consistent and quality pre-hospital emergency care across Ireland. It is envisaged that over the next 2 to 3 years the PHECC CFR Standard will become the national standard. For further information see [www.PHECC.ie](http://www.PHECC.ie)

The Irish Heart Foundation (IHF) is one of many organisations that offer BLS/AED training. The IHF has affiliated training sites throughout Ireland that are qualified to instruct BLS/AED courses. Training follows the IHF/American Heart Association (AHA) guidelines. The IHF web site ([www.irishheart.ie](http://www.irishheart.ie)) contains helpful information on the courses offered as well as the location of approved training sites and approved trainers.

Presently the IHF strongly recommends that trained AED responders undergo a skills renewal every 90 days especially for those who would not be using an AED on a regular basis, such as those in the community. A responder group should ensure that whatever skills renewal policy they adopt is written into the guidelines and protocols for their responder programme. Completion of a certified CPR/AED course should be completed every two years. It is therefore important to build this ongoing cost into your budget.

The training provider you choose will advise you on keeping your skills up to date with renewal training and how often this should be undertaken. The PHECC CFR standard is that skills renewal should occur at a minimum every year.

Keeping a record of trained personnel is essential. The table below is one example of how to do this.

Responder Name	Responder Location/Address	Date of initial CFR Course	1 <sup>st</sup> Re-cert Date	2 <sup>nd</sup> Re-cert Date

It is advisable to identify a number of people who would be prepared to go on to a higher level of training and undertake an instructor's course. In this way your programme would become self sufficient and this would decrease ongoing costs.

Not only can BLS/AED training potentially reduce the incidence of pre-hospital cardiac deaths, it can also be used to educate the community and general public in the symptoms of heart attack, stroke, choking and cardiac arrest. Training will also put greater emphasis on the importance of a quick response to an incident and is an ideal opportunity to promote heart health and general well being in the community.

### 3.5. Role of the cardiac first responder

Cardiac first responders, in a programme linked to the ambulance service, would be expected to attend relevant emergency calls in their area at the direction of the Ambulance service.

A cardiac first responder 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 (ph 112 or 999) unless activated already via the emergency services;
- 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 D**; and
- handing over to the emergency services with relevant history, treatment given and any response.

*A cardiac first responder is not expected to respond to road accidents or other trauma-related incidents.*

### 3.6. Code of conduct

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Cardiac first responders need to ensure that they are tactful, sympathetic, patient and respectful. A patient's clothing must not be removed unnecessarily. Developing a code of conduct is important so that the dignity of the casualty is maintained and the programme maintains the respect of the local community.

### 3.7. AED selection, site and maintenance

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#### AED selection

There are many models of AEDs available. The ongoing costs of consumables (such as, replacement pads) need to be taken into consideration when purchasing your AED. It is essential that AED owners/users inform the EMS of the type and location of the AED.

The HSE is currently tasked with establishing a National AED Register. To help us in this process, we ask that following the purchase of an AED, you supply details by completing the form in **Appendix C** and sending this to the Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**).

Guidance on the recommended minimum specifications of AEDs to assist in your AED purchase can be found in the document *AED National Pre-Hospital Standards* available through the Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**) or as a pdf document via the PHECC website [www.phecc.ie](http://www.phecc.ie)

#### AED site

You should carefully consider the best location for the AED/s within your community, bearing in mind possible distances of travel, access to users and security issues. Wherever you choose to site an AED, ensuring that it is readily available is essential. It is also necessary to balance accessibility with the need to protect the AED from vandalism

or inappropriate use by others. If the AED is to be kept in a public place, a security cabinet may be the best option. Cabinets are available to purchase from various manufacturers/suppliers.

The number of AEDs that would be required to cover any given site or area depends on the number of potential cardiac events and would also be determined by a response time of 'collapse to use' within 3 to 5 minutes.

#### AED Maintenance

Strict protocols should exist for the maintenance and care of AEDs. When you purchase your AED, the manufacturer or supplier should always provide you with training on the technical aspects of the model. They should also advise you on maintenance requirements.

From an accountability point of view, it is essential, (and is usually an insurance requirement) that you keep an accurate record of maintenance of your AED by:

- observing maintenance schedules; and
- doing regular checks/refurbishment of consumables.

A designated person in each location should ensure that these objectives are achieved.



### 3.8. Equipment - checks and restocking

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The following sets out, as a minimum, what equipment should be available and readily accessible, preferably in a strong and durable kit bag:

- AED with spare defibrillator pads, razor, disposable towel;
- Selection of pocket face masks (adult and child) with one way valves;
- Selection of ambulance dressings;
- Disposable gloves;
- Torch;
- CFR high visibility jacket/vest;
- Paramedic shears (for cutting clothing when necessary);
- CFR programme mobile phone/pager;
- Clinical waste bags;
- Hand cleansing lotion (alcohol based); and
- CFR Report.

