

PHILIPS

sense and simplicity

HeartStart OnSite Automatic External Defibrillator

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Sudden

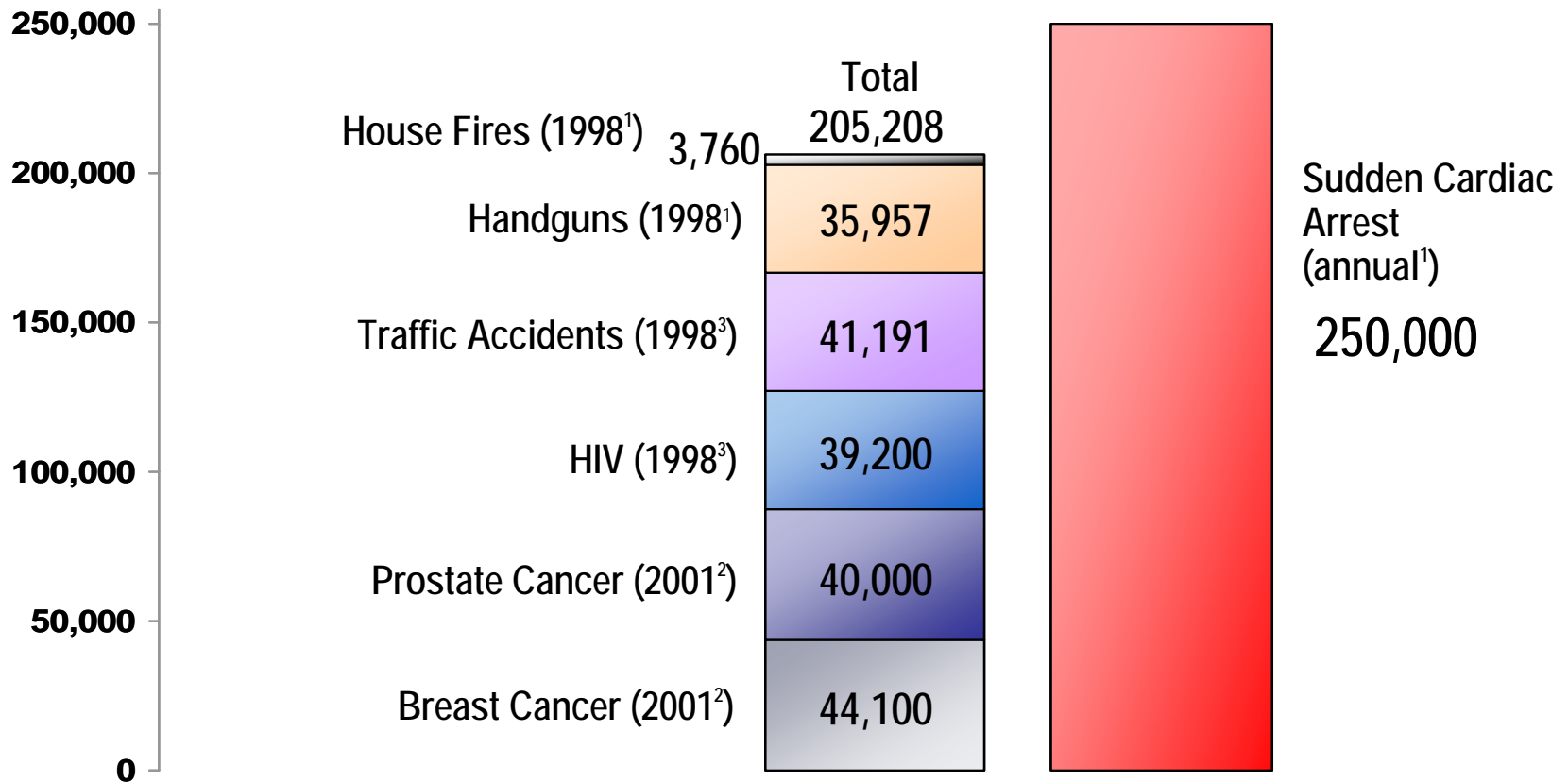
Cardiac Arrest

can strike
anyone,
anytime,
anywhere...

