

Health & Well-Being @ISSUE

a publication of the rapides foundation

fall 2000

F O C U S : A E D P R O J E C T

The Shock That Saves

In the dramatic television series “ER,” rarely does a week go by without at least one patient going into cardiac arrest. In this scenario, the emergency room doctors rush in, press paddles on the character’s chest, yell “clear!” and apply an electric shock to restore a normal heartbeat. The sense of urgency is palpable during such scenes — you know the patient’s life hangs in the balance, and speed is critical.

In the real world outside TV, life and death scenes occur all too often. But when real people have real heart attacks, it typically doesn’t happen in a well-equipped and professionally-staffed hospital emergency room. It may happen to a farmer in his cotton field, or to a shopper at the mall, or to a golfer on the 9th hole, miles away from a medical center or even an ambulance.

Unfortunately, the survival rate for victims of sudden cardiac arrest is not good: more than 95 percent of these victims die, according to the American Heart Association. Each minute of delay in returning the heart to its normal pattern of beating decreases the chance of survival by 7-10 percent. After as little as 10 minutes, very few resuscitation attempts are successful. Every year, about 225,000



The very “user-friendly” AED has built-in computers which assess the patient’s heart rhythm and judge whether defibrillation is needed.

Americans die from cardiac arrest.

It’s obvious that the key to boosting the cardiac arrest survival rate is speedy response, and that’s how a powerful little device called the AED - automated external defibrillator - can turn victims into survivors.

An AED is a portable device used to administer an electric shock through the chest wall to the heart. When a heart attack becomes a full cardiac arrest, the heart most often goes into uncoordinated electric activity called ventricular fibrillation. The heart twitches ineffectively and can’t pump blood.

(continued)

Rapides Foundation and Heart A

The Rapides Foundation has partnered with the Alexandria office of the American Heart Association to launch a major initiative to place automated external defibrillators (AEDs) in volunteer fire departments in Central Louisiana's rural communities.

"Saving lives is the focus of this project," said Joe Rosier, president and chief executive officer for the Rapides Foundation. "We believe Central Louisiana will become a role model for the rest of the country on how to bring communities together to be trained and equipped to use these lifesaving devices."

The Foundation has earmarked \$360,000 for the new AED program. The project will train and equip rural fire departments in five area parishes, including Rapides, Winn, Avoyelles, Grant and LaSalle. The Heart Association will provide free training to the volunteer firemen whose departments receive AEDs.

"These volunteer fire departments are typically the First Responders in their communities - the first ones on the scene of an emergency in remote areas," explained Rosier, "so it's important to have AEDs in their hands."

Agrees Sharon Bethea, senior health initiatives manager for the Louisiana office of the American Heart



Members of the Operation Heartbeat Committee (left to right) M.W. Grantham, Mickey Christy and Larry Davis

Association. "Right now, only about 10 percent of the rural fire departments in our area have AEDs," she said. "The project's goal is to have 100 percent of the rural fire departments equipped with AEDs by the end of next year. As a result, hundreds of lives will be saved each year in Central Louisiana."

To encourage the use of AEDs throughout the state, a 1999 Louisiana law ("Louisiana Public Access to Defibrillation—PAD—Legislation") was passed which allows non-medical personnel to use AEDs and provides limited liability

The Shock That Saves (continued)

The AED delivers electric current to the heart muscle, momentarily stunning the heart and stopping all activity. This gives the heart an opportunity to resume beating effectively.

Defibrillation can restore the heart's normal rhythm if done within minutes of the arrest. Hospitals and ambulances carry sophisticated defibrillators that must be operated by medical personnel. But the smaller, simpler AED is designed for use by non-medical personnel who may reach a heart attack victim first. It's another tool, in addition to CPR

(cardiopulmonary resuscitation) that a layperson may use to save someone's life.

Technology has made this possible. Very "user-friendly," the AED has built-in computers which assess the patient's heart rhythm, judge whether defibrillation is needed and then administer the shock. A voice prompt guides the rescuer through the process of administering defibrillation.

By making the device do the technical work, the AED opens the door for police, firefighters, flight attendants, security guards and other lay rescuers to safely operate these defibrillators with a minimum of training.

Developed in the 1980s and refined over the years, today's AEDs are compact, lightweight and relatively small - typically less than 12 inches square. Depending upon the manufacturer and model, each AED costs an average of about \$3,000.