It may also be wise to consider stocking a range of pharyngeal airways for use by appropriately trained persons. Oxygen is always available on emergency ambulances.

A procedure will be required to cover issues such as:

- who will be responsible for the equipment;
- where will the equipment will be stored;
- who will check items are in date (batteries, pads, etc); and
- who will restock consumable items.

It would be wise to appoint an equipment coordinator and have a store of equipment spares, including a variety of sizes of pocket masks, spare batteries and spare pads (child and adult). The contents of the equipment store should be in units designed to deal with one patient and stock levels should be sufficient to provide care for a minimum of four patients.

### 3.9. Disposal of clinical waste

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Programmes should have suitable containers (bags being the preferred option) for clinical waste, such as used defibrillator pads. Clinical waste should be gathered at the scene into the appropriate container before the departure of the ambulance. Ambulance crews would be able to assist or advise in the removal of clinical waste.

In the rare occasions where there is no ambulance crew to assist or advise in the removal of any clinical waste please gather the waste safely and contact the Area Pre-Hospital First Responder Coordinator for your area (see **Appendix A**).

It is important that you protect yourself from contact with blood or any other body fluids of the patient.

### 3.10. Responding to a call and vehicle use

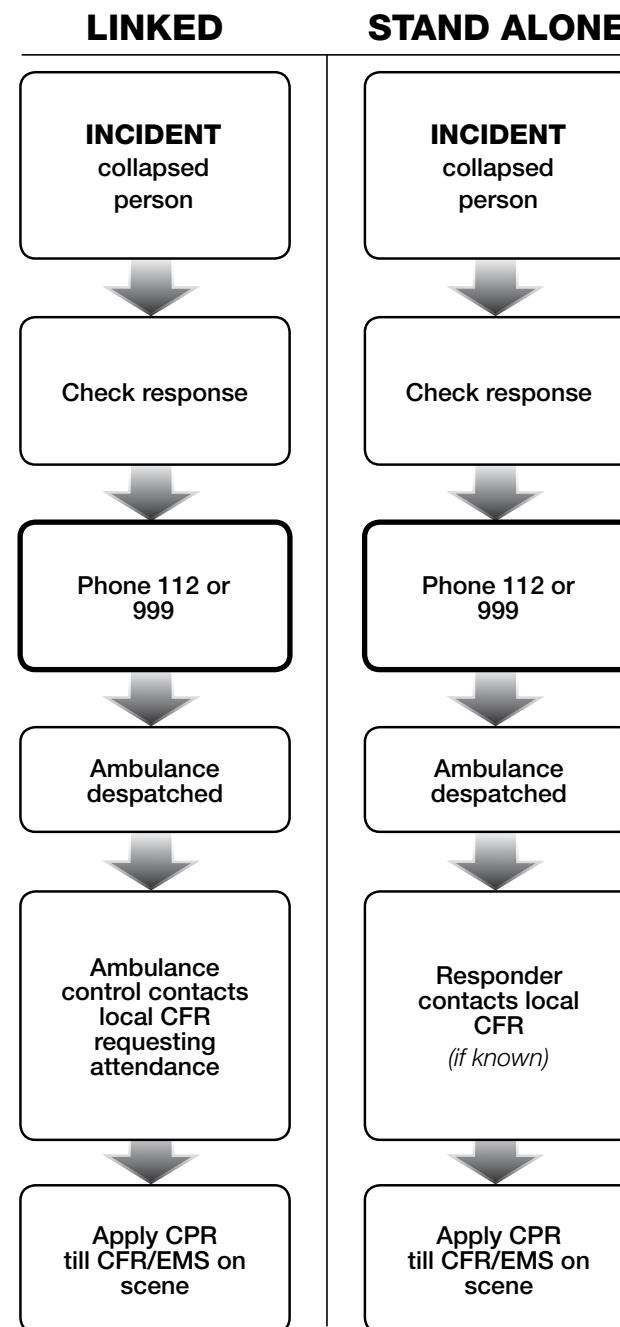
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Safety is a priority at all times. Whether you are in a linked or a stand alone programme, when responding to an incident you must abide by all road traffic regulations and speed restrictions at all times. If you are in a programme linked to the EMS, the HSE requires evidence of insurance (and NCT if appropriate) as well as evidence that the programme member's insurance company has been notified of involvement in the CFR programme.

