



NEW BEDFORD, MASS  
COMMUNITY PROFILE



## HELPING TO SAVE LIVES WITH THE PHILIPS DEFIBRILLATOR



Captain James Trout, Paramedic Community Training Center Program Coordinator

"Around the World!" shouted the men aboard the whaling ships that embarked from New Bedford's legendary harbor and traveled to far-flung corners of the globe in search of whale oil. Herman Melville, who shipped out of New Bedford in 1841, used his whaling experience as the basis for the novel *Moby Dick*.

Generations later, the same enthusiasm and pioneering spirit have again taken hold in New Bedford, but this time to serve a different goal. In a matter of months, the public and private sectors have joined forces to create and deploy a cohesive early defibrillation program to protect its citizens from the fatal effects of sudden cardiac arrest (SCA).

### FACING THE THREAT OF SUDDEN CARDIAC ARREST

Many people do not realize that SCA is a leading cause of death in North America, claiming a life every 1 to 2 minutes. SCA occurs when a person's heart stops pumping in a regular rhythm and instead assumes an abnormal beat, called ventricular fibrillation (VF). Once VF occurs, a victim's symptoms immediately appear; the pulse stops, breathing ceases, and the person collapses.

Fortunately, VF is treatable if the person's heart is "shocked" back into its normal rhythm with a defibrillator. But this treatment must occur quickly. Just ten minutes after collapse, the chance of surviving SCA is tragically low.

### ESTABLISHING NEW BEDFORD'S EARLY DEFIBRILLATION PROGRAM

New Bedford is a densely populated city of about 100,000 citizens. Although the local business park contributes many manufacturing jobs to the area, the fishing industry remains the city's largest employer. Despite this city's limited financial resources, New Bedford has created an early defibrillation program through careful planning and determination.

Each year, New Bedford's EMS dispatchers receive between 10,000 and 11,000 calls. Even though a relatively small number of these calls pertain to SCA (about 1%, or 100 calls), a few simultaneous events within the community brought the issue of defibrillators, in particular AEDs (automated external defibrillators), to the forefront.

## STATISTICS

Population:	100,000 Residents
Program Implementation:	2001
Trained Responders:	EMS, Firefighters, Police Officers, School Nurses, Citizen Responders
Number of AEDs:	18
AED Locations:	Police Cars, Fire Trucks, EMS Trucks, High School and Middle School, and a Privately Owned Company
Number of Saves:	2

First, the local paramedic service, which was a hospital-run program, was transitioning to a city-run program. At this time, the city had just three AEDs, each assigned to an ambulance. Second, local firefighters, aware of the small number of AED units in the city, began trying to solicit funds from the local hospital to purchase AEDs for the Fire Department. As a result, several people from the public and private sectors decided to meet with David Hiltz, a representative from the American Heart Association, to discuss the feasibility of acquiring additional AEDs and setting up an early defibrillation program in New Bedford. Included in this meeting were Captain James Trout, the EMS Training Officer for the City of New Bedford, New Bedford fire fighters from Local 841, and Jeff Miller, Director of Corporate Development for Southcoast Health System, a non-profit charitable organization comprised of three hospitals and 41 ancillary health facilities.

**The participants in the meeting discussed the need for collaboration among the fire department, police department, the Mayor's office, and the private sector. By the meeting's close, the members unanimously decided that the community early defibrillation program would proceed as a citywide initiative and a true public-private partnership.**

The next challenge was to generate interest from parties who could donate funding to purchase the AEDs.

#### **GETTING HELP FROM THE PUBLIC SECTOR**

Captain Trout, a paramedic with 15 years' experience and a Community Training Center Program Coordinator for the American Heart Association, needed no convincing about the important role of AEDs. He was keenly aware of the marked increase in SCA survival rates when an AED is on hand. As he says, "The key is to get defibrillated. If you don't get defibrillated, you don't make it." His job was to discuss the importance of early defibrillation with the Mayor of New Bedford, Frederick Kalisz, Jr., to see if the city would pledge support to the cause.

As it turns out, Captain Trout did not face a difficult task. Mayor Kalisz, who had been a CPR instructor at one time, was aware of the link between technology and the quality of life in his city. As he noted, "In trying to enhance quality of life and keep services at their peak, we've been progressive in obtaining enhanced equipment for public safety, including thermal imaging cameras (portable units that help fire fighters detect people in smoky or burning buildings) and AEDs. It's made a tremendous difference in our ability to maintain the quality of life in the city. That's important not only in the private sector but also on the city streets."

As part of his public-safety oriented approach, Mayor Kalisz immediately allocated funding to purchase three AEDs for the city. With the financial backing of the Mayor's office assured, Captain Trout and others on the team worked to entice the private sector to help, too.

#### **PUTTING SERVICE ABOVE SELF, THE ROLE OF ROTARY INTERNATIONAL**

*Service Above Self* is the motto of Rotary International, and Rotary members should be proud of the service they've provided to the New Bedford community. Both Mayor Kalisz and Captain Trout give an enormous amount of credit to the Rotary's fund-raising efforts which, to date, have furnished two AEDs for the city.

Initially, most Rotary members weren't aware of the potentially life-saving benefits of AEDs. One exception was Jeff Miller, who had been present when members of the private and public sectors met with David Hiltz of the American Heart Association. Mr. Miller invited Captain Trout to a Rotary meeting to discuss SCA, the life-saving benefits of early defibrillation, and to give a brief AED demonstration.



Life Saving AED being taken out of its carrying case

**With strong leadership and public backing, the New Bedford community has been able to face the threat presented by sudden cardiac arrest.**

During the presentation, Captain Trout used anecdotal and statistical data to emphasize that each minute counts when SCA strikes, and how early access to defibrillators truly saves lives.



Mayor Frederick Kalisz, Jr. strongly supports AEDs as part of his public health initiative

**The Rotary members quickly recognized the benefits. One member, whose father had died from cardiac arrest, will always wonder whether a defibrillator might have saved him. As Mr. Miller recalls, "Everyone was so impressed by the number of saves with early defibrillation, that we decided as a group to make this one of the causes we support."**

**The Rotarians voted to use funds from their next fundraiser, a wine-tasting event, to purchase a defibrillator for the city. Their decision was validated soon after their**

**generous donation. Within months, Captain Trout had the pleasure of telephoning a Rotary member to announce, "One of the AEDs you gave us just saved someone's life."**

Mr. Miller is a strong proponent of the importance of AEDs. As he notes, "The thing people realize is that it could be you, your kid, spouse, mother, father, or your friend. Cardiac arrest doesn't discriminate. It could be anybody. So, if you've got these units available in as many places as possible, then there's a better chance that someone you know will be saved."

#### **ELICITING SUPPORT FROM OTHER PRIVATE BENEFACTORS**

According to Mayor Kalisz, "We've been very fortunate so far, considering 2/3 of the AEDs were purchased by the private sector and 1/3 were purchased by the city."

Besides Rotary International, other private donors include Johnson & Johnson's DuPuy division, which bought one AED unit to keep on-site at their facility, and donated two units to the city. The family of a retired firefighter who recently passed away donated an AED to place on the truck where he spent most of his career. And the local Masonic lodