



**AUTOMATED
EXTERNAL
DEFIBRILLATORS**

The Shocking Truth

PRIMA CONFERENCE

Reno, Nevada

May 19, 2003

The Reality of Life...



...Someday everyone will die!

The Problem

Premature Death



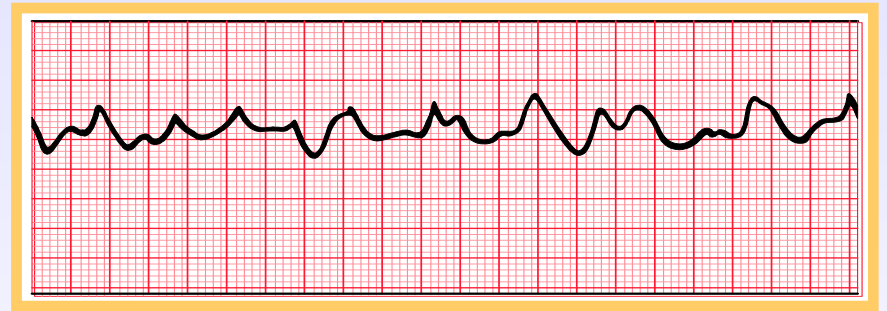
**The #1 Killer in the United States
in Cardiovascular Disease and
Stroke!!!**

**Specifically, in the United States, 250,000
people die each year die of Sudden
Cardiac Arrest**

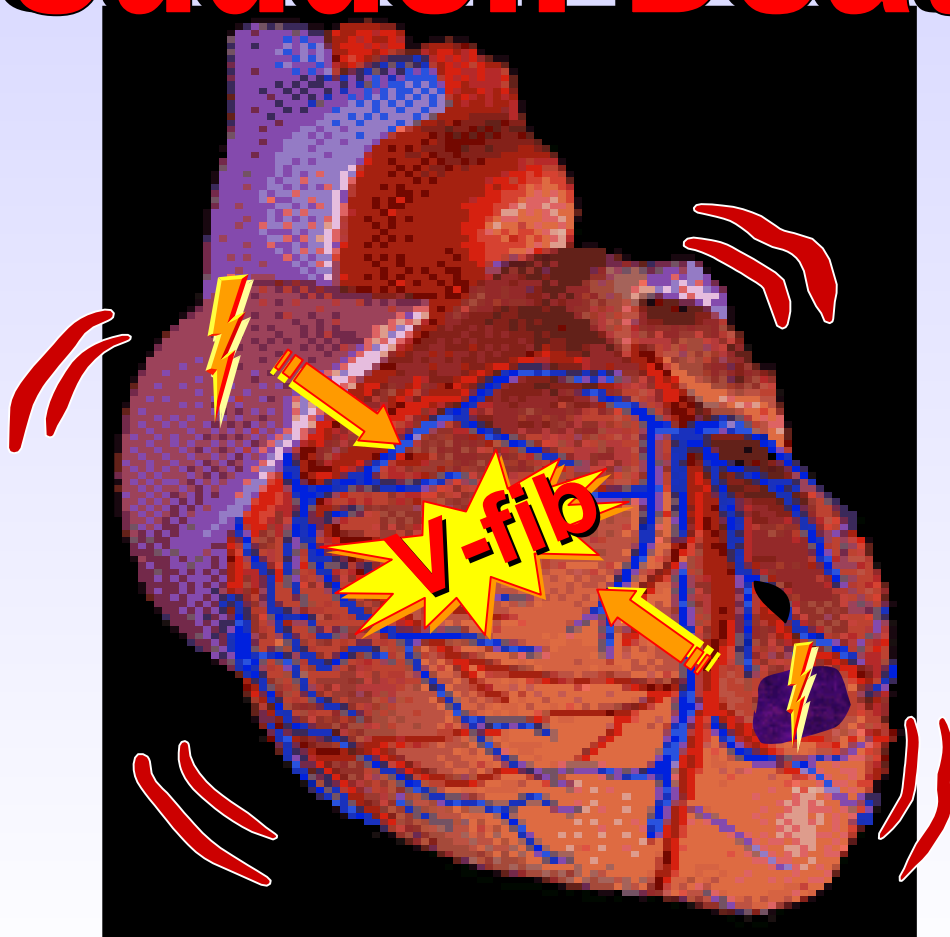
Sudden Cardiac Arrest

....caused by Ventricular Fibrillation

- V-Fib is the most frequent initial rhythm in sudden cardiac arrest



Sudden Death



“V-Fib”

