

Early Defibrillation Program

Policies and Procedures

The following document describes the policies and procedures to be used in governing an early defibrillation program. It is the goal of this program to provide a rapid response to sudden cardiac arrest for employees and guests. It is the intent of this document to give the early defibrillation response team members general guidance in response to an incident of sudden cardiac arrest (SCA). The document is not intended to cover all circumstances involved in such emergencies. All early defibrillation response team members must operate within the parameters of this early defibrillation program



1. Scope

This document describes the policies and procedures relating to an early defibrillation program utilizing employees who serve as trained responders in CPR and defibrillation therapy in the event of a medical emergency.

2. Purpose

The purpose of this document is to establish a consistent guideline for application, location, maintenance, and various other components described herein involving the early defibrillation program. It is the goal to provide the appropriate defibrillator coverage with a response time of three (3) minutes from time of incident to first shock to increase the likelihood of survival in the event of SCA. This workbook is intended to serve as a guide and checklist for the basic elements of implementing an early defibrillation program.

3. Definitions

Early Defibrillation Response Team Member. An individual who is trained in AED use to respond to SCA medical emergencies and may also be a member of the Emergency Response Team.

Automated external defibrillator (AED or defibrillator). An automated computerized medical device programmed to analyze heart rhythm, recognize rhythms that require defibrillation, and provide visual and voice instructions for the device operator, including, if indicated, to push the button to deliver an electric shock.

Bystander first aid/CPR. Initial first aid/CPR provided by a trained individual who is not part of an organized medical response system such as ERT or EMS.

Cardiopulmonary resuscitation (CPR). Rescue breathing and external cardiac compression applied to a victim in respiratory and/or sudden cardiac arrest.

Emergency Medical System (EMS). Professional community responder agency for emergency events, who provide medical assistance and/or ambulance transport.



Emergency Response Team (ERT), or Medical Emergency Response Team (MERT). A group of medical responders who train on a regular basis to respond to medical emergencies.

Rescue breathing. Artificial ventilation of a victim in respiratory and/or sudden cardiac arrest.

Sudden cardiac arrest (SCA). A significant life-threatening event when a person's heart stops or fails to produce a pulse.

4. Early Defibrillation Program Overview

A medical emergency response that includes basic and advanced first aid, CPR, and emergency defibrillation. The goal of the early defibrillation program is to participate actively in the chain of survival, illustrated below, by providing early defibrillation to any victim of sudden cardiac arrest (SCA).

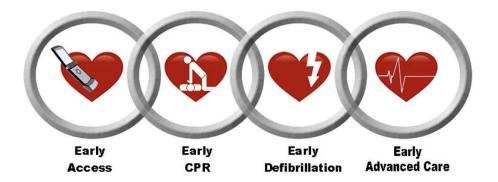


Figure 1. Chain of Survival

5. Early Defibrillation Response Team Roles and Responsibilities

See appendix A for the roster of early defibrillation response team members.

- 5.1 **Environmental Health and Safety Manager or Field Manager**. It is the responsibility of the Environment Health and Safety (EHS) Manager or Field Manager to:
 - (1) Communicate to site management the costs and benefits of expanding the existing medical emergency response by including defibrillator use.
 - (2) Ensure adequate resources are allocated to achieve Early Defibrillation Program goals.



- (3) Designate an Early Defibrillation Program Coordinator who understands early defibrillation and the use of defibrillators, and demonstrates the ability to manage employee teams.
- (4) Review the program annually to evaluate effectiveness.
- 5.2 **Early Defibrillation Program Coordinator and Site Coordinators.** It is the responsibility of the Early Defibrillation Program Coordinator and Site Coordinators for each site to:
 - (1) Participate in case reviews, responder training and retraining, data collection and other quality assurance activities.
 - (3) Assure maintenance of the defibrillators and related response equipment.
 - (4) Develop and maintain the emergency response plan and company policies and procedures.
 - (5) Maintain a list of trained early defibrillation responders.
 - (6) Ensure compliance with the company policies and procedures of the Early Defibrillation Program.
- 5.3 **Early Defibrillation Response Team Members.** It is the responsibility of the Early Defibrillation Response Team members to:
 - (1) Successfully complete all required training and skills evaluations, as defined by and/or the requirements of this document.
 - (2) Respond to emergency calls according to the site's early defibrillation response protocol.
 - (3) Follow the guidelines of the early defibrillation program and remain current on all certifications.

