Is Your Community Aware of SCA?
FACT SHEET: SUDDEN CARDIAC ARREST

1 What is sudden cardiac arrest?

Sudden cardiac arrest (SCA) is a leading cause of death in the U.S., killing more than 325,000 people each year. That’s more than the total death rate for breast cancer, lung cancer, and HIV/AIDS combined. During SCA, heart function ceases abruptly and without warning. When this occurs, the heart is no longer able to pump blood to the rest of the body, and in over 90% of victims, death occurs. This is usually caused when the electrical impulses in the affected heart become rapid (ventricular tachycardia, or “VT”) or chaotic (ventricular fibrillation, or “VF”), or both. These *irregular heart rhythms are arrhythmias*. The general public and media often mistakenly refer to SCA as a “massive heart attack.”

**SCA is an electrical problem,** whereby the arrhythmia prevents the heart from pumping blood to the brain and vital organs. There is an immediate cessation of the heart. In most cases, there are no warning signs or symptoms. **A heart attack is a “plumbing” problem** caused by one or more blockages in the heart’s blood vessels, preventing proper flow, and the heart muscle dies. Symptoms include chest pain, radiating pain in left arm, between shoulder blades, and/or jaw, difficulty breathing, dizziness, nausea and vomiting, and sweating. In some cases, a heart attack may lead to a sudden cardiac arrest event.

2 Resuscitation from SCA

**When someone collapses from SCA, immediate cardiopulmonary resuscitation (CPR) and use of an automated external defibrillator (AED) are essential for any chance of recovery.** The AED analyzes the heart rhythm of the victim, and if necessary, a computerized command will instruct the user to press a button to deliver an appropriate shock to restore the normal operation of the heart. These devices are failsafe and will not cause injury to the user, nor will they deliver a shock if none is needed. For patients in “VF”, studies show that if early defibrillation is provided within the first minute, the odds are 90 percent that the victim’s life can be saved. After that, the rate of survival drops ten percent with every minute. As many as 30 to 50 percent would likely survive if CPR and AEDs were used within five minutes of collapse.

Many heart failure patients who have either suffered an SCA or are at risk, have surgery to implant a small device called an implantable cardioverter defibrillator, or ICD. ICDs are designed to recognize certain types of arrhythmias and correct them with a shock. Ninety five percent of lethal ventricular arrhythmias were shown to be effectively terminated by ICDs.
Who is at risk for SCA?

SCA can strike persons of any age, gender, race, and even those who seem in good health, as evidenced by world class professional athletes at the peak of fitness. Many patients who may be at risk are not being identified, screened and given options for medical treatment. If someone has any of the following risk factors or symptoms, he/she should discuss with a doctor whether further heart testing and/or evaluation by an electrophysiologist (EP) or cardiologist is necessary:

- History of early heart disease, heart attack or cardiac death in the family
- Unexplained fainting or near fainting or palpitations
- Chest pain, shortness of breath or fainting with exertion (such as during sports)
- Heart failure or heart attack
- Weak heart muscle or a cardiac ejection fraction (EF) of less than 40% (EF refers to the percentage of blood that is pumped out of the heart’s main pumping chamber during each heartbeat)
- Cardiac risk factors such as high blood pressure, diabetes, obesity, smoking, or high cholesterol

Prevention

About 80 percent of SCA victims have signs of coronary heart disease. Leading a heart healthy lifestyle is important in preventing coronary artery disease and other heart conditions.

- Learn CPR and the use of an AED
- Activate 911 immediately in an emergency
- Help your community by advocating placement of AEDs in public places
- Know your personal and family health history that may identify risk factors
FACT:

FACT SHEET: Sudden Cardiac Arrest vs. Heart Attack

Same or Different?

SUDDEN CARDIAC ARREST

- Sudden Cardiac Arrest (SCA) is a condition that occurs when the heart stops pumping blood. Usually, this is caused by an electrical problem in the heart.
- Occasionally, there is a mechanical problem where there may be a normal electrical signal; in turn the heart muscle fails to pump.
- Sometimes SCA is caused by severe hemorrhage and other issues.

HEART ATTACK

- A heart attack is caused by a circulation or plumbing problem of the heart, when one (or more) of the arteries delivering blood to the heart is blocked. Oxygen in the blood cannot reach the heart muscle, and the heart muscle becomes damaged.
- This damage to the heart muscle can lead to disturbances of the heart's electrical system. A malfunction of the heart's electrical system may cause dangerously fast or slow heart rhythms that can cause SCA.
- Many SCAs occur in patients with coronary heart disease. If the patient suffers a heart attack, there is a higher risk for SCA.

UPDATED JUNE 2008
Why Should First Responders Work To Increase Awareness Of SCA?

First responders are uniquely positioned in local communities to improve the links of the “chain of survival,” and raising awareness of SCA is an all-around win for first responders. Too often, first responders go unnoticed by the public, even during medical emergencies during which they are the first line of defense.

This program will enhance the image of first responders as leaders in emergency care. It puts a face on the profession of emergency responders and shines light on the invaluable role of responders in maintaining public health and safety. Ultimately, this program’s goal is to increase survival rates of SCA, yet that alone is not the only positive result. Relationships with first responder agencies and various community groups will become stronger and greater recognition will be paid to the importance of bystander intervention and first responders through public events honoring their lifesaving and heroic acts.
What’s Your Community’s IQ When It Comes To SCA?

Most people do not know what SCA is, how it differs from a “heart attack,” and how to respond to it. It’s not surprising then that most people aren’t aware the threat of SCA exists within their own homes and communities.

Before reaching out to educate residents about the public health crisis of SCA, it’s helpful to identify and measure data within your community. In other words, find out how informed or equipped your community is about SCA. Addressing the following questions can provide you with a solid starting point to develop productive and effective community outreach efforts:

- Are there AEDs located throughout your community? Identify the number of AEDs and where they are located.
- How many cases of out-of-hospital cardiac arrest have occurred in your community? Of those, how many resulted in survivors?
- Do schools and athletic organizations have emergency action plans addressing SCA?
- Is SCA a focus of health classes?
- How many local residents are trained in CPR/AED use?
- Are there other local organizations that educate residents about SCA?