### 3.11. Communication and mode of activation

As discussed already in this document there are programmes linked to the ambulance service and other programmes that are not linked - stand alone programmes. The process chart on the opposite page describes what to do in either programme.

In essence both processes are similar and it is important that in a linked programme the Ambulance Service has a contact number (single number preferable) for the cardiac first responder. If a person at the incident knows, and is trained in, CPR this also increases the chances of survival prior to the EMS or cardiac first responder arriving with an AED.



### 3.12. Audit and incident reporting

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It is important to keep a record of times and interventions when an AED is used. It is especially important to know:

- if the collapse was witnessed;
- what time it occurred;
- when help arrived;
- when CPR was started;
- when defibrillation was attempted; and
- the number of attempts at defibrillation.

A system for recording this information should be developed as part of your programme procedures.

For national audit purposes a Cardiac First Response Report (CFRR) should be completed for each incident. The CFRR (sample in **Appendix D**) is available from your Area Pre-Hospital First Responder Coordinator. The CFRR is a two part document. The top copy should go with the patient to the hospital/destination facility and the second copy should remain as a record with the Responder organization. A national Out-of-Hospital Cardiac Arrest Register is being developed in conjunction with NUI Galway, HSE and PHECC. When the ambulance arrives, the information you have collected will be added to the EMS patient care record which will inform the national register. The information will also be used for patient handover, on arrival to hospital.

### 3.13. Medical direction of the programme

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Physician oversight is an invaluable addition to any AED responder programme. This can be a local GP/family doctor or other medical doctor who is happy to oversee the programme. Such involvement helps to ensure the safety and effectiveness, and brings authority and medical expertise to the programme. The physician can also serve as a visible spokesperson for the programme.

A physician can direct the medical aspects of the programme by:

- advising on training requirements;
- giving input into policies and procedure development;
- assisting in post-event feedback to responders; and
- assisting in managing any critical stress issues that may arise through participation in a CFR programme.

### 3.14. Complaints/adverse event

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This information guide has tried to cover all eventualities, however occasionally things can and do go wrong. There may be a complaint as to how an incident was handled, someone may get injured in the response/rescue process or an AED may fail to work. Unfortunately these things do happen. It is therefore essential that a policy is written on what to do in the event of a complaint or equipment failure should it occur.

For any AED device failure, it is important that your programme contacts the Medical Devices Department of the Irish Medicines Board (contact details in **Appendix A**).

Reportable adverse incidents include not only those which actually occurred but also those which could have happened were it not for the timely preventative intervention of the device user or other person. When adverse incidents have occurred the manufacturer is required by the legislation to conduct an investigation to determine why the event occurred and to identify any way in which the device may have contributed. This investigation should be conducted in close communication with the IMB. Adverse events should also be discussed with the Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**).

### 3.15. Debriefing after an event and post event follow up

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If and when you have to use a defibrillator 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 members in the community who were involved. This may involve access to formal services such as counseling. Again this should be included when you are developing your procedures.

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 for the community. It is therefore essential that when setting up a programme, consideration should be given as to how this debriefing/follow up can be achieved.

The HSE is exploring the use of ambulance personnel counselling services for responders from cardiac first responder programmes that are linked to the EMS.

### 3.16. Insurance and liability

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One of the main stumbling blocks to communities purchasing AEDs and developing programmes has been concern over legal indemnity. Ireland has, as yet, no Good Samaritan Act but this is being addressed by the Law Reform Commission (LRC). The LRC has made a provisional recommendation to the Attorney General that there should be an act to protect Good Samaritans and volunteer rescuers. The LRC has produced a consultation paper inviting submissions by the due date of 31 March 2008 [www.lawreform.ie](http://www.lawreform.ie)

In 2003, PHECC sought legal opinion on implications for those who attempt to provide pre-hospital emergency care. The opinion concluded that should a pre-hospital emergency care provider act in accordance wholly with their training status and not act in a grossly negligently fashion then it is unlikely that any litigious claim would be successful. The full advice can be found in **Appendix B**.

A number of insurance companies now also offer insurance for trained first responders involved in first responder programmes. You may contact your Area Pre-Hospital First Responder Coordinator who will have the most up-to-date information (see **Appendix A**).

The present situation for insurance and liability for first responders is:

- **Emergency Medical Services (EMS)** - the State Claims Agency Clinical Indemnity Scheme (CIS) covers trained members of the EMS in their duty and also indemnifies them for 'good Samaritan' acts when in an off-duty capacity.
- **Cardiopulmonary Resuscitation (CPR) responder programmes** - the CIS indemnity does not apply to members of the public (including uniformed personnel, such as fire fighters and the Gardaí) who receive CPR training only.
- **GP first responders** - the CIS advises GPs to seek their own cover under their medical malpractice policies.

- **Linked first responder programmes (uniformed or community)** – first responders who have been trained in the use of AEDs and CPR in a formal, structured way and post training are in programmes that remain under the supervision and control of the HSE Ambulance Service, will be indemnified in Ireland by the CIS.
- **Stand alone first responder programmes (uniformed or community)** – the CIS does not indemnify stand alone programmes however there are a number of insurance companies that do offer cover.
- **Site specific** – site specific programmes, such as, golf clubs and GAA clubs, may be able to obtain insurance cover as part of their broader public liability policies. The geographical limit of such cover must be clear.

## 4.1. Key Points

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After considering the information and advice in this guide, you are now aware that a considerable amount of thought and planning is needed before embarking on a First Responder Programme in your community. Whilst an AED is an essential component in the Chain of Survival, the purchase of an AED must be considered in context with the development and management of the whole programme.

As mentioned earlier in the guide, if your community is already well served with AEDs (such as in local sports clubs, gyms, hotels or community centres) it might be better to promote a CPR responder programme within the community and concentrate resources in CPR training as opposed to buying equipment that may not be used. Good CPR skills alone can save lives.

So in summary, if you are considering embarking on a First Responder Programme in your community, ask yourself the following:

- Are there already enough AEDs in the community?
- Would a CPR programme be a better option than an AED/CPR first responder programme?
- Is the proposed location for the programme very remote from the nearest ambulance station thus making a linked programme the most desirable option?
- Are there enough willing and motivated volunteers to maintain a viable first responder programme?

- Is there a GP/family doctor willing to be the medical advisor/director?

For further advice and information contact your Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**).

## 4.2. Frequently Asked Questions (FAQs)

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**Question 1** How do I find out if my community has an AED and/or First Responder Programme?

**Answer** *The local community council should be aware of AEDs and any programmes in the community. Your Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**) may also be aware of programmes, particularly any programmes linked to the EMS.*

**Question 2** What if I only want to be involved in first response rather than organising a programme?

**Answer** *There may be existing programmes in your community that you can join and any of the voluntary ambulance services (contact details in **Appendix A**) may also be able to advise you. In any case you may want to consider being trained in CPR to increase the chance of survival to any victim of a cardiac arrest.*

**Question 3** What are the main points to consider in starting a first responder programme?

**Answer** *The main points to consider are costs for training and equipment, maintaining the enthusiasm and commitment of the volunteers and the administration of the programme. These points are all outlined in Chapter 3 of the guide.*

**Question 4** What type of AED should I purchase?

**Answer** *Section 3.7 of this guide gives details of a guide for purchasing AEDs. We suggest that prior to purchasing an AED you contact your Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**) to discuss the specifications to ensure compatibility with the EMS if required.*

**Question 5** What support is there for first responder programmes?

**Answer** *At present there is no direct financial assistance from the HSE for programmes, however the Area Pre-Hospital First Responder Coordinator (contact details in **Appendix A**) will be able to assist you in arrangements for training and other aspects of a programme.*



# APPENDICES

**A**     **List of Contacts**

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**B**     **Civil Liability & Pre-Hospital Emergency Care**

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**C**     **Notification of Placement of AED**

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**D**     **Cardiac First Response Report (CFRR)**

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**E**     **Map of (the four) HSE Areas**

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**F**     **AED signage**

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# LIST OF CONTACTS

## Health Service Executive (HSE) – Ambulance Service

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A **National Pre-Hospital First Responder Coordinator and Area Pre-Hospital First Responder Coordinators** for each of the four HSE areas (see Appendix E) are being recruited with appointments expected in 2008. In the interim please contact the person below who will put you in contact with the relevant pre-hospital person in your area for information on setting up a first responder programme.

Seamus Dunne  
HSE Ambulance Service  
HSE Offices, Millennium Park, Naas, Co Kildare  
Tel: 045 882 567  
Fax: 1 890 252 125  
Web: [www.hse.ie](http://www.hse.ie)

## HSE Health Promotion

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HSE Health promotion address key health issues such as promoting physical activity and nutrition programmes. For information on national HSE health promotion initiatives and publications contact:

HSE Health Promotion  
Eye, Ear and Throat Hospital  
Western Rd, Cork  
Tel: 021 492 1641  
[www.healthpromotion.ie](http://www.healthpromotion.ie) –for HSE health promotion initiatives  
[www.healthinfo.ie](http://www.healthinfo.ie) - for HSE health promotion publications

## Pre-Hospital Emergency Care Council (PHECC)

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For information on standards, education and training in the field of pre-hospital emergency care in Ireland contact