- V-Fib is a useless, chaotic quivering of the heart that results in no blood flow

Patient Symptoms when in Ventricular Fibrillation

- Unconscious
- No Effective Heart Action
- No Breathing
- Looks Terribly Sick & Discolored

Resulting in...

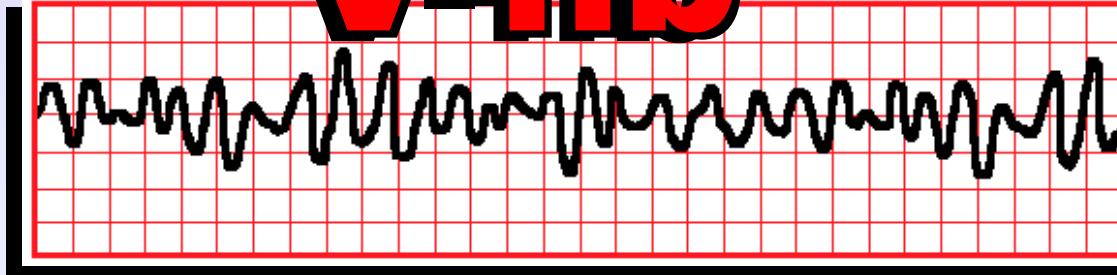
No Oxygen to the Brain or Body Organs



Life or Death is now a matter of TIME

The Only Effective
Treatment
for

V-fib



De-fib

The problem in perspective:

- 250,000 people die each year from sudden cardiac arrest
- 75-80% occur outside of the hospital
- Less than 5% survive



We Know The Solution

The Chain of Survival



**Early
Access**

**Early
CPR**

**Early
Defibrillation**

**Early
Advanced
Care**

The Question

Why do only 5% survive?



The Weak Link



**Early
Access**

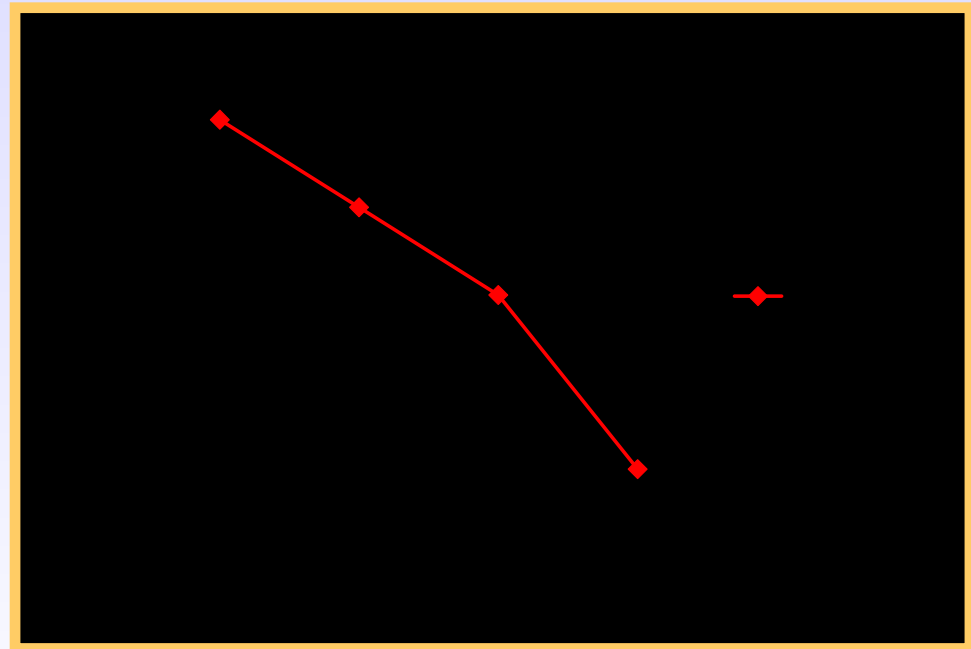
**Early
CPR**

**Early
Defibrillation**

**Early
Advanced
Care**

Why EARLY Defibrillation?