6. Defibrillator Equipment

See Appendix B for the *Defibrillator Location and Equipment Sheet*.

- 6.1 **Description.** The equipment provided in support of the early defibrillation program is to be used in the event of an SCA. This equipment shall not be used outside the parameters of the AED program except as approved by the Early Defibrillation Program Coordinator and Site Coordinators. Each device will be maintained according to manufacturer's guidelines.
- 6.2 **Accessories.** All accessory equipment must remain with the defibrillator and must be inspected on a regular basis for readiness for use and integrity of the device.



7. Defibrillator Maintenance

See Appendix C for the Periodic Maintenance Checklist.

- 7.1 **Reports of Damage.** Follow the manufacturer's recommendations for all scheduled defibrillator maintenance checks. Report any performance discrepancies, device defects, or missing, expired, and/or damaged accessories to the Early Defibrillation Program Coordinator immediately.
- 7.2 **Calibration.** The defibrillator requires no calibration or verification of energy delivery. The defibrillator has no user-serviceable parts. The defibrillator performs regular self-tests to assure that it is ready for use. While the maintenance required for the defibrillator is minimal, it is important that a regular check of the defibrillator be performed to assure readiness, as described in the defibrillator *Instructions for Use*.
- 7.3 **Suggested Maintenance Schedule.** Refer to the suggested maintenance schedule in the defibrillator Instructions for Use, which also provides detailed instructions for responding to each maintenance task.
- 7.4 **Cleaning.** When necessary, clean the defibrillator using recommended cleaning agents, per the defibrillator *Instructions for Use*.

8. Early Defibrillation Response Plan Overview

- 8.1 Initiation of Emergency Response. Any Employee who recognizes a medical emergency initiates the Emergency Response Plan immediately, by

 [method of emergency response initiation for User Facility] and provides the following information:
 - Reporting employee's name
 - Type of emergency
 - Location of emergency
 - Brief description of the patient
- 8.2 **911 Notification.** The communication center contacts 911 and, using established procedures, dispatches the ERT or Early Defibrillation Response Team to the location of the emergency with the appropriate equipment.
- 8.3 **Early Defibrillation Team Response.** At the scene, the ERT or AED team verifies scene safety before assessing the patient, then renders appropriate care based upon the patient's condition and AED response protocols.
- 8.4 **EMS Contact and Lead-In.** When possible, the ERT or Early Defibrillation Response Team contacts EMS and provides lead-in instructions (directions



for reaching the patient on site) to the responding EMS unit, while continuing to provide appropriate patient care until a higher medical authority arrives or the patient refuses care.

- 8.5 **Transfer of Patient Care.** Once EMS arrives, the ERT or Early Defibrillation Response Team transfers patient care to the EMS agency for appropriate advanced medical treatment and provides a report including:
 - The initial time of the event
 - Any care given prior to the team's arrival
 - Patient's condition upon the team arrival
 - All treatment rendered to the patient by the team
 - Any available medical information about the patient
 - Post-use equipment check
 - Replacement of necessary supplies used
 - Return of the AED to its designated location
- 8.6 **Post Event Procedures.** After transferring patient care to the EMS responders, the ERT or Early Defibrillation Response Team conducts the following post-event procedures in accordance with the protocol as provided in Appendix D, *Early Defibrillation Response Protocol and Flow Chart*.
- 8.7 **Debriefing Procedures.** As soon as possible, a debriefing is conducted to evaluate the ERT or Early Defibrillation Response Team's response and the potential need for emotional support of the responders involved. This debriefing can be conducted on an informal basis with the team or with the assistance of professional counselors. The Early Defibrillation Program Coordinator conducts an evaluation of all aspects of the emergency response and the strengths and deficiencies of the response plan as revealed by the incident. Modifications made to the plan must be approved by the Medical Director and discussed with the ERT or Early Defibrillation Response Team prior to any changes to the response plan.

9. Protocol Guidelines

See Appendix D for the Early Defibrillation Response Protocol and Flow Chart.

9.1 **Defibrillator Application Guidelines.** Once the defibrillator is turned on and the pads applied to the patient, the ERT or Early Defibrillation Response Team member shall not remove the pads or turn off the device unless prompted by the device itself or directed by a higher medical authority. In all



- cases, the Team member shall continue to assess the patient's airway, breathing, and circulation and provide CPR as indicated.
- 9.2 **AED Application Criteria.** The defibrillator shall be applied only to patients who are unresponsive and not breathing.
- 9.3 **Defibrillation Procedure.** Defibrillation shocks are to be delivered only in accordance with the early defibrillation response protocol. If the device advises no shocks, the ERT or Early Defibrillation Response Team responder follows the approved protocols for patient care and CPR.
- 9.4 **Wet Environments and Metal Surfaces.** The defibrillator can be used in fresh and saltwater environments and on metal surfaces that are wet or dry. Always follow all defibrillator recommended safety precautions.
- 9.5 **Excessive Chest Hair.** If required for proper defibrillation pad adhesion, any excess hair on the patient's chest is shaved with a prep razor supplied in the accessory kit. A smooth shave is not required.
- 9.6 **Medication Patches.** Using a gloved hand, remove any medication patches, if present, from the patient's chest prior to pad placement and wipe the skin clean with a cloth.
- 9.7 **Implantable Pacemakers and Defibrillators**. If the patient has an implantable pacemaker or internal defibrillator, do not place the defibrillation pads directly over the implanted device. If the presence of an implanted device affects pad placement, place the defibrillation pad as close to the recommended pad placement as possible.
- 9.8 **AED Abuse or Vandalism**. No abuse or vandalism of the defibrillator is to be tolerated. If abuse or vandalism is suspected, it is to be reported to the Early Defibrillation Program Coordinator immediately so that the defibrillator can be evaluated for proper operation.

10. Early Defibrillation Response Protocol

(This should match Appendix D, as created by [User Facility].)

- 10.1 Initial Assessment. The first ERT or Early Defibrillation Response Team member responding conducts an initial assessment to determine the level of response required from the team and outside responding agencies. This initial assessment includes:
 - Assessment of the scene for safety of self and other responders.
 - Use of gloves and other universal precautions prior to patient contact.
 - Assessment of the patient for absence of responsiveness, respiration, and signs of circulation.



Assessment for additional information about the patient or scene.

Information gathered at the scene should be relayed to ______ [communication center for User Facility] for dissemination to responding parties.