Pre-Hospital Emergency Care Council  
Abbey Moat House, Abbey Street, Naas, Co Kildare,  
Tel: 045 882 042  
Fax: 045 882 089  
Email: [info@phecc.ie](mailto:info@phecc.ie)  
Web: [www.phecc.ie](http://www.phecc.ie)

## Irish Heart Foundation

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For information to help your community establish an AED programme and on how to apply for a Heartsafe Community Award contact:

Irish Heart Foundation  
4 Clyde Road, Ballsbridge, Dublin 4  
Tel: 01 668 5001  
Fax: 01 668 5896  
Email: Via contact us area of web  
Web: [www.irishheart.ie](http://www.irishheart.ie)

## Department of Health and Children (DOHC)

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For information on health policy and health legislation, contact:

Health Promotion Unit  
Department of Health and Children  
Hawkins House, Hawkins Street, Dublin 2  
Tel: 01 635 4000  
Fax: 01 635 4001  
Email: [info@health.gov.ie](mailto:info@health.gov.ie)  
Web: [www.dohc.ie](http://www.dohc.ie)

## Dublin Fire Brigade

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Dublin Fire Brigade provides an Emergency Ambulance Service in the Dublin city and counties areas. For information and assistance in setting up an AED programme in this area contact

EMS Support  
Dublin Fire Brigade  
Fire Brigade Headquarters  
Townsend St  
Dublin 2

Contact: Martin O'Reilly

Tel : 01 673 4090  
Email: [martinm.oreilly@dublincity.ie](mailto:martinm.oreilly@dublincity.ie)  
Web: [www.dublincity.ie/shaping\\_the\\_city/fire\\_brigade/ambulance/](http://www.dublincity.ie/shaping_the_city/fire_brigade/ambulance/)

## Croí

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For information and assistance in setting up an AED programme in the west of Ireland (Galway, Mayo, Roscommon and Clare) contact:

Croí  
West of Ireland Cardiology Foundation  
University College Hospital, Galway  
Tel: 091 544 310  
Fax: 091 526 000  
Email: [info@croi.ie](mailto:info@croi.ie)  
Web: [www.croi.ie](http://www.croi.ie)

## Voluntary Ambulance Services

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For information on becoming involved in voluntary ambulance services and to help your community establish an AED programme contact:

### **Irish Red Cross**

16 Merrion Square  
Dublin 2  
Tel: 01 642 4600  
Fax: 01 661 4461  
Email: [info@redcross.ie](mailto:info@redcross.ie)  
Web: [www.redcross.ie](http://www.redcross.ie)

### **Order of Malta Ireland**

St John's House  
32 Clyde Road  
Ballsbridge  
Dublin 4  
Tel: 01 614 0035  
Fax: 01 668 5288  
Email: [firstaidtraining@orderofmalta.ie](mailto:firstaidtraining@orderofmalta.ie)  
Web: [www.orderofmalta.ie](http://www.orderofmalta.ie)

### **St John Ambulance Brigade of Ireland**

Lumsden House  
29 Upper Leeson Street  
Dublin 4  
Tel: 01 668 8077  
Fax: 01 668 8780  
Web: [www.sja.ie](http://www.sja.ie)

## Civil Defence

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For information on becoming involved in casualty and ambulance services at community events or rescue activity contact:

### Civil Defence School

Benamore  
Roscrea  
Co Tipperary  
Tel: 0505 25310  
Fax: 0505 25344  
Email: [civildefence@defence.irlgov.ie](mailto:civildefence@defence.irlgov.ie)  
Web - [www.civildefence.ie](http://www.civildefence.ie)

## Irish Medicines Board (IMB)

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The role of the Irish Medicines Board is to protect and enhance public and animal health through the regulation of medicines, medical devices and healthcare products. For information on medical devices or malfunction of medical devices contact:

Medical Devices Department  
Irish Medicines Board,  
Kevin O'Malley House,  
Earlsfort Centre, Earlsfort Terrace,  
Dublin 2

Tel: 01 676 4971  
Fax: 01 676 7836  
Email: [medicaldevices@imb.ie](mailto:medicaldevices@imb.ie)  
Web - [www.imb.ie](http://www.imb.ie)

## Relevant Publications

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Reducing the Risk: A Strategic Approach. The Report of the Task Force on Sudden Cardiac Death. Department of Health and Children. Available as a pdf document on website [www.hse.ie](http://www.hse.ie)

Coronary Heart Disease National Service Framework. Chapter Eight. Arrhythmias and Sudden Cardiac Death. National Health Service, UK.