For each minute
that passes without
defibrillation, the
persons chance of
survival decreases
by about 10%

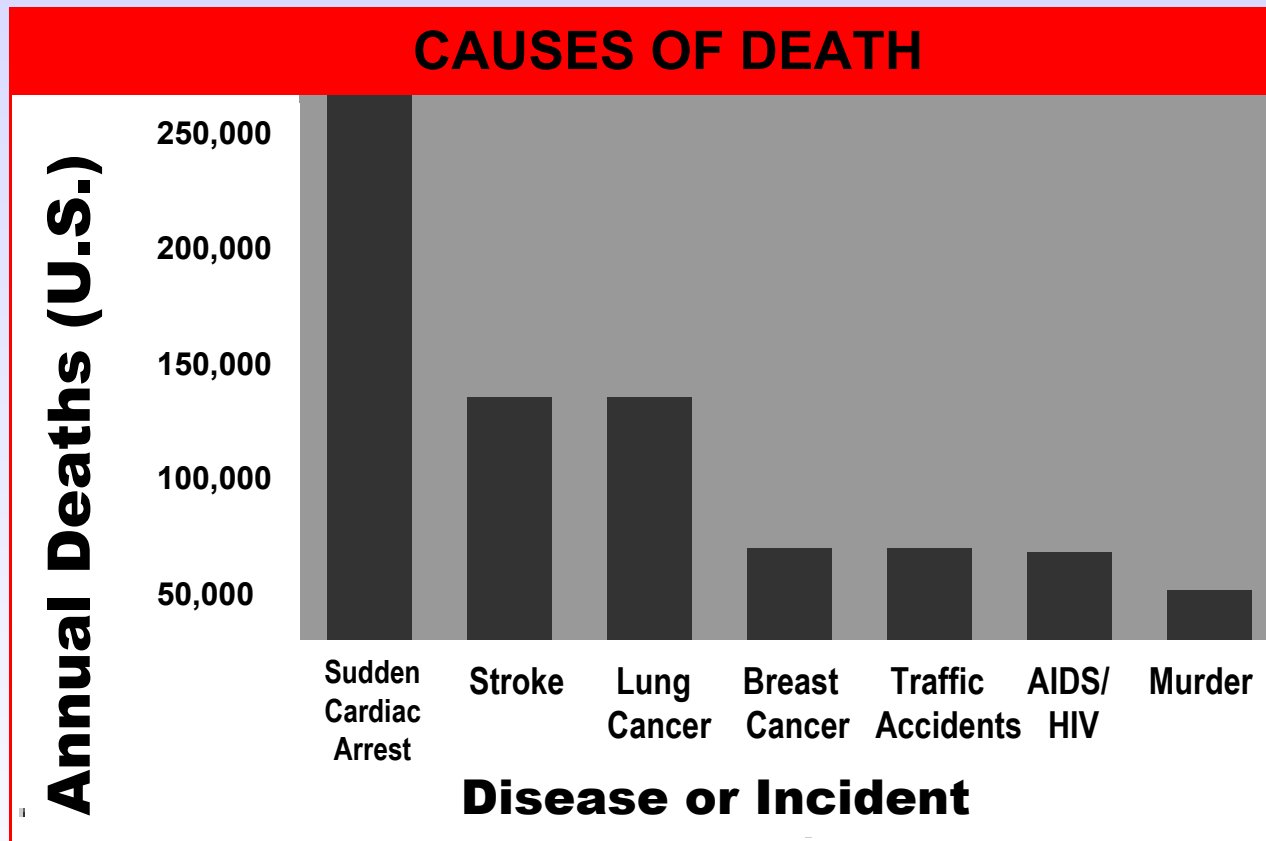


The Weak Link



- The Chain of Survival is only as strong as its most critical link
- In most cases of cardiac arrest the critical link is early defibrillation

But despite EMS advances...