SCA Fiction vs. Fact

	Stereotype	Reality
Gender	Male	Male and Female
Age	Old	Any Age
Risk Factors	Overweight Smoker High cholesterol	Often No Clear Risk Factors
Medical History	Heart Attack	Often No Cardiac History
Presenting Symptoms	Chest Pain Dizziness	Often No Symptoms

Causes of Death in the U.S.



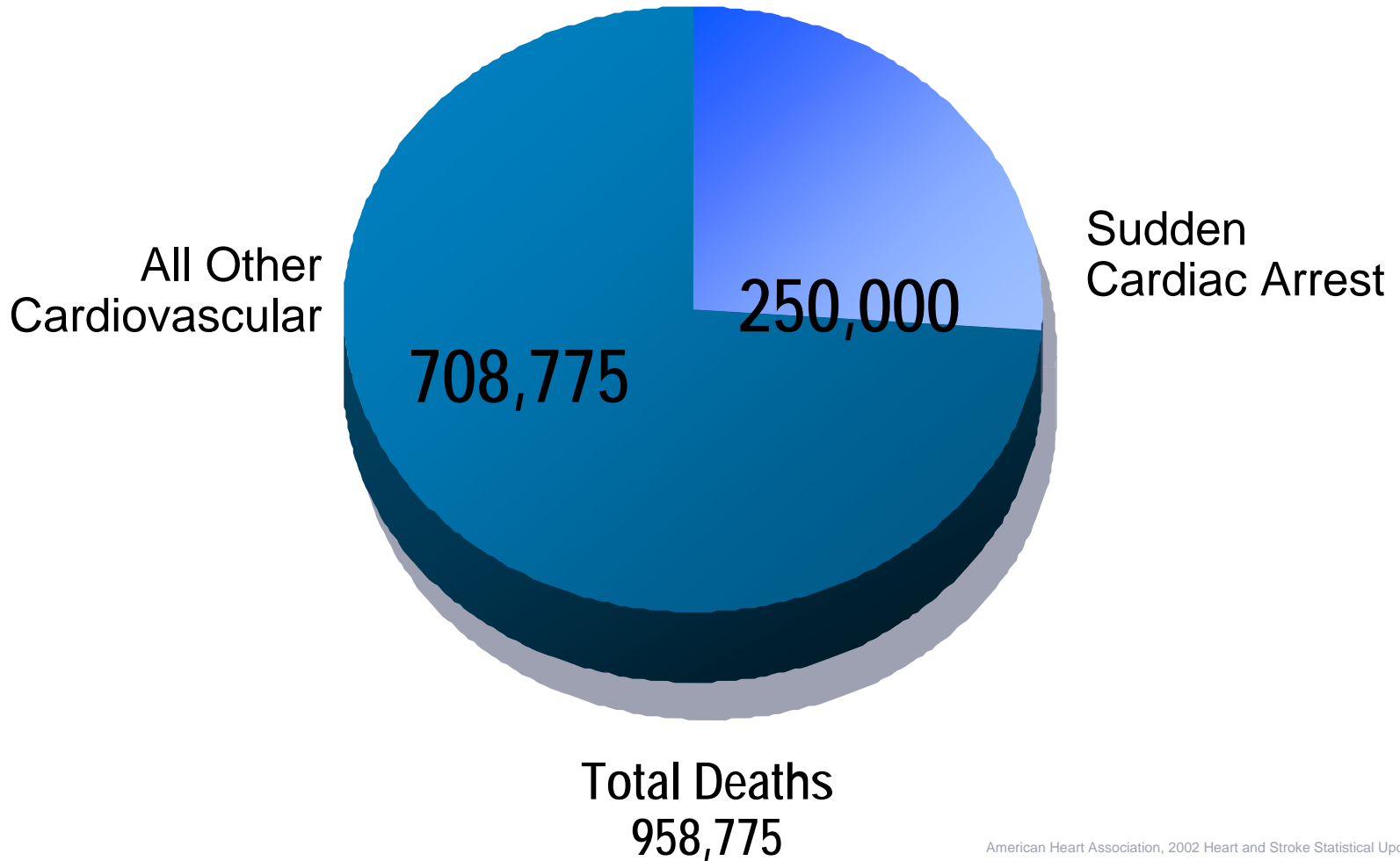
¹ <http://www.americanheart.org>

² <http://www.cancer.org>

³ U.S. Statistical Abstract of the United States, 1998-2001.