- 10.2 Early Defibrillation Response Plan and 911. The initial ERT or Early Defibrillation Response Team responder verifies that the AED response plan has been activated and that 911 has been notified. If the defibrillator is not present at the scene, the responder verifies that it is being brought immediately.
- 10.3 *CPR Procedures.* In the absence of the defibrillator, the ERT or Early Defibrillation Response Team member initiates the ABCs of CPR establishing an airway, ventilating the patient, and beginning chest compressions until the defibrillator arrives.
- 10.4 Defibrillator Application. Turn on the defibrillator as soon as it arrives at the scene and follow its prompts. If more than one ERT or Early Defibrillation Response Team member is present, one can apply the defibrillation pads and operate the defibrillator while the other continues CPR until told to stop. Perform any special procedures required (removal of medication patches, shaving of excessive chest hair, etc.) as outlined in the early defibrillation response protocol guidelines (section 10) prior to placing the pads on the patient's bare chest.
- 10.5 Defibrillator Heart Rhythm Analysis. When the pads are properly attached to the patient and connected to the defibrillator, the device will automatically analyze the patient for a shockable rhythm such as ventricular fibrillation (VF). Ensure that no one touches the patient during rhythm analysis. On completion of rhythm analysis, the defibrillator will prompt the rescuers as to the appropriate course of action. Follow the device prompts in treating the patient.
- 10.6 Defibrillation Safety Precautions. If the defibrillator gives a "Shock Advised" prompt, first ensure that no one is touching by examining the patient area and loudly stating "I'm clear, you're clear, everyone clear!" Then press the shock button to deliver a shock to the patient as prompted. Shock delivery will be followed by re-analysis of the patient's heart rhythm by the defibrillator. If additional shocks are advised by the defibrillator, follow the above sequence until the defibrillator prompts otherwise or EMS arrives.
- 10.7 *Defibrillation Shock Sequence.* Based upon early defibrillation response protocols and in accordance with defibrillator prompts, administer a shock to



- the patient, followed by two (2) minutes of CPR if signs of circulation are absent.
- 10.8 No Shock Advised Procedure. If the defibrillator gives a "No Shock Advised" prompt and the patient is not breathing and has no signs of circulation, administer CPR until the patient regains signs of circulation, the defibrillator advises to stop CPR for analysis, or EMS arrives and assumes care of the patient. If the patient is not breathing but does have signs of circulation, perform rescue breathing until the patient regains adequate respiration, the defibrillator advises to not touch the patient for analysis, or EMS arrives and assumes patient care. Conduct continuous monitoring of the patient's condition and evaluation of rescue in accordance with ERT or Early Defibrillation Response Team training.
- 10.9 Patient Monitoring. Once the defibrillator has been applied to the patient, do not turn off the defibrillator or remove the defibrillation pads unless prompted by the device (e.g., "Replace battery" or "Replace pads"). The defibrillator will continue background monitoring of the patient's heart rhythm and alert the rescuers if additional shocks are required. Continue to assess the patient's airway, breathing, and circulation and provide CPR as indicated.

11. Transfer of Patient Care to EMS

- 11.1 *EMS Arrival.* Upon arrival of EMS, transfer patient care to the EMS team. If requested by EMS, assist in patient care; otherwise, initiate post-incident procedures (see section 13).
- 11.2 Oral Report. Give the EMS agency a complete oral report of the event and any significant findings. Unless requested to remain at the scene to assist, complete the Early Defibrillation Incident Report.
- 11.3 Early Defibrillation Incident Report. The Early Defibrillation Incident Report may be copied and given to the EMS agency as part of the patient care document, either while EMS is on-scene or after the ambulance has left with the patient. If the report is to be given later, it is the responsibility of the Early Defibrillation Program Coordinator to oversee this data transfer and delegate responsibility if necessary.
- 11.4 *Defibrillator Data Retrieval.* An ERT or Early Defibrillation Response Team member who responded to the incident is responsible for retrieval of the defibrillator data.



12. Post-Incident Procedures

See Appendices E and F for the *Early Defibrillation Incident Report* and the *Post-Incident Critique Form*.