Sudden Deaths continue to increase.

Barriers to quick response

- Traffic
- Weather
- Distance
- Road closures
- Elevators
- Gated communities
- Large Campuses
- Difficult locations
- Etc., etc.



What time barriers does your business have?



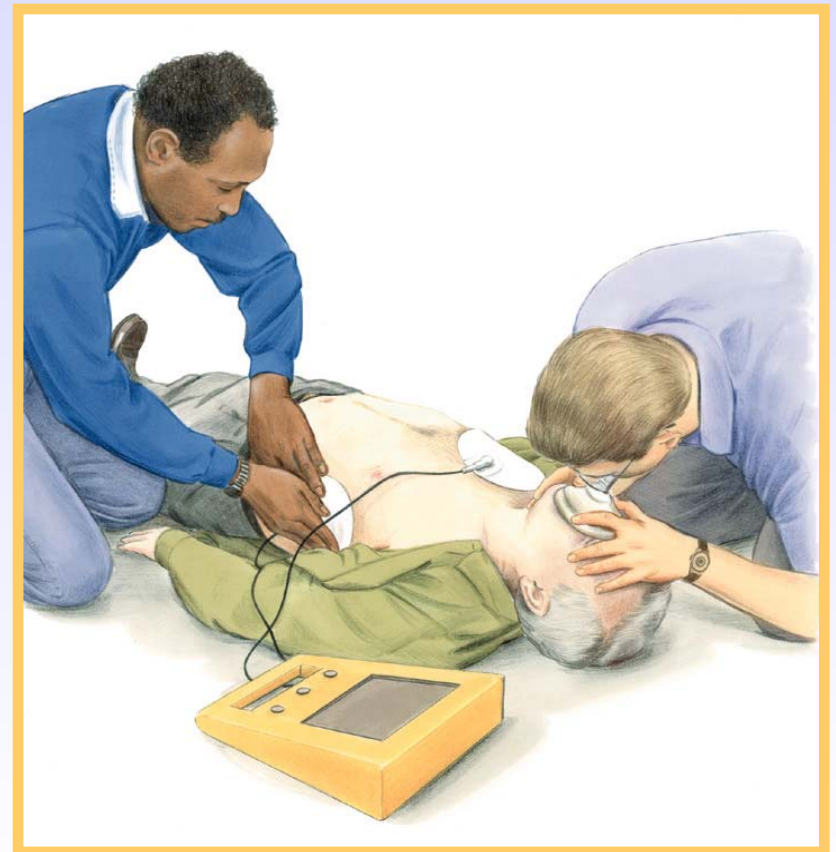
Public Access to Defibrillation Programs (PAD Programs)

The Concept:

Trained lay rescuers equipped with defibrillation capabilities in settings where large number of people congregate, live or work - improves survival rates for cardiac arrest victims.

PAD Programs: The Goal

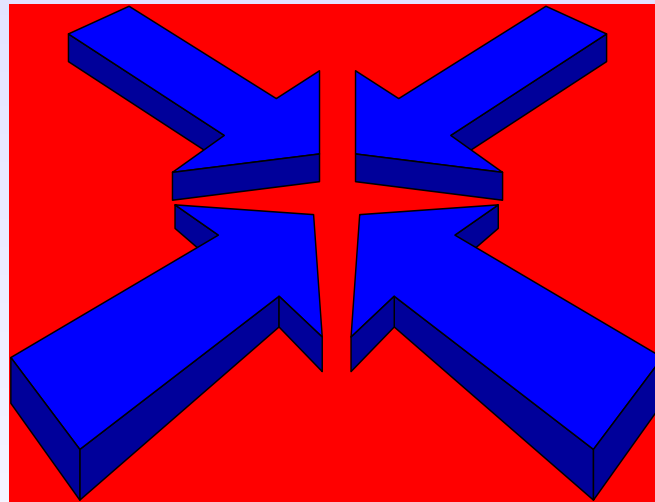
Positively impact the out-of-hospital cardiac arrest survival rate by having defibrillation capability available to victims within 3-5 minutes of the onset of cardiac arrest