The Odds

Annual Deaths from Cardiovascular Disease – U.S.



American Heart Association, 2002 Heart and Stroke Statistical Update, p. 4, 11.

The Stakes

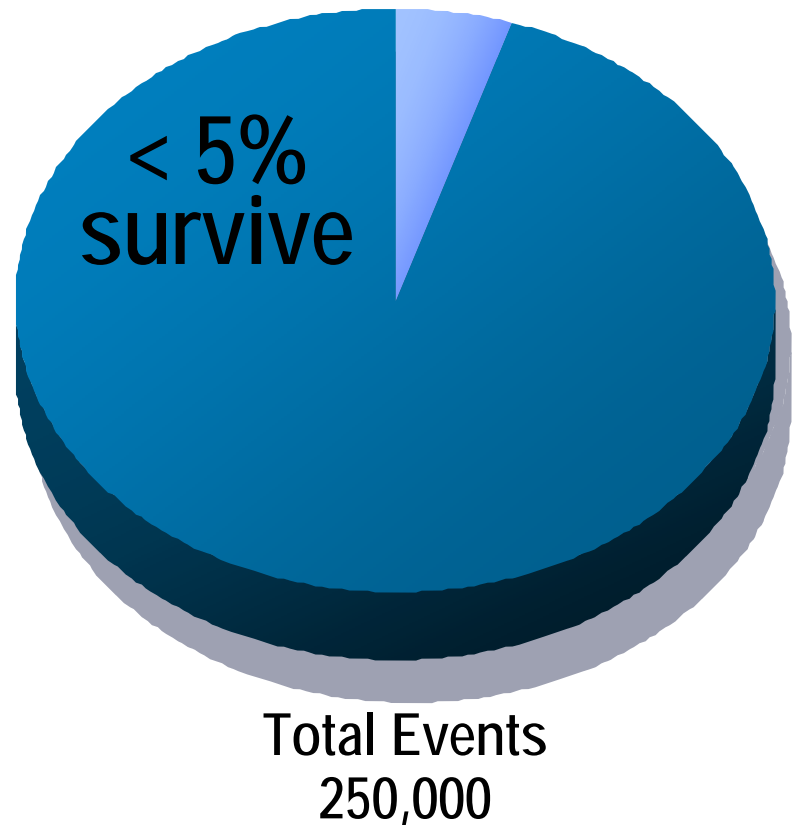
Annual Sudden Cardiac Arrest (SCA) Events – U.S.

600 patients per day
(one every 2 to 3 minutes)