[www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Coronaryheartdisease/](http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Coronaryheartdisease/)

# CIVIL LIABILITY & PRE-HOSPITAL EMERGENCY CARE

What are the legal implications for those who attempt to provide pre-hospital emergency care?

The Pre-Hospital Emergency Care Council has commissioned opinion on the legal implications for those who attempt to provide pre-hospital emergency care. The following is a memorandum prepared by Dr. Ciaran D. Craven B.L.

### 1. General

This is a general memorandum prepared for PHECC summarising the principal issues in respect of the civil liability of those providing pre-hospital care. Its purpose is to give general guidance only. It is not, and it is not intended to provide, either an exhaustive legal analysis of all of the issues that can arise or specific legal advice on any particular issue.

### 2. Introduction

For those involved in pre-hospital care, the two principal areas of liability to be considered are in trespass to the person and negligence. Both are torts - civil wrongs committed by one person against another.

### 3. Trespass to the Person

3.1 The essence of a trespass to the person is unconsented touching – this is a battery. To cause another person to apprehend that (s)he is about to be battered is an assault. Obviously, therefore, a person who is asleep or unconscious cannot be assaulted, insofar as the civil law is concerned. In short, a battery is a touching of the body and an assault the ‘touching’ of the mind.

3.2 Where a person is incapable of giving consent, treatment – involving touching without consent - may lawfully be given if it is necessary. The defence of necessity justifies what would otherwise be unlawful in the absence of consent. However, the defence is limited to that which is necessary to save life or limb. If treatment, or the touching, goes beyond that which is necessary, it becomes unlawful, at that point. Although necessary treatment may often arise in an emergency situation, it is the necessity for the intervention, not the emergency of the situation that is central to the defence.

3.3 In summary, the defence of necessity – subject to the limitations of that defence – is sufficient to justify, and render lawful, the unconsented resuscitation and treatment of an unconscious patient and to avoid what would otherwise be liability in trespass and pre-hospital care personnel can usefully be reassured in this regard.

#### 4. Negligence

4.1 There are four constituent elements to the tort of negligence. Firstly, there must exist a duty of care. This is a legally imposed obligation, the essence of which is to avoid causing reasonably foreseeable harm to those who might reasonably foreseeably be harmed by your acts or omissions. In our legal order, however, there is no legally imposed duty to rescue or to stop to give assistance. (However, a duty will be imposed where one actually does stop and provides assistance.)

4.2 Secondly, there must be a failure to conform to the required standard of care. Insofar as persons trained in pre-hospital care are concerned the standard applicable is “the standard[s] of the ordinary skilled first-aider exercising and professing to have that special skill of a first-aider”. For the word ‘first-aider’ can be substituted para-medic, EMT or nurse, as the case may be. At its simplest, the standard of care falls to be determined by what a reasonably competent person possessing, or professing to have, the particular level of skill would have done, in the circumstances.

4.3 Thirdly, the patient must suffer some injury, damage or loss. If this occurs, in a pre-hospital situation, it is usually self-evident. Fourthly, it must be established, as a matter of probability, that but for the failure to conform to the required standard of care, the patient would not have suffered injury, damage or loss or whatever the harm happens to be.

4.4 In summary, unless a patient can establish (i) that not alone did the person providing pre-hospital care fall below an acceptable standard of care, in all of the circumstances, (ii) but also that, as a matter of probability, caused the harm complained of, an action in negligence is bound to fail.

4.5 Given the factual background and clinical complexity of most pre-hospital care situations, trying to establish this second element, i.e. that it is more likely (which is what ‘as a matter of probability’ means) that the harm ultimately suffered was caused by the pre-hospital care that was given rather than by the initial illness or accident, will present a formidable obstacle to success in any such action, as a matter of practicality.

**Dr. Ciaran D. Craven B.L.**  
July 2003

#### Conclusion

Should a pre-hospital emergency care provider act in accordance wholly with their training status and not act in a grossly negligently fashion then it is unlikely that any litigious claim would be successful. This conclusion is also in keeping with the position of the Resuscitation Council of the United Kingdom. [www.resus.org.uk/pages/legal.htm](http://www.resus.org.uk/pages/legal.htm)



# NOTIFICATION OF PLACEMENT OF AED

## Company/Community Information

Company/Community Name \_\_\_\_\_

Manager/Person with responsibility for AED \_\_\_\_\_

Contact person \_\_\_\_\_

Company/Community Address \_\_\_\_\_

Company/Community Phone Number \_\_\_\_\_

## AED Information

Location of AED \_\_\_\_\_

Make \_\_\_\_\_ Model \_\_\_\_\_

Serial Number \_\_\_\_\_ CE Mark \_\_\_\_\_

Battery out of date \_\_\_/\_\_\_/\_\_\_ Pads out of date \_\_\_/\_\_\_/\_\_\_

Servicing Recommendation \_\_\_\_\_

Service agreement with \_\_\_\_\_

Updated to ILCOR 2005 Guidelines  Yes  No

.....  
**Office use:**

*Received by Ambulance Service* Date \_\_\_/\_\_\_/\_\_\_

*Inputted into Ambulance System* Date \_\_\_/\_\_\_/\_\_\_

**Cardiac First Response Report (CFRR)**



**SURNAME**  
S U R N A M E

**FIRST NAME**  
F I R S T N A M E

**AGE** YES  ESTIMATE Y  N

**GENDER:** MALE  FEMALE

**DATE OF INCIDENT/EVENT** DD MM YYYY

**INCIDENT ADDRESS**

**INCIDENT/EVENT LOCATION**

**HOME** WORKPLACE PUBLIC BUILDING

**FARM** RECR OR SPORT PLACE RESIDENTIAL INSTITUTION

**History of Coronary Disease** YES  NO  UNKNOWN

**1** **COLLAPSE WITNESSED BY:**

**BYSTANDER** COLLAPSE NOT SEEN OR HEARD

**CARDIAC FIRST RESPONDER** COLLAPSE NOT SEEN OR HEARD

**TIME OF COLLAPSE** HH MM ESTIMATED Y  N  UNKNOWN

**2** **Time of Chest Pain** HH MM

ESTIMATED Y  N  MEASURED  UNKNOWN

ASPIRIN GIVEN YES  DOSE  NO  UNKNOWN

**Time CPR Commences** HH MM

ESTIMATED Y  N  MEASURED  UNKNOWN

**Duration of CPR** HH MM

ESTIMATED Y  N  MEASURED  UNKNOWN

**3** **Outcome of Bystander AED Use:**

WAS A SHOCK GIVEN YES  NO  UNKNOWN

TOTAL NO. OF SHOCKS GIVEN ESTIMATED Y  N  UNKNOWN

**Time First Shock delivered** HH MM

SPONTANEOUS PULSE RETURNED YES  NO  IF YES ENTER TIME HH MM

DID THE PATIENT START BREATHING OR RECOVER CONSCIOUSNESS YES  NO  UNKNOWN  IF YES ENTER TIME HH MM

**4** **Outcome At Scene:**

SPONTANEOUS CIRCULATION ON ARRIVAL IN ED  TIME HH MM

RECOGNISED DEAD AT SCENE

TRANSFERRED TO HOSPITAL - NO CIRCULATION

TRANSFERRED TO HOSPITAL - CPR IN PROGRESS

**HOSPITAL HOME**

TIME DEPARTED SCENE HH MM

GP IN ATTENDANCE YES  NO

**5**

TIME RECEIVED CALL HH MM

TIME AT PATIENT HH MM

**ADDITIONAL INFORMATION**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

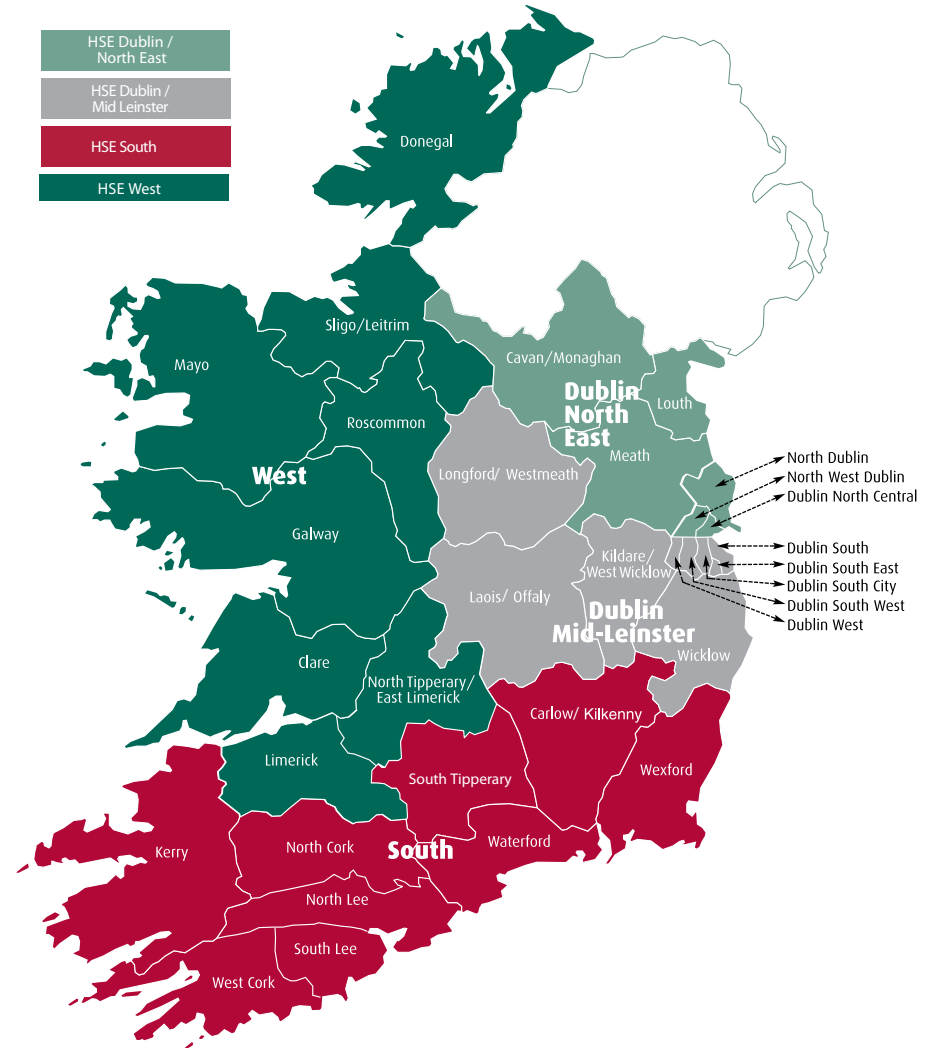
**SIGNATURE/PHN** \_\_\_\_\_

**DISTRICT** \_\_\_\_\_

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# MAP OF (THE FOUR) HSE AREAS

**Location of HSE's Four Administrative Areas and 32 Local Health Offices**



## AED SIGNAGE



**AED Signage used by Resuscitation Council (UK) and approved by PHECC (with the permission of Resuscitation Council (UK) for use in Ireland.**

Available via the PHECC website – [www.phecc.ie](http://www.phecc.ie)