Successful PAD Programs incorporate four key elements

AED

Medical Oversight

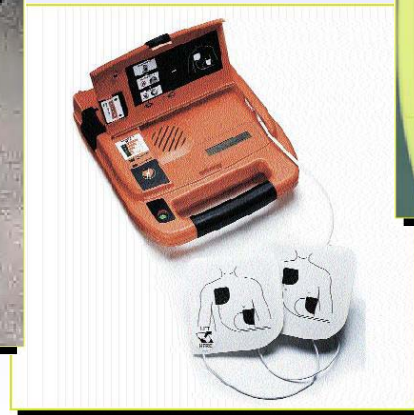


Training

EMS Integration

The Shocking Solution to Sudden Death

AED



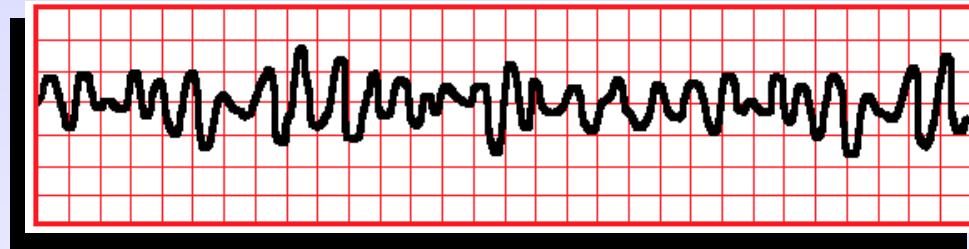
Automated External Defibrillators

✓ **Safe**

✓ **Simple Use**

✓ **High Success Rate**

AEDs



ONLY Advise Shocks

**If there is a shockable
rhythm**

AEDs

Prompt the user in what to do

- Visual
- Readiness
- Audible



AED Placement - *Where?*

- AEDs should be strategically placed to optimize the response rate of 3-5 minutes

AED Maintenance

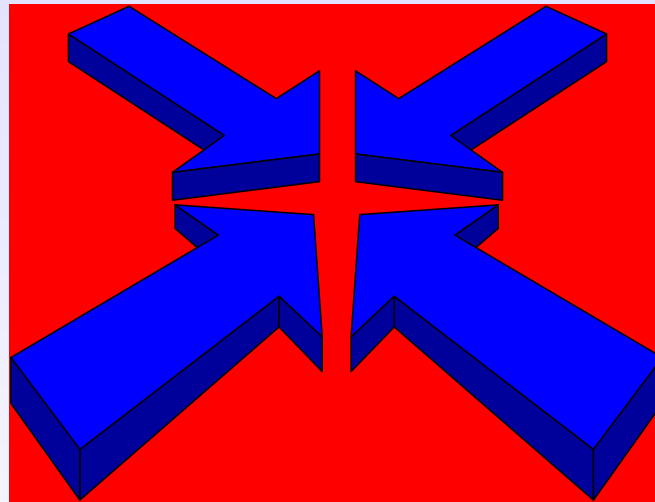
Maintenance Procedures: Designate individual to:

- conduct maintenance checks on AED(s) (according to manufacturer recommendations)
- order supplies
- follow-up with manufacturer on maintenance issues

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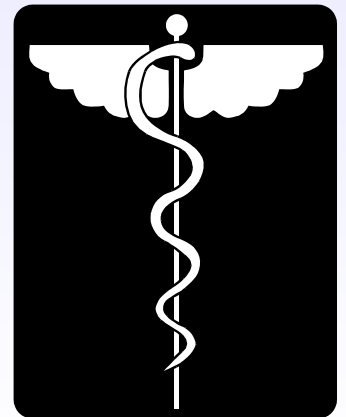


Training

EMS Integration

Medical Oversight

- FDA requires a physician's prescription to purchase an AED
- Physician brings leadership, authority and medical expertise to the PAD program
- Ensures rescuers are properly trained and skills maintained
- Responsible for incident review