- 12.1 Early Defibrillation Incident Report. The team member who provided care to the patient must document all accounts of the medical event and any patient care given on the Early Defibrillation Incident Report form. The team member will then provide the completed Early Defibrillation Incident Report to the Early Defibrillation Program Coordinator for data collection and quality review.
- 12.2 Early Defibrillation Report Confidentiality. The Early Defibrillation Incident Report is a part of the patient care record and is confidential to both the patient and the facility. This report is not to be copied or altered once it is completed. Discussion of all aspects of the event is to be limited to team members, in debriefing or training sessions. To prevent violation of patient confidentiality, ERT or Early Defibrillation Response Team members are to refrain from open discussion about any aspects of the medical event. Patient confidentiality must be maintained in accordance with all state and federal regulations.
- 12.3 Response Protocol Irregularities. Any protocol or equipment irregularities that occurred during the SCA event are to be reported to the Early Defibrillation Program Coordinator immediately for appropriate action. The Program Coordinator is to ensure that the device manufacturer is notified of any equipment irregularities.
- 12.4 Defibrillation Debriefing Procedures. A debriefing, headed by the Early Defibrillation Program Coordinator, is to be conducted with all team members who responded to the event, as well as any bystanders and coworkers who witnessed the event, the Medical Director if necessary, and professional counselors if deemed appropriate by the Early Defibrillation Program Coordinator or the Medical Director.
- 12.5 Post-Event Defibrillator Check Procedures. Before returning the defibrillator to service, perform the following post-event procedures:
 - Check the defibrillator visually for damage or missing parts.
 - Replace all supplies used during the event.
 - Download the data from internal memory to a PC.
 - Run a battery insertion test and replace the battery if indicated.
 - Return the defibrillator to its designated area for future use.



12.6 Incident Critique. A Post-Incident Critique form shall be completed at the conclusion of each drill and each real SCA event to evaluate the response model and debrief the ERT or Early Defibrillation Response Team. The completed form shall be discussed in the debriefing meeting following the drill or event. Further discussion shall be conducted with the Medical Director as necessary. In either event, written copies of the form shall be distributed to all necessary parties within the organization for administrative review.

13. Data Collection

- 13.1 Early Defibrillation Incident Report and Incident Data. Data collection begins with the Early Defibrillation Incident Report and data from the defibrillator. These two components are to be provided to the Early Defibrillation Program Coordinator as soon as possible.
- 13.2 Data Transfer. The incident data is to be provided to the Early Defibrillation Program Coordinator according to policy. The data will be reviewed by the Early Defibrillation Program Coordinator in order to assess responder performance and for quality assurance.
- Data Download Procedure. Data download can be conducted by the Early Defibrillation Program Coordinator or delegated to other personnel under the supervision of the Early Defibrillation Program Coordinator. Once the data is downloaded, it can be transferred via file format or printed in a hardcopy format.
- 13.4 *Data Storage.* Downloaded data and post-incident critique forms are to be stored in a secure location under the direct supervision of the Early Defibrillation Program Coordinator.

14. Training and Drill Procedures

See Appendix F for the *Post-Incident Critique Form*.

- 14.1 *Defibrillation Training Requirements.* The ERT or Early Defibrillation Response Team members shall be responsible for maintaining all required training. The Early Defibrillation Program Coordinator shall track training requirements and notify each team member of any deficiencies.
- 14.2 AED Response Plan Drills. Periodic drills of the early defibrillation response plan and protocols shall be conducted to evaluate the effectiveness of the early defibrillation program. These drills may comprise a live re-enactment of an SCA event or classroom discussion of the overall response plan and protocols. Additional critique discussions with the ERT or Early Defibrillation Response Team may also follow any actual defibrillation events.



APPENDICES

The following appendices are provided in a format suitable for copying and posting as appropriate:

- A. Early Defibrillation Response Team Roster
- B. Defibrillator Location and Equipment Sheet
- C. Periodic Maintenance Checklist
- D. Early Defibrillation Response Protocol and Flow Chart
- E. Defibrillation Incident Report
- F. Post-Incident Critique Form



APPENDIX A Early Defibrillation response Team Roster

(Complete for each site.)

AED COORDINATOR				
NAME				
PHONE #				
LOCATION				



Team Members

NAME	NAME
PHONE #	PHONE #
LOCATION	LOCATION
NAME	NAME
PHONE #	PHONE #
LOCATION	LOCATION
NAME	NAME
PHONE #	PHONE #
LOCATION	LOCATION
NAME	NAME
PHONE #	PHONE #
LOCATION	LOCATION
NAME	NAME
PHONE #	PHONE #
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PHONE #	PHONE #
LOCATION	LOCATION
NAME	NAME
PHONE #	PHONE #
LOCATION	LOCATION
NAME	NAME
PHONE #	PHONE #
LOCATION	LOCATION



APPENDIX B Defibrillator Location and Equipment Sheet

Defibrillator Model # Defibrillator Serial #	Location	Accessories



APPENDIX C

Periodic Maintenance Checklist

DEFIBRILLATOR LOCATION:					
DEFIBRILLATOR MODEL NUMBER:	DEFIBRILLATOR SERIAL NUMBER:				
DATE					
SCHEDULED FREQUENCY					
DEFIBRILLATOR CONDITION NO DIRT/DAMAGE/CONTAMINATION					
STATUS INDICATOR SELF-TEST PASSED.					
ADULT PADS, SEALED, UNDAMAGED, UNEXPIRED					
INFANT/CHILD PADS, SEALED, UNDAMAGED, UNEXPIRED					
ANCILLARY SUPPLIES (HAND TOWEL, SCISSORS, RAZOR, POCKET MASK)					
DATA CARDS, UNDAMAGED					
OTHER:					
INSPECTED BY (INITIALS)					
REMARKS, PROBLEMS,					



APPENDIX D Early Defibrillation Response Protocol and Flow Chart



Early Defibrillation Response Protocol

The following early defibrillation response protocol is provided as a sample. It is required that your facility's trained responders follow the steps established by that protocol when responding to a victim of sudden cardiac arrest. The protocol should be reviewed on an annual basis, and revisions to the protocol made as necessary.

Cond	luct	an	initia	l assessm	ent:

	Assess for scene safety; use universal precautions.						
	Assess patient for unresponsiveness.						
	If unresponsive, activate EMS and in-house emergency plan. Call 911 or designated number: Call for defibrillator.						
Ass	Assess breathing						
	Open airway						
	Look, listen and feel for breathing						
	If breathing is absent, deliver two rescue breaths						

Assess circulation

If signs of circulation are absent, provide CPR. Continue CPR until defibrillator arrives.

Begin defibrillation treatment

- As soon as the defibrillator is available, turn it on and follow the prompts. If the patient is an infant or child that is less than 8 years old or 55 pounds, use Infant/Child defibrillator pads if available.
- Shave chest with razor if indicated. Discard razor in a safe manner. Wipe chest if it is wet.
- Apply defibrillation pads. Look at the icons on the self-adhesive defibrillation pads, peel one pad at a time and place it as shown in its illustration. Ensure pads are making good contact with the patient's chest. Do not place the pads over the nipple, medication patches, or visible implanted devices.
- Deliver a shock to the patient when advised by the defibrillator, after first clearing the patient area. Administer additional shocks as prompted by the defibrillator, until it advises no shock or has delivered a series of three consecutive shocks and prompts the responder to check the patient.
- □ When advised by the defibrillator, check the patient's airway, breathing, and signs of circulation and initiate CPR if circulation is absent.



- □ Continue to perform CPR until otherwise prompted by the defibrillator or EMS personnel.
- Continue to follow the defibrillator prompts until EMS arrives.

When EMS arrives

Responders working on the victim should document and communicate important information to the EMS provider, such as:

- □ Victim's name
- Known medical problems, allergies or medical history
- Time the victim was found
- Initial and current condition of the victim
- □ Information about the defibrillator's operation:
 - Number of shocks delivered
 - Length of time defibrillator has been on
- Assist as requested by EMS providers