# GLOSSARY & ABBREVIATIONS

**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. Sometimes also referred to as an **Advisory External Defibrillator**.

**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.

**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

**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.

**Cardiopulmonary Resuscitation (CPR)** – the emergency substitution of heart and lung action to restore life to someone who appears dead. The two main components of cardiopulmonary resuscitation (CPR) are chest compression to make the heart pump and mouth-to-mouth ventilation to breath for the victim.

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

**Clinical Indemnity Scheme (CIS)** - the Clinical Indemnity Scheme will cover all claims alleging medical malpractice or clinical negligence against an agency and/or its staff arising from the delivery of professional medical services by those employed by the agency. It will cover Good Samaritan acts occurring within an agency covered by the Scheme.

**Coronary heart disease (CHD)** – can also be referred to as coronary artery disease (CAD) or ischaemic heart disease (IHD). The coronary arteries arise from the aorta adjacent to the heart and supply the heart muscle with blood that is rich in oxygen. CHD refers to narrowing or blockages in the vessels, usually due to atherosclerosis.

**Defibrillation** – the use of a carefully controlled electric shock, administered either through a device on the exterior of the chest wall or directly to the exposed heart muscle, to normalise heart rhythm.

**Emergency Medical Services (EMS)** – Statutory Ambulance Service in Ireland provided by the HSE either directly or indirectly.

**First Responder** – a person trained as a minimum in Cardiac First Response, who attends a potentially life threatening emergency. This response may be by the statutory ambulance service or complementary to it. If complementary, first responders can be linked with the statutory emergency services or they can be independent and stand alone.

**Health Service Executive (HSE)** - the Health Service Executive is responsible for providing Health and Personal Social Services for everyone living in Ireland. The objective of the HSE is to use the resources available to it in the most beneficial, effective and efficient manner to improve, promote and protect the health and welfare of the public.

**Linked Programme** – a programme that is developed in conjunction with the emergency medical services and participates in an on-call rota. The programme comes under the direction of the emergency medical services.

**Pre-Hospital Emergency Care Council (PHECC)** – statutory body for standards in pre-hospital emergency care established in May 2000. The Council has responsibility for developing national professional

and performance standards for the EMS. It is also tasked with developing national training standards for pre-hospital care.

**Public Access Defibrillation (PAD)** – the open availability of automated external defibrillators to be used by members of the public.

**Stand Alone Programme** – a programme that is developed by a community group that does not participate in an on-call rota with the emergency medical services. The programme is developed and maintained by the community.

**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.







