



COOKEVILLE, TN
COMMUNITY PROFILE



A SAFE PLACE FOR SUDDEN CARDIAC ARREST



Although it's impossible to predict when or where sudden cardiac arrest will strike, or who its victims might be, there's a better chance or survival if you happen to be stricken in the city of Cookeville, Tennessee. The 26-square-mile community of 26,000 has more automated external defibrillators (AEDs) per capita than most U.S. cities. This means chances are excellent that someone can get an AED to a cardiac arrest victim within one to five minutes to administer the shock vital for restoring normal heartbeat and saving a life.

Cookeville, with a unique small-town blend of farmland, retail, manufacturing and college life, began implementing a community-wide AED program in 1998 with the clear goal of saving more lives. "We wanted to make our community one where the chance of surviving a cardiac arrest is better than anywhere else," said Cookeville Fire Chief Gene Schmid, whose department was instrumental in executing the city's AED program, as well as coordinating and overseeing private sector initiatives.

Today there are 30 Heartstream AEDs in strategic locations throughout the municipality, which also serves as county seat of rural Putnam

County. All city buildings and city facilities are equipped, along with 4 fire engines and 16 police cars. There are AEDs in the sports complex, recreation center, senior citizens center, city park, technical university, and other public places where people work and gather.

To support the strategic placement of these small and easy-to-use AEDs, there are almost 500 public and private citizens trained to use the lifesaving medical devices and administer CPR (cardiopulmonary resuscitation). In addition, at least one large manufacturer in Cookeville has plans to purchase AEDs and train a team of employees to use them.

As a result, "anyone who has cardiac arrest in the city has a real good possibility of someone getting to them in most places from one to three minutes, and at the most four to five minutes," Chief Schmid said.

And, according to the city's mayor, Charles Womack, who also happens to be a practicing neurologist, the goals for the program are even more ambitious: add four more AEDs to the fire

STATISTICS

Population:	26,000 Residents
Program Implementation:	1998
Trained Responders:	Fire, Police, City Employees, and Trained Citizen Responders
Number of AEDs:	30
AED Locations:	Industry, Fire and Police Vehicles, Sports Complex, City Buildings and Facilities, Technical University, Senior Citizen Center, Recreation Center, and City Park
Number of Saves:	1

department; re-certify city employees in CPR/AED training every two years; train new city employees as they are hired; reach out to train more private citizens, perhaps even as young as teenagers; and get more private companies to initiate their own AED programs.

Dr. Womack, one of the original advocates for the program even before becoming mayor, says early access to AEDs enhances the ability to respond quickly to cardiac arrest and increases the survival rate for victims. It was Cookeville's community AED program, he notes, that was instrumental in saving the life of a 65-year-old Cookeville woman.

SAVING A LIFE MAKES IT ALL WORTHWHILE

Mrs. Joy Wilhite probably wouldn't be alive today if not for an AED located on a fire engine stationed near her home. It happened on a hot July day in 1999. Mrs. Wilhite was cooking a meal for her visiting son when she suddenly and without warning went into cardiac arrest. Jim Wilhite was in another room and heard a strange noise. He rushed into the kitchen and caught his mother as she collapsed. He immediately called 911.

Luckily for Mrs. Wilhite, the engine that responded to the emergency call carried an AED. Even more fortunate for her was the fast response time; the truck arrived within one minute of the call. "The fire department was here almost by the time Jim could hang up the phone," she said. "They said if I'd been out much longer, it (defibrillation) might not have worked."

Mrs. Wilhite was unconscious, not breathing, and without a pulse when the firefighters arrived. Her skin had turned dark blue. A lifesaving shock was administered, along with CPR, restoring her pulse, breathing and normal color within minutes.

Mrs. Wilhite's survival chances would have been greatly diminished without immediate access to an AED. This is because time is of the essence when dealing with cardiac arrest. An unattended victim's chances of survival decrease by approximately 7 to 10 percent with each passing minute, according to the American Heart Association (AHA). After 10 minutes survival rates drop to zero.



Fire Chief Gene Schmid, Survivor Joy Wilhite, and Mark Goolsby, EMT

Naturally, Mrs. Wilhite has plenty of good things to say about Cookeville's AED program: "To me it's wonderful. I just wouldn't be here without it," she said. "I wasn't ready to go. I feel like I got a second chance."

"If I could afford it, I'd buy one for everybody, everywhere that needed them," Mrs. Wilhite added.

Based on this rescue and the program's potential to save other future cardiac arrest victims, both the Mayor and Fire Chief agree that the AED program in Cookeville is a huge success. Said Chief Schmid: "**You save one life and the money is well invested.**"

STRONG ADVOCATES RALLY BEHIND THE PROGRAM

Cookeville's well-established community defibrillation program owes its success to the vision and backing of two public officials with "M.D." in their titles, as well as the unanimous consent of the city manager and city council.

Dr. Womack first learned about the Heartstream AED in 1997 when he took advanced cardiac life support (ACLS) training. Tennessee's EMS director, Dr. Sullivan Smith, who is based in Cookeville and also works as an emergency room doctor there, was teaching the course.



Chris Holmes and Linda Davis put City Hall's AED into service

Dr. Womack, who donates his time and medical talents in mercy missions to impoverished areas in South America, was convinced immediately.

"We started talking and we said we need to have this all over Cookeville," he said. "We went to the hospital board and got the hospital (Cookeville Regional Medical Center) to purchase four defibrillators to give to the city in 1998."

Those initial four units were an unexpected windfall for Fire Chief Schmid. To help his department fulfill its credo to "make Cookeville a safer place to work and live," he had recently determined that AEDs were essential equipment for his department. Unfortunately, he had only enough funding in his budget to purchase one AED. Thanks to the hospital's generosity, however, he was able to equip each of his four stations with the lifesaving device.

The program subsequently expanded from there with city funding after Dr. Womack became Cookeville's part-time mayor in 1998.

Today Chief Schmid oversees a community AED program with 30 Heartstream AEDs and says Cookeville had the right people in the right place at the right time: **"We were fortunate to have a mayor who really wanted to see this happen and a city council and city manager that were 100 percent behind it," he said. "They all saw the value of it and they all supported it."**

"I can't give those two men (Drs. Smith and Womack) enough credit," Chief Schmid added. "They really did push this and worked real hard for it. Dr. Smith is a man of vision. He foresaw this and persuaded the mayor, who caught on fire for it. Their energy is what created it."

Dr. Womack concurs: "Since becoming mayor I've tried to get them everywhere. It's a rare event to use a defibrillator, but when you need them, you need them, and I think they need to be ubiquitous, like fire extinguishers and first-aid kits."

STATE LEGISLATION EASES IMPLEMENTATION OF THE PROGRAM

When Drs. Smith and Womack initially teamed up to push for a city-wide AED program, they realized they would need help at the state level

first. What was missing was liability protection for the well-intentioned people who would be trained to respond to cardiac arrest.

Both men worked to recruit three groups – the Emergency Services Association, the Tennessee Medical Association, and the American Heart Association – to come together to sponsor a Good Samaritan AED bill in the state legislature. The bill passed in May 1999 and became law the following month.

CITY USES PHASED-IN APPROACH TO BETTER ABSORB COSTS

Getting the top city officials to agree to the need for a community-wide AED program was "relatively" easy, according to the Mayor. "They've been very enthusiastic about it," he said.

The biggest challenge, however, was funding. Since the vote to implement the program was unanimous, the city manager and city council members worked with Dr. Womack on devising a feasible solution to make it easier for the city to absorb the cost of the \$77,000 program.

They decided to phase in the program and spread costs over a two-year period starting in 1999 with the purchase of 15 Heartstream AEDs. Nine more were installed in 2000, adding a total of 24 to the original four donated by Cookeville Regional Medical Center. Then, Tennessee Technological University, with an enrollment of 8,200 students, purchased two, one for its sports complex and one for a security patrol car, bringing to 30 the number of AEDs under the city's jurisdiction.

Funding for the 24 AEDs purchased in 1999-2000 came directly out of the city coffers and the budgets of the individual departments that would carry or install the units. Dr. Womack believes future additions to the program will be funded in the same manner.



TRAINING ACCOMPLISHED WITH EASE

On the surface, training 380 city employees in CPR/AED might seem a daunting task, but the city handled the duty cost-effectively and with relative ease. Sixteen of Chief Schmid's firefighter EMTs and paramedics became certified through the AHA to teach their municipal colleagues the AHA Heart Saver AED course.



Fire Chief Gene Schmid, Mayor Charles T. Womack and Firefighter/Paramedic Richard Billings

The training was conducted in 2000 over several weeks with two four-hour sessions held three to four times a week. “We kept the class sizes to the AHA guidelines of four students to one instructor,” Chief Schmid said. “Class sizes were usually around 20.”

The police department, with approximately 95 members, was trained first, followed by the rest of the city employees. The 49 fire department personnel had been trained previously.

The enthusiasm of the city’s 380 employees also helped facilitate the training process. Chief Schmid said these folks **“take a lot of pride in the program. I go around every month and look at the AEDs in the public buildings, and the employees have all checked them and taken care of them.”**

By using his department’s personnel to conduct the training, Chief Schmid noted that costs were kept to a minimum. “Training was paid for from the city’s budget. Overtime pay for the fire department’s teachers came out of my budget. Books and other supplies came from the various departments (being trained),” he said.

Re-certification training, held every two years, is scheduled for 2002. Chief Schmid says it “will be done the same way. We will just work until we get them all.”

PROGRAM EXPANDS BEYOND COOKEVILLE INTO PUTNAM COUNTY

Success can catch on like wildfire, especially when people come together for the greater good. There is clear evidence of this in the fact that outlying Putnam County, upon seeing the success of Cookeville’s AED program, decided to enhance its own AED program, too.

With Dr. Sullivan Smith as his inspiration, Randy Porter, Putnam County’s director of Emergency Services, became the initial advocate for expanding the AED program into the county.

Porter wanted all five county buildings to have AEDs and all 235 county employees trained to use them. The 403-square-mile rural county already had two AEDs in sheriff deputy patrol cars, but Porter wanted to add seven more. He brought his proposal before the 24-member Board of County Commissioners in 2000. They unanimously approved the program and earmarked funding for the purchase of the AEDs and the necessary training.

Today there are AEDs in the county jail, courthouse, library, justice center, and court clerk’s building, as well as in the fire station in the small city of Monterey and another that rotates in the two police cars that patrol the town of Algood. Training the county employees was handled efficiently in the same way Cookeville conducted its sessions. Two of Porter’s paramedics were AHA certified and in turn trained the others.

Porter notes that although the AEDs have not been called into use yet, everything is in place and everyone is prepared to respond appropriately. “It’s something you just never know, you go a year or two and never use one, and then you can use two or three in the next month.”

Porter is pleased with the county and Cookeville efforts: "We've got quite a few AEDs scattered about," he said. "And we've got the county pretty well-saturated with people that can do CPR and work the AEDs."

"The program is continuing to grow, but we've pretty much done what we can with the county and now you're starting to see it spread into the private sector." Churches are starting to look at them, Porter noted. And recently a private citizen with a history of cardiac problems bought one for his home on the recommendation of his doctor. Porter's department helped the man purchase the AED and trained his family to use it.

PRIVATE SECTOR SEES AED BENEFITS AND BEGINS TO FOLLOW SUIT

As Putnam County's Porter observed, the AED program is starting to take root in the private sector. With help and guidance from the Cookeville Fire Department, Tutco, Inc., a large manufacturer of electric heater assemblies, is hoping to implement its own AED program on-site within a year. The company employs 500 people in two adjacent facilities. Plans call for the purchase of two AEDs, one for each of the company's buildings in Cookeville, and training for a team of about 40 first responders, including first-aid responders, supervisors and managers.

Tutco Safety and Training Director Donna Harris says having AEDs in-house is an important company benefit: **"We not only have to worry about work-related injuries, but we also have to worry about health-related incidences and providing quality care until those who can give a more extensive level of care arrive on the scene."**

To get the program going, Tutco has turned to Chief Schmid's department for guidance on logistics and selecting the best AED. "We feel like they're the experts. They can certainly guide us in that area (of product selection). They've been very helpful and cooperative," Harris said. "They've shared what we would need to do as far as having a written program and a medical officer signing off on it so that we can have the defibrillators in-house."

Harris points out that there are employees at Tutco who are at increased risk for cardiac problems because they have had previous heart attacks off-site. She has not had to respond to a cardiac arrest incident at the workplace yet, but she has responded to stroke victims and was thankful to have had the tools, such as oxygen for instance, to deal with those unsettling events. She said she wants defibrillators in place for the same reason – so that her team can respond appropriately to cardiac arrest.

"As first responders, we feel this is the next level up in terms of the quality of care we can provide," Harris said. "We see the defibrillator as being a tool in which to do that. It could save someone's life in a matter of minutes."

TRAINING MORE CITIZEN RESPONDERS IS A MAJOR PROGRAM GOAL

Dr. Womack hopes to see more private companies like Tutco follow the city's example and implement their own in-house AED programs. He said this is now possible because of the statewide legislation in place. "Having a bill that limits liability is key for private industry to put these in," he emphasized.

The mayor's other goals for the program include AED training at the high school level. "The ideal program would be to train high school kids during health class on the use of a defibrillator," Dr. Womack said. This, he insists, would ensure a steady stream of city residents trained to respond to cardiac arrest.

Currently, there is a small group of approximately 50 private citizens in Cookeville trained in CPR and the use of an AED. These citizen responders received their training during a one-week course, called the Citizen's Fire Academy, that is run twice a year by the fire department. About 25 people can attend the course for a nominal fee of \$35. Chief Schmid said the academy is "targeted at people in the community who are interested in the fire service" and it helps "familiarize the community with what the fire department does."

COOKEVILLE'S ELEMENTS FOR SUCCESS CAN BE REPLICATED ANYWHERE

The officials of Cookeville consider themselves fortunate to have had all the right components for a winning AED program come together at the right time. The unwavering support of early advocates was, first and foremost, the key element for success.

Unlike Cookeville, few communities have a mayor who's an M.D. However, such impressive credentials are not necessary to establish a community AED program. **"The program needs strong advocates to get going and that can be anybody in the community who is interested,"** said Chief Schmid. "But that person really needs to exist for this type of thing to get started."

Mayor Womack agrees and says getting the support of civic clubs, such as Kiwanis and Rotary Club, can be helpful as well. He also says "training is key." He recommends that communities reach out to get people trained or at least to raise awareness for the need and the benefits of an AED program.

Once there's agreement and funding is secured, Dr. Womack further recommends that communities place AEDs "in the hands of police and fire" to have the most immediate impact on survival. He stresses that the ultimate goals should be to get AEDs to SCA victims within three minutes and dramatically increasing the cardiac arrest survival rate from 7 percent, which is where it stands without a community AED program.

That's their, Dr. Smith's and Randy Porter's, shared vision for Cookeville and Putnam County. And thanks to it, the area will be prepared for cardiac arrest and many more people like Joy Wilhite may be fortunate to receive their "second chance," too.



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