Post-Use Procedure

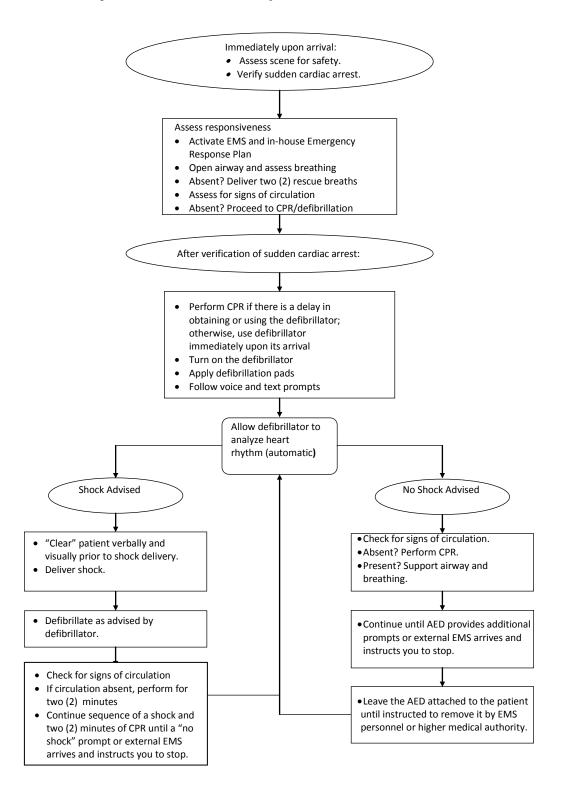
- □ Take the defibrillator and the Defibrillation Incident Report to the Early Defibrillation Program Coordinator within 24 hours post-event for downloading data from internal memory.
- □ Check the defibrillator and replace any used supplies as soon as possible following the event so that the defibrillator may be returned to service. Perform the after-patient-use maintenance on the defibrillator.
- Early Defibrillation Program Coordinator: conduct employee incident debriefing, as needed.
- □ Early Defibrillation Program Coordinator: complete the incident follow-up report and forward to Medical Director.

Defibrillator Maintenance after Each Patient Use

- □ Inspect the exterior, pads connector port or pads cartridge well for dirt or contamination.
- Check supplies, accessories and spares for expiration dates and damage.
- Check operation of the defibrillator by removing and reinstalling the battery and running a battery insertion test.
- □ Download data from defibrillator to a PC then erase the defibrillator memory to ensure adequate capacity for recording data when next used.



Early Defibrillation Response Protocol Flow Chart





APPENDIX E

Early Defibrillation Incident Report

Incident Details		
Incident ID:	Incident Date:	
Incident Time:		
Shocks Delivered:	Device ID:	
Device Type:		
Patient Detail		
Last Name:	First Name:	MI:
DOB:	Age:	
Gender:	Race:	
Patient ID:		
Additional Information Defibrillator Operator: Comments:		
Report Completed By:	Date:	
Patient Name:	Incident Date:_	
Employee Number:	DOB: Age:	Sex:
How was Team alerted?	Time aler	rted::



APPENDIX F

Post-Incident Critique Form

How was Team dispate	hed?	Dispatch time:	:		
Who initiated 9-1-1 call	?	Time called:	:		
ERT or AED Team arriv	val time: _	AED arrival time	::		
Collapse/recognition::			Bystander CPR started: :		
9-1-1 called:	:_	_	EMS dispatched:	:	
SCA Event Report					
ERT Team arrival:	:	_:	AED arrival:	:	
Patient unresponsive:	□ Yes	□ No	Documented time:	:	
Rescue breathing starte	ed:□ Yes	□ No	Documented time:	:	
CPR started:	□ Yes	□ No	Documented time:	:	
AED applied:	□ Yes	□ No	Documented time:	:	
First shock advised:	□ Yes	□ No	Documented time:	:	
Additional shocks:	□ Yes	□ No	Total # of shocks deliver	red:	
Return of circulation:	□ Yes	□ No	Documented time:	:	
Return of respiration:	□ Yes	□ No	Documented time:	:	
EMS scene arrival:	:_	_:	EMS arrival at patient:	:	
Patient condition at EM	S hand-of	f:			
Care Given by EMS:	\square ALS	□BLS	Patient transported:	:	
Transported to:					
Patient condition at hos	spital:				
Report Completed by:			Date) :	