Program Coordinator

- Typically someone on site
- Responsible for day-to-day activities associated with the PAD program
 - AED maintenance checks
 - inventorying & reordering supplies
 - scheduling of training & retraining
 - aspects of event review
- Extent of responsibility determined by PAD oversight physician

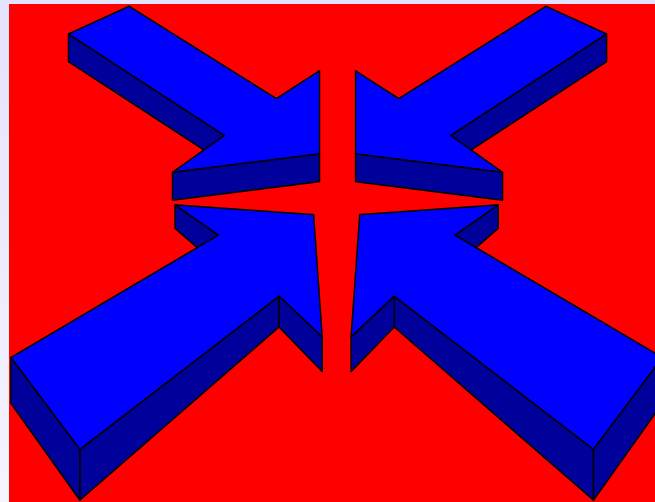
Medical Director and Program Coordinator:

- Emergency response plan
 - Include PAD Team to ensure continuation of program implementation, consistent training and follow up
 - Indicates most efficient actions and responsibilities of responders
 - Includes repeated orientation of staff to these policies and procedures for a comprehensive understanding of the program
 - Continued updates with the Medical Director for quality assurance

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Medical Oversight



Training

EMS Integration

Training

- Helps to alleviate panic
- Integral part of response plan
- Teaches the responder how to identify an emergency
- Gives responder confidence to act

Training (continued)

- Who and how many?
 - Best case scenario – every employee
 - Minimally – response team trained in AED and as many others as possible in CPR

Training (continued)

Heartsaver AED

- Access EMS System
- Adult CPR (one rescuer)
- Relief of foreign body airway obstruction
- Use of barrier device
- Use of an AED
- Scenario based
- 3 ½ - 4 hour course
- Written evaluation
- Hands on practice and skills test
- Re-certification every two years

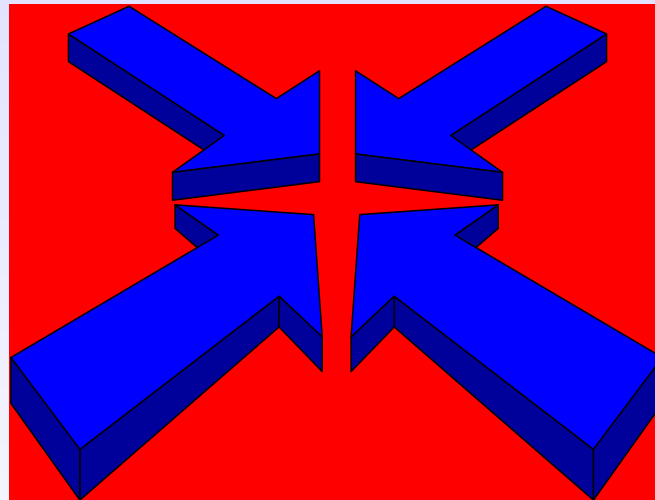
Who can be trained to use an AED?

- **Flight Attendants**
- **Security Guards**
- **Firefighters**
- **Ushers**
- **Corporate
Emergency
Response Teams**
- **Cruise Ship
Personnel**
- **Lifeguards**
- **Mall Workers**
- **Police**
- **Golf Pros**
- **Health Club
Employees**
- **Students**
- **Office Staffs**
- **Physicians**

Successful PAD Programs incorporate four key elements

AED

Medical Oversight



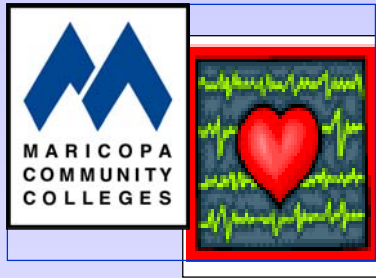
Training

EMS Integration

Integration with EMS

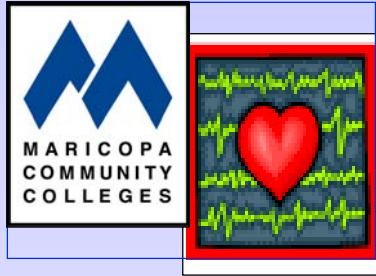
- Imperative and required part of PAD programs
- Allows your address to be marked with premise alert stating you have an AED
- Dispatchers can assist with AED instructions if necessary
- Dispatchers can notify local EMS unit AED has been used or is present





Maricopa Community Colleges PAD Program

- **Liability concerns first raised in early and mid-1990s--questioning the risks of improper use of AEDs.**
- **Now widely accepted as safe, AEDs are easy-to-operate and capable of reversing SCA.**
- **Soon, the greater liability risk will be *not* having AEDs.**



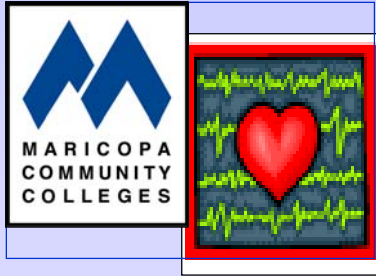
Liability Concerns

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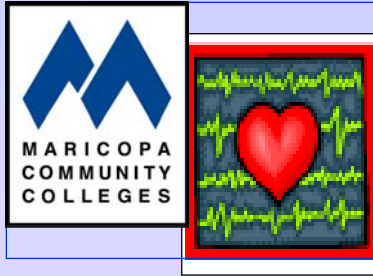
What Laws Apply to PAD Programs?

- **Cardiac Survival Act [HR 2498]**: President Clinton signed into law on 11/16/00. Encourages placement of AEDs in federal buildings and provides nationwide Good Samaritan protection.
- **Arizona's AED Bill [ARS 36-21.1]**: Approved by the governor in 1999. Provides liability protection for trained responder, instructor, physician, premises owner and AED acquirer.
- **FDA requires medical oversight by physician.**



Most Laws Governing PAD Programs Require

- **Registration** with the local EMS provider.
- **Medical supervision** A physician who signs off on the purchase, maintenance, and usage of the devices.
- **Regular Maintenance Testing** per manufacturer's specifications.
- **Training for Potential Users** includes CPR training and must be updated every 2 years.

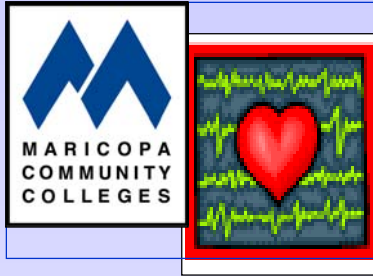


MCCCD AED Committee

4/13/01: Memo to Chancellor's Executive Council from District Safety Committee recommending all colleges establish PAD Programs.

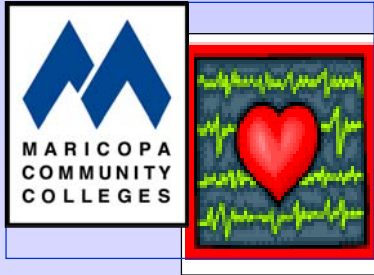
Spring 01: Meetings with American Heart Association and AED vendors.

8/8/01: Informational meeting regarding implementation of District PAD Program.



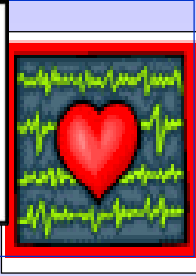
MCCCD AED Committee

- **9/20/01**: First AED committee meeting held. Pima Community College Director of Environmental Health & Safety joins committee.
- Meetings held every three weeks; members establish these goals:
 - Assess individual college needs
 - Assist with training efforts
 - Institute an annual monitoring program