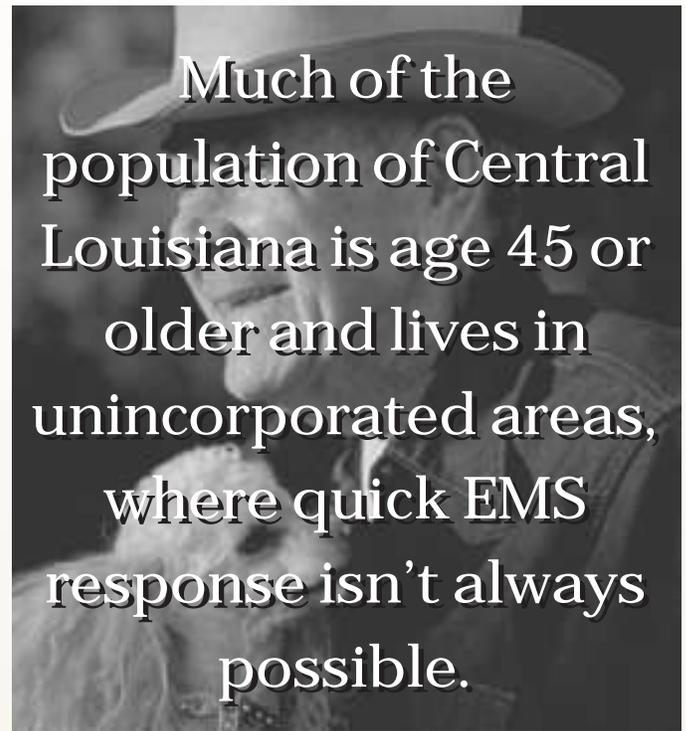
Association Launch AED Program

immunity for them. The law also requires that any entity possessing an AED must have either a physician or advanced practice nurse as medical director, to ensure compliance with training, maintenance and EMS notification requirements.

The local project is a part of the American Heart Association's nationwide "Operation Heartbeat" program, designed to strengthen the "Chain of Survival" for sudden cardiac death and cardiac emergencies in all communities. The Chain of Survival is a series of four steps to successfully treat such emergencies; it includes early access to care, early CPR, early defibrillation, and early advanced care. The national goal is to reduce by 25 percent the instances of death due to cardiovascular diseases by the year 2008.

The Heart Association also strongly encourages establishing PAD programs in any area where large numbers of people congregate, such as sports arenas, high-rise buildings, gated communities, large manufacturing plants and shopping malls. It has been estimated that establishing defibrillation programs in these facilities could help save as many as 50,000 lives per year.

Locally, the Alexandria chapter of the AHA has developed a committee of volunteers with emergency



cardiovascular care (ECC) expertise, emergency medical professionals, hospital and 911 office representatives who are working to plan and implement Operation Heartbeat in Central Louisiana. Committee members are evaluating the local "Chain of Survival," and discussing what can be done to improve response and survival rates.

The Rapides Foundation is a philanthropic organization that provides grants to organizations throughout an 11 parish service area that share the foundation's mission to improve the health and well-being of Central Louisiana.



The Rapides Foundation
www.rapidesfoundation.org



AED Program



Ken Saunders with members of the England Airpark Fire Department (back left to right) Kenny Bordelon, Todd Gohmert and Mike Anthony

“Living Proof” that AEDs Save Lives

By his own admission, Ken Saunders shouldn't be here. The 56-year-old retired school administrator credits the automated external defibrillator, known as an AED, with saving his life when he collapsed a year and a half ago at a school function.

“I'm living proof that it works,” he says, remembering how England Airpark firemen and Acadian Ambulance paramedics used AEDs to shock his heart repeatedly - 14 times in all - after he suffered a heart attack.

It was May of 1999, and Saunders, who was supervisor of transportation and safety for the Rapides Parish School Board for many years, was attending an end-of-the-year party for school cafeteria workers held at a facility within England Airpark.

“I passed out,” Saunders recalls now, “and was out for over 15 minutes.” Two people there started administering CPR, and continued until the fire department arrived. They had just acquired an AED, and England firefighter Mike Anthony began using it to shock Saunderson's heart.

“He shocked me 12 times, and Acadian Ambulance arrived and they shocked me two more times,” says Saunders. “My cardiologist said I shouldn't be here.” Saunders was taken to Rapides Regional Medical Center, where he spent a week in

intensive care.

He left with an implanted defibrillator, which has since been replaced with a combination pacemaker and defibrillator. Each has been activated once, Saunders says, when his heart started “skipping.”

“He shocked me 12 times, and the Acadian Ambulance arrived and they shocked me two more times.”

Ken Saunders

While he did not have a history of heart disease, the former school official remembers experiencing chest pains in 1989; subsequent tests revealed a rare tumor on his heart valve, which was removed. After his May 1999 heart attack, Saunders had a mild stroke that October. He took disability retirement in March of this year.

Though he admits he “gets tired quickly,” he plays a little golf now and then, and appreciates getting a second chance at life. He advocates increasing the availability of AEDs in the community.

“There's no telling how many lives can be saved if AEDs were in each fire department,” he says.

When Every Second Counts



Allan Bernheisel of the Pineville Fire Department and Ruby-Kolin Volunteer Fire Department is a member of the local Operation Heartbeat Committee.

“We know that for every minute a person is in cardiac arrest, their chances of survival go down 10 percent,” said Dr. Emmanuel Witherspoon, an emergency room physician at Rapides Regional Medical Center in Alexandria.

Agrees Allan Bernheisel, a firefighter with the Pineville Fire Department and the volunteer Ruby-Kolin Fire Department in rural north Rapides Parish. “That first 10 minutes of cardiac arrest are so critical.”

Dr. Witherspoon co-chairs and Bernheisel is a member of the local Operation Heartbeat committee, a group working with the American Heart Association’s Alexandria office to strengthen emergency treatment of sudden cardiac arrest. Dr. Witherspoon is also medical director for the Pineville Fire Department.

Both men have seen firsthand the results when there is a delay in administering CPR or defibrillation to a heart attack victim.

“One of the most depressing things to see in the emergency room is a heart attack patient who is brought in who has been ‘down’ too long. If that patient hasn’t received bystander CPR or defibrillation, his chances for survival are greatly diminished,” said Dr. Witherspoon.

Getting speedy assistance to a heart attack patient can be hampered by a number of factors, however. Geography plays an important role.

“In rural areas, there are usually no ambulance stations, but there are fire departments,” said Bernheisel. Members of the fire department who live or work in their communities can often get to an emergency scene faster than can an ambulance or helicopter traveling from a nearby city. “We’ll normally beat the ambulance by anywhere from 10 to 25 minutes.”

Added Shawn Lacombe, a registered nurse and education coordinator for the ER staff at Rapides Regional Medical Center; “The most important thing is the time. In rural areas, if a cardiac arrest patient doesn’t get CPR or defibrillation from an AED, his chances of survival are practically nil.”

The Ruby-Kolin Fire Department purchased its own AED two years ago with locally-generated funds, explained Bernheisel, and has used it several times. The Pineville Fire Department received three AED units in September through a grant from the Rapides Foundation.

Putting more AEDs out into the community can certainly increase the number of cardiac arrest survivors, Bernheisel believes. “Who’s to tell over the last five or six years the difference it would have made if there had been more AEDs out there,” he said.

Volunteer firefighters with the 35-member Oak Hill Fire Department in Rapides Parish made a difference in one elderly woman’s life last November, when she suffered a heart attack while in church. Assistant Chief Mickey Christy, who also works for the Alexandria Fire Department, relates that community firemen were on the scene within three minutes with their AED.

“We delivered one or two shocks, she converted to a normal heartbeat and the ambulance arrived to take her to the hospital. ”Importantly, a nurse who happened to be in church with the woman administered CPR before the AED arrived.

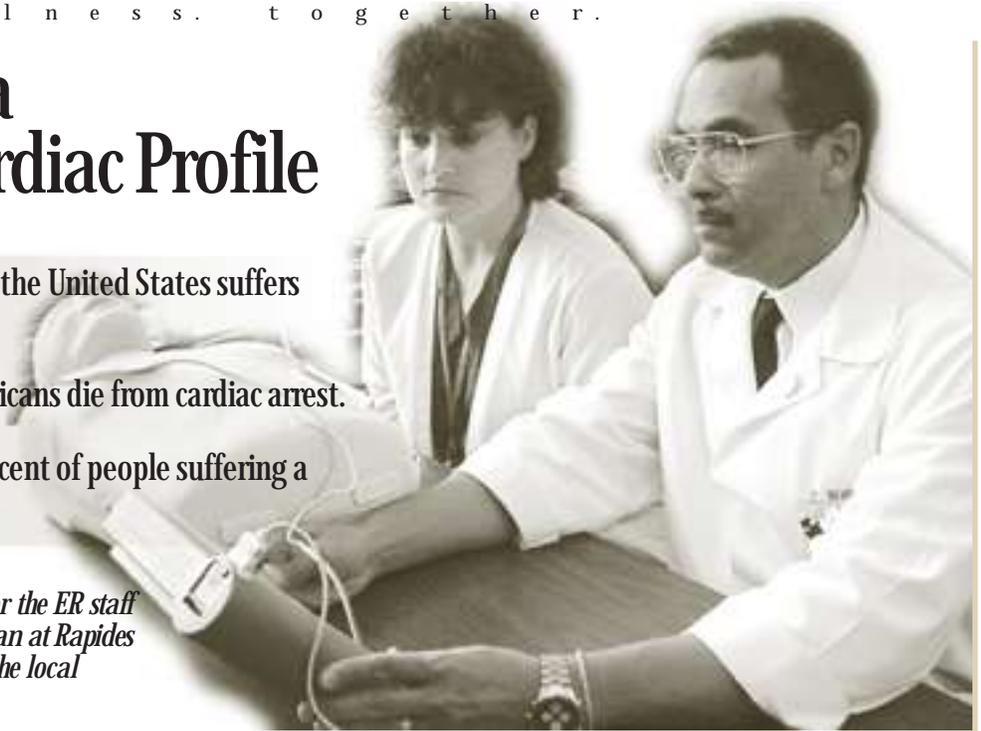
The Oak Hill Fire Department, which can also provide paramedic services, purchased AEDs several years ago with money generated in that community.

“AEDs have got to be in the hands of the people on the scene,” emphasized Christy. “The links in the chain of survival have to be close.”

How to Change a Community's Cardiac Profile

- ♥ Every two minutes, someone in the United States suffers sudden cardiac death.
- ♥ Every year, about 225,000 Americans die from cardiac arrest.
- ♥ Nationwide, only about five percent of people suffering a sudden cardiac arrest survive.

Shawn Lacombe, education coordinator for the ER staff and Dr. Emmanuel Witherspoon, ER physician at Rapides Regional Medical Center are co-chairs of the local Operation Heartbeat Committee.



Grim statistics like these are jolting. They give a sense of urgency to the American Heart Association's nationwide push to help communities reduce their mortality rates from cardiac emergencies.

The organization which has chapter offices all over the United States, has set a goal of reducing by 25 percent the instances of death due to cardiovascular diseases by the year 2008. Through their "Operation Heartbeat" program, they are focusing their efforts on acute events such as cardiac arrest and heart attack. As many as 50,000 lives a year could be saved if the program were implemented across the country, according to the association.

To strengthen the "Chain of Survival," the AHA recommends the following series of steps:

1. Early access - recognizing a cardiac emergency and calling 911.
2. Early cardiopulmonary resuscitation (CPR) - administering CPR buys time by circulating oxygen-rich blood to the heart and brain.
3. Early defibrillation - shocks the heart back to a normal rhythm.
4. Early advanced care - provides any additional care such as intravenous drugs or airway management.

Establishing "public access defibrillation" or PAD programs is an important part of strengthening the chain of survival, according to the AHA: "The availability of safe, effective, easy-to-use external defibrillators (AEDs) - combined with new legislation that provides limited liability coverage for lay AED users - has increased interest

in placing these devices in areas where defibrillation capabilities aren't what they should be."

Many states, including Louisiana, now offer legal immunity to lay rescuers who use AEDs. The U.S. Senate has also passed measures within the past two years to encourage the use of AEDs throughout the country.

In Seattle, Washington, a concerted effort to improve that city's cardiac emergency response system brought the survival rate from cardiac arrest up from five percent to 20 percent.

"They beefed up their 911 system, established an effective public education program, worked with local hospitals and distributed AEDs to many areas of the city, from airports to police and fire departments," explained Sharon Bethea, senior health initiatives manager for the Louisiana office of the American Heart Association. Seattle also trimmed the average time to defibrillation to less than seven minutes.

A study done a few years ago in the Seattle area showed that the incidence of cardiac arrest was higher in airports, county jails, shopping malls and public sports stadiums and arenas. That information helped guide officials to place AEDs in those locations. "We want to try to follow Seattle's example," added Bethea.

In Ontario, Canada, survival rates for "out-of-hospital" cardiac arrest increased 33 percent after making improvements to their 911 system, providing more public CPR training and reducing response time to eight minutes or less from collapse to defibrillation. Firefighters there were also equipped with AEDs.

Other cities which have documented improvements to cardiac survival rates include Houston, Milwaukee and Cincinnati.

The emergency response time for Rapides, Avoyelles and Allen parishes is nine minutes - within industry standards. However, the average response time in LaSalle Parish is 12-15 minutes, and in Winn and Grant it is even longer.

Grant Update:

The Rapides Foundation Grants from July-September 2000

Arts and Humanities Council of Avoyelles To conduct a cultural assessment and continue organizational development activities.	\$25,000	1 yr
Arts Council of Central Louisiana Development of a writer's guild in Cenla.	4,000	1 yr
Arts Council of Central Louisiana Program development for a major arts in education effort.	10,000	1 yr
Alexandria Metropolitan Foundation Feasibility study for the development of a small business incubator in Cenla.	10,000	1 yr
Central Louisiana Area Health Education Center Implementation of a major hospice education initiative and related subsidies for indigent hospice care.	350,000	2 yrs
Community Senior Citizens Multipurpose Resource Center Implementation of various health and wellness activities for older adults in South Alexandria.	80,000	2 yrs
Eighth District Baptist Association Implementation of health and wellness programs targeting chronic disease within multiple African-American congregations.	120,000	2 yrs
Emma R. Williams Education Foundation Planning and organizational development for this Natchitoches community-based group.	5,000	1 yr
Inner-City Revitalization Corporation Partial support of home maintenance program for low-income seniors focusing on safety and accessibility repairs.	40,000	3 yrs
Kuumba Center Implementation of health and wellness programs at two predominantly African-American Catholic congregations.	50,000	2 yrs
Louisiana College - Division of Nursing Establishment of a technical support and outreach center for faith-based health and wellness programs.	1,000,000	3 yrs
Louisiana State University at Alexandria Planning effort in conjunction with local healthcare employers to determine long-term healthcare professional training and hiring needs.	67,975	1 yr
Louisiana Technical College (Ville Platte) Collaborative effort with AFCO Industries, Cabot and Cameron-Cooper to implement customized employee assessment and training activities.	400,000	3 yrs
Louisiana Technical College (Natchitoches) Collaborative effort with Martco and Trus Joist for pre and post-employment training.	108,000	1 yr
Mamou (Town of) Matching funds for establishment of health resources center at city-owned facility.	5,000	1 yr
North Louisiana Goodwill Industries Rehabilitation Center Collaborative effort with Rapides Regional Medical Center and CHRISTUS St. Frances Cabrini Hospital to pilot career ladders for housekeeping and food service workers in order to improve retention and recruitment efforts.	50,000	1 yr
Northwestern State University Collaborative effort with Martco, Alliance Compressor and Boise Cascade to support employee skills assessment and indicated training for employees in electrical and mechanical maintenance areas.	190,000	2 yrs



Grant Update:

Northwestern State University Continuing Education Department Collaborative effort with Alliance Compressor and ConAgra to implement a joint recruitment, training and advancement program.	\$155,000	2 yrs
PBWS Organizational and planning support for this Jena-based group focusing on adolescent risk issues.	10,000	1 yr
St. Mathews Baptist Church Start-up funds for church based health clinic.	10,000	1 yr
Sickle Cell Anemia Research Foundation Establishment of a specialty clinic for adults with sickle cell anemia.	201,000	3 yrs
Sisterhood of Central Louisiana Operations support for efforts in HIV/AIDS education in South Alexandria.	80,000	2 yrs
The Rapides Exploratory Education House (TREE House) Matching support for operations for this Cenla based children's museum.	150,000	3 yrs
United Educational Missionary Baptist Association Implementation of health and wellness programs targeting chronic disease within multiple African-American congregations.	120,000	2 yrs
United Hands for Youth Center Matching fund support for youth technology program in Concordia Parish.	65,000	2 yrs



The Rapides Foundation

Toll-Free Foundation Number 1-800-994-3394



is published by The Rapides Foundation

*The Rapides Foundation continues
a legacy of community healthcare
initiated in 1903.*

President/CEO:
Joseph R. Rosier, Jr., CPA, CFA

Editor:
Vicki Bemard

Contributing Writer:
Melanie Torbett

For additional copies or to be added
to the mailing list contact:
The Rapides Foundation
P.O. Box 11937
Alexandria, LA 71315-1937

Tel: 318-443-3394
Fax: 318-443-8312
Toll Free: 1-800-994-3394

Internet: www.rapidesfoundation.org
e-mail: info@rapidesfoundation.org

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