75% out-of-hospital

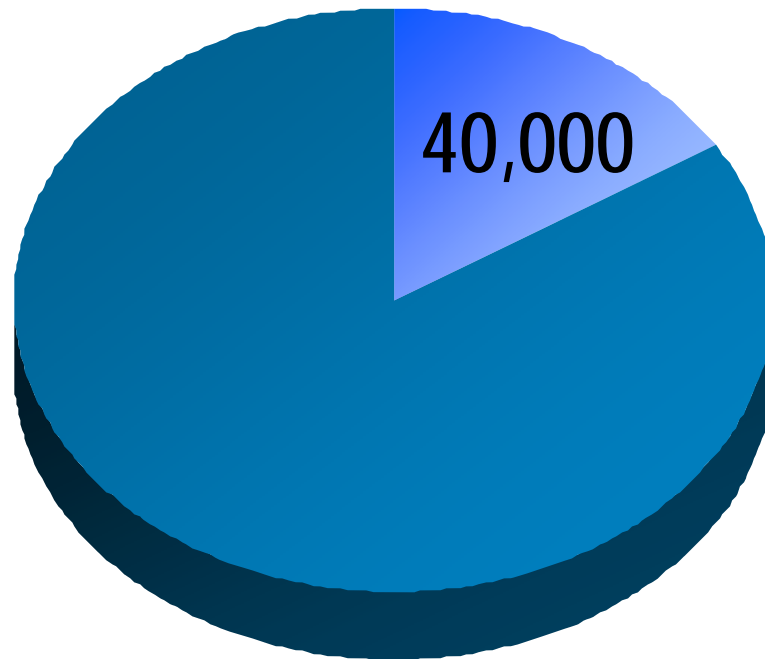
20% without prior symptoms

95% die without *very early*
treatment



The Benefits of Treating SCA

American Heart Association



Total SCA Events
250,000

SCA deaths prevented annually*

Recovery Prospects
for Survivors Are High

80% alive at one year

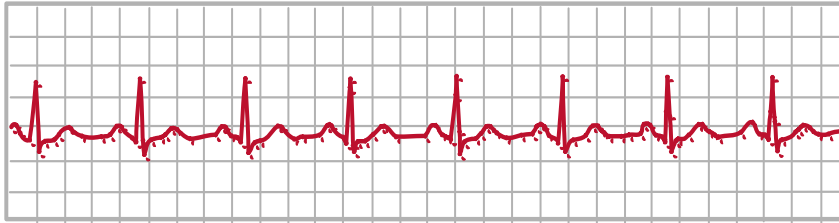
57% alive at five years

*AHA estimates 20% survival rate

The Healthy Heart

A Series of Events

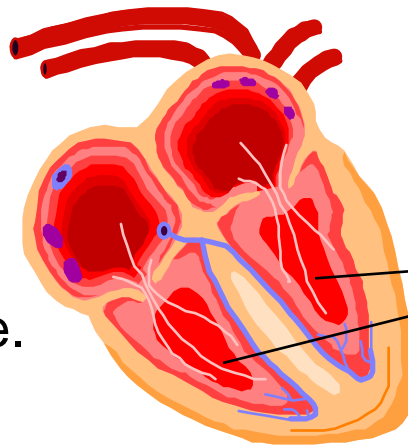
An electrical event...



stimulates a mechanical event...



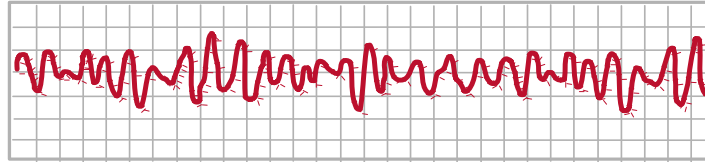
...resulting in coordinated heart pumping, and regular pulse.



Main Pumping Chambers

Sudden Cardiac Arrest

A Heart in Distress



- Uncoordinated, very fast heart rhythm
 - Ventricular fibrillation (VF)
 - Some ventricular tachycardias (VT)
- Ineffective heart pump
- Unconscious, no breathing, no pulse
- Death ***certain*** without defibrillation

What Is Defibrillation?



- Electric shock to the heart
 - Stops uncoordinated rhythm
 - Allows return of regular rhythm and pulse
- Only definitive treatment for VF