MCCCD AED Committee

- 12/01:** Proposal to VC of Business Services requesting \$225,000 funding
- 1/02:** Approval for full funding received
- 2/02:** Commenced training efforts
- 2/02:** Issued RFP
- 3/02:** Received and reviewed vendor proposals
- 4/02:** Media and public relations efforts began
- 4/02:** Award contract to vendor
- 5/02:** Installation of AEDs at MCCCD locations
- Ongoing:** Continuous monitoring of program



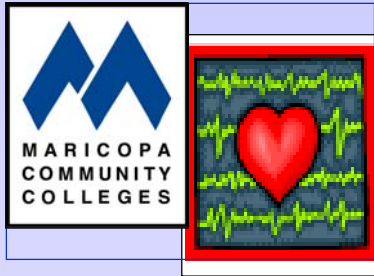
MCCCD AED Committee Members





MCCCD AED Committee: *Sub-Committees*

- ✓ **Assessment**
- ✓ **RFP/Purchasing**
- ✓ **Training**
- ✓ **Proposal**
- ✓ **PR/Marketing**



MCCCD Statistics

AEDs Installed:	96
Employees Trained:	1,000+
Locations Installed:	29



Helpful Tools

- ✓ **AED Training Units**
- ✓ **Videos**
- ✓ **Stickers**
 - **Hearts for Name Plates & Badges**
 - **“Heart Safe” Facility**
- ✓ **Face Shields**
- ✓ **Blue Lights**
- ✓ **Refresher Training**

Public Access Defibrillation

For use by...

...just about ANYONE

just about ANYWHERE



The Benefits of an AED Program

- ✓ **Prevent Premature Death**

But it also

- ✓ **Extends Life and Productivity**
- ✓ **Enhances Employee & Client Morale**
- ✓ **Enhances Employee & Client Loyalty**
- ✓ **Promotes Personal Safety & Health**
- ✓ **Limits Liability Exposure**

...and if death occurs

- ✓ **Comfort, Support & Closure for Family**

The Problem

Premature Death



What are you going to do about it?

When Hearts & Brains Are Too Good to Die
Sudden Death Can Be Interrupted &

Life Can Be Extended

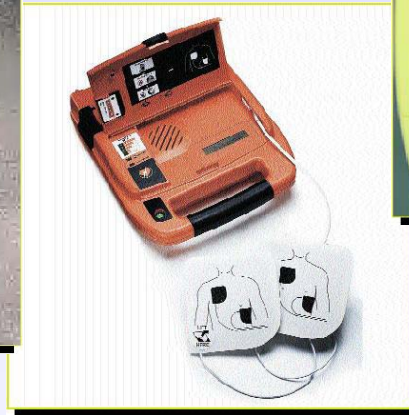
You Can Do It!



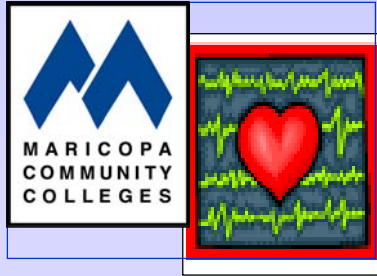
Take Home Message:

- Sudden Cardiac Arrest is an extremely time sensitive emergency
- Defibrillation is the **ONLY** known treatment
- AEDs, put in the hands of trained lay rescuers, **SAVE LIVES!!**

AED Program

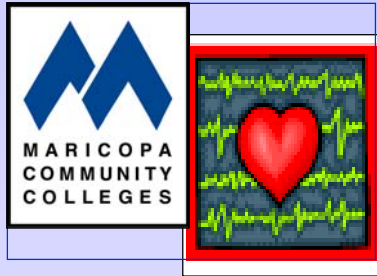


The right thing to do



AED Demonstration

- **Call for emergency services.**
- **Remove victim's upper clothing to expose skin; follow pictures on the electrode pads to place the pads.**
- **Press the button on the AED that activates the checklist routine.**
- **Listen to directions as given audibly by AEDs.**



AED Demonstration

- **AED checks for pulse and audibly announces whether a shock is needed.**
- **AED warns bystanders to stay clear of victim; rescuer presses “Shock” button.**
- **Shock is delivered; checklist sequence is repeated until either a normal pulse is detected or EMS arrive and take over.**



QUESTIONS?

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