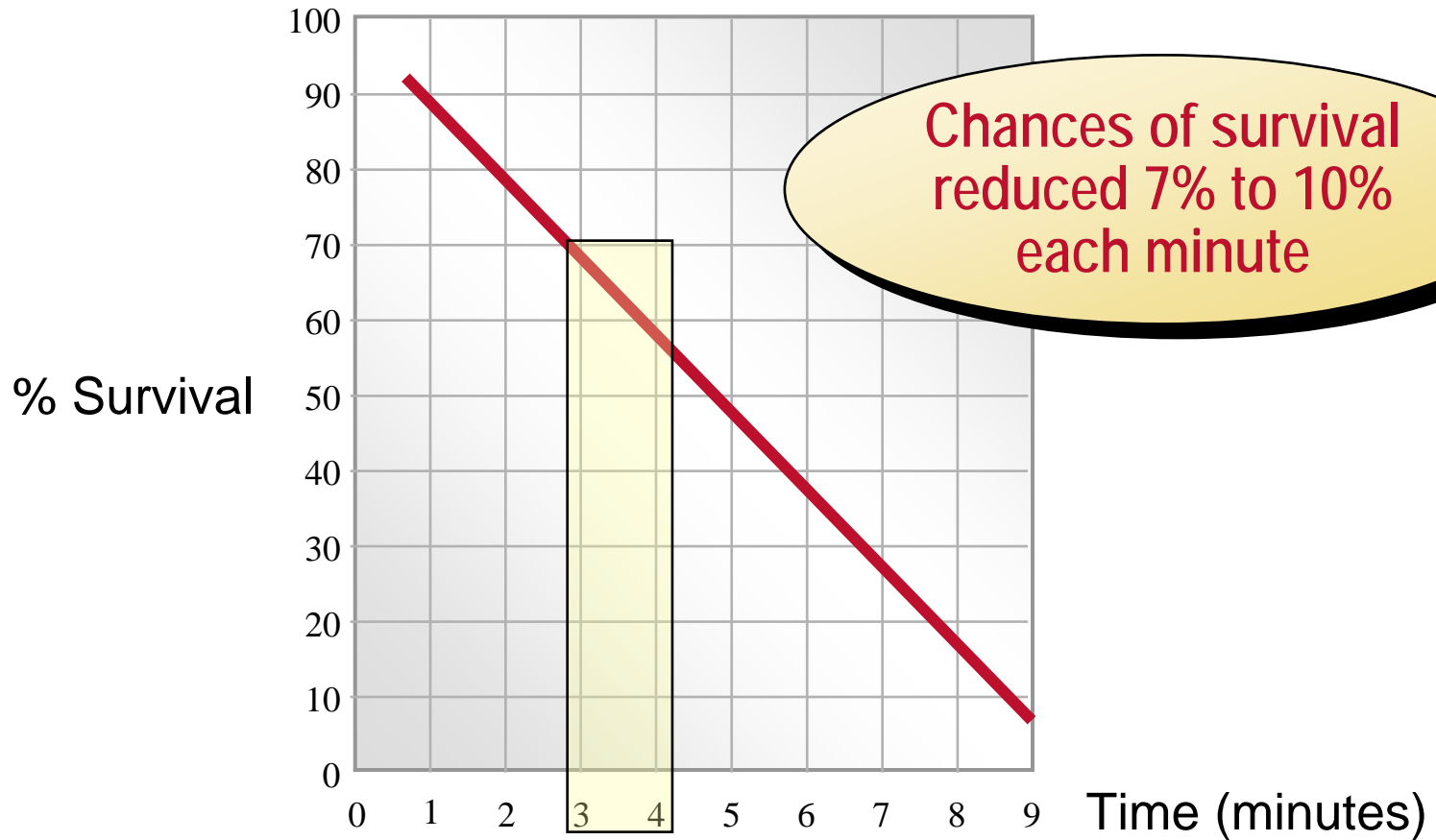
Vigorous Treatment Recommended



*“Vigorous resuscitative measures are indicated, even for those who appear dead on initial evaluation... initiate the ABCD techniques...[including] use of an AED by **lay responders.**”*

(I-251)

The Case for *Early* Defibrillation

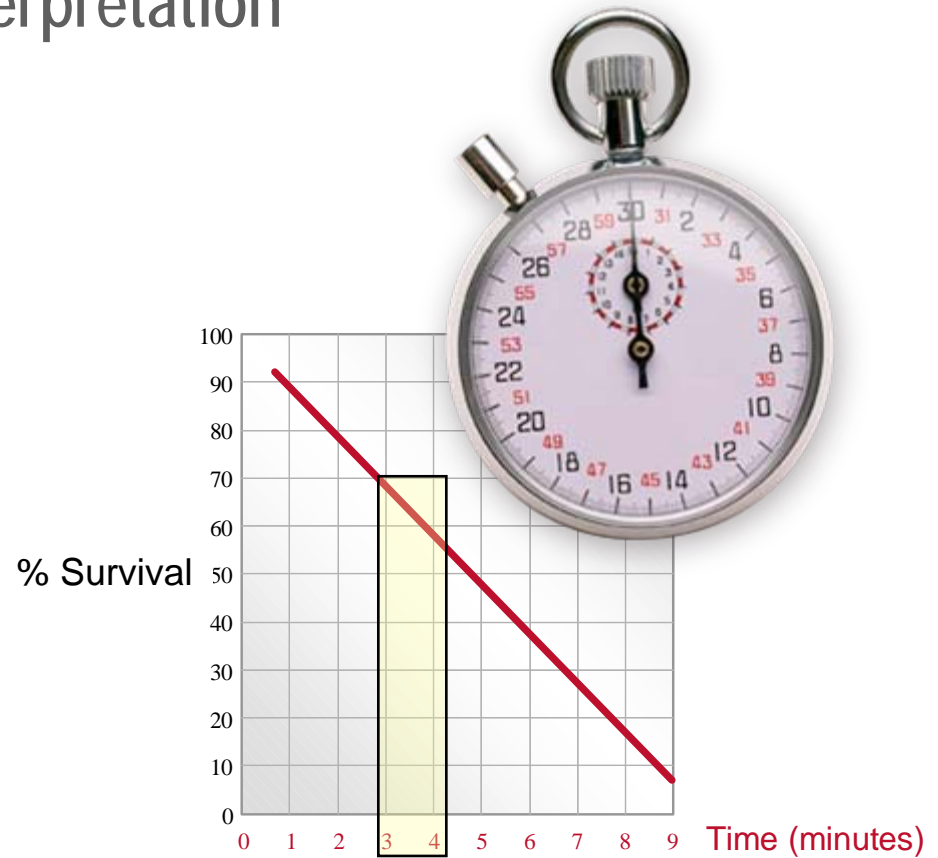


Cummins RO, et al. Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care (ECC, *Circulation (Suppl)* 2001;102:8, August 22

How Fast is “Early” Defibrillation?

OSHA interpretation

*3 to 4 minutes
from onset of
life-threatening
condition
to first aid
(first shock)*



How Fast is “Early” Defibrillation?



“A specific response plan should be implemented...targeting a collapse-to-defibrillation time ≤ 4 to 5 minutes

(e.g., “AEDs located...such that the walk to retrieve an AED is no more than 1.5 minutes)” Page I-71

What Happens When You Call 911?

Best Case Scenario

Identify emergency/ Activate emergency response plan	30 seconds
911 call	1 minute
Alert ambulance and rescue squads (dispatch)	30 seconds
Responders to their units	30 seconds
Travel time to location	5 minutes*
Unload equipment/ Distance to patient	2 minutes
Assess patient/ Apply defibrillator/ Deliver shock	1.1 minutes**

TOTAL 10.6 minutes

*Travel time varies depending on weather, traffic, distance (vertical and horizontal), and ambulance (with defibrillator capability) availability.

**Cummins RO, et.al. Automatic external defibrillators used by emergency medical technicians: a controlled clinical trial. JAMA. 1987; 257:1605-10

Who Should Be Trained to Defibrillate?



*BLS (Basic Life Support) responders whose jobs require them to respond to emergencies are expected to know CPR and use of an AED
(Class IIa)*

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“Good to very good evidence”, a “standard of care”

Something to Think About...

*“Public Access Defibrillation
has the potential to be the
single greatest advancement
in the treatment of
prehospital SCA death
since the development
of CPR.”*



Today's AED Recommendations

Building Owners and Managers Association

- “Having trained lay rescuers equipped with AEDs in settings where large numbers of people congregate saves precious minutes and improves survival rates for cardiac arrest victims.”¹
- “In addition to high-security companies, sports arenas, large hotels, concert halls, **gated communities** and sprawling manufacturing plants and other remote sites such as commercial office buildings can benefit from obtaining AEDs and training employees to use them.”¹
- Nursing homes and senior living communities are identified as “SCA high risk” locations²

¹ BOMA AED position, <http://www.BOMA.org/aed>

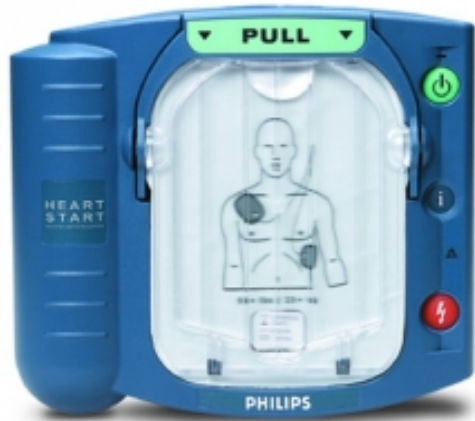
² Becker L, et al. Circulation 1998;97: 2106-2109

Defibrillators to the Rescue



- Small and lightweight
- Ready when needed
- Safe, effective, and easy to use
- Designed for the infrequent lay rescuer
- Expands lifesaving opportunities

Philips HeartStart OnSite Automatic Electronic Defibrillator



Why Philips HeartStart OnSite?

- Philips is the leader in portable defibrillation technology ¹.
- Heart Start On Site is the easiest-to-use and most reliable defibrillator available.^{2,3}
- The HeartStart OnSite defibrillator is the first AED available for commercial and institutional users *without a prescription*.

1. Frost & Sullivan

2. Andre, et al. Automated External Defibrillator Use by Untrained Bystanders: Can the Public-use Model Work? Prehospital Emergency Care 2004;8:284-291

3. Snyder, Time to Shock vs Voice Prompt Duration: Optimization of Defibrillators for Public Access and Home Deployment. 6th Scientific Congress of the European Resuscitation Council, Oct 2002



HeartStart OnSite Features

- Small and lightweight - weighs just 3.3 lbs
- Intuitive
 - Clean design and clear voice instructions, including CPR coaching, instill the confidence that's needed when treating a person in cardiac arrest.
- Effective
 - Patented SMART Analysis heart rhythm assessment and SMART Biphasic defibrillation therapy
 - Clinically proven in nearly 10 years of use.
 - No other external defibrillation therapy has been supported by more published clinical data⁴
- Patented Quick Shock
 - HeartStart OnSite is fastest in class at delivering a shock after CPR.
 - Studies show that minimizing time to shock after CPR may improve survival ^{5,6,7,8,9}

4. Philips Medical Systems. SMART Biphasic Studies, listed alphabetically by study author.

5. Yu et al. Adverse Outcomes of Interrupted Precordial Compression During Automated Defibrillation. *Circulation* 2002; 106:368-372.

6. Eftesol T, Sunde K, Steen PA. Effects of Interrupting Precordial Compressions in the Calculated Probability of Defibrillation Success During Out-of-Hospital Cardiac Arrest. *Circulation* 2002; 105:2270-2273.

7. Snyder et al. Biphasic Defibrillation Waveform Combined with AED-Imposed "Hands-Off" Intervals Significantly Affect Outcome Following Prolonged Cardiac Arrest. Abstract from 7th Scientific Congress of the European Council, 2004.

8. Snyder & Morgan. CPR Interruption Interval Varies Widely Among Commercially Available AEDs. Abstract from 7th Scientific Congress of the European Council, 2004.

9. Snyder, D.E. and Morgan, C. Wide Variations in Cardiopulmonary Resuscitation Intervals Among Commercially Available Automated External Defibrillators May Affect Survival Despite High Defibrillation Efficacy. *Critical Care Medicine*. 2004;32(9) Supplement:S421-S424.6

Ready When Needed

- Automatically performs daily, weekly, and monthly self-tests of its electrical components, subsystems, and battery
- Pads Integrity Test
 - Checks daily that the cartridge is properly installed and that the defibrillator pads are in working order
- Blinking green “ready” light means that HeartStart OnSite is ready for use
- No green “ready” light:
 - Defibrillator needs attention and “chirps” to alert you
 - Pressing the flashing blue “Information” button provides verbal guidance to help you identify and correct the situation

Easy To Use

- Pulling the green handle activates the defibrillator and voice instructions
 - Instructions paced to your actions
 - Guide user through entire process
- HeartStart OnSite determines if a heart rhythm is shockable
 - Provides instructions for shock delivery if required, **or**
 - Instructs you to assess the patient and to perform CPR when necessary
 - HeartStart OnSite will only shock the victim if needed – a responder cannot “accidentally shock” a victim.
- Reminds you to call EMS
- Provides event summary to EMS if necessary

Philips - The Trusted Choice

- A Fortune Global 500 company, Philips is one of the world's largest medical products companies with annual revenues of over \$7 billion
- With over 350,000 automated external defibrillators installed, Philips is the leader in public access defibrillation¹⁰
- Over 7 billion HeartStart Defibrillator service hours have been logged, with an additional 7 million added every day
- Over 17% of Fortune 1000 companies, 8 out of 10 major airlines, and 43 professional sports teams rely on Philips HeartStart Defibrillators

10. Frost and Sullivan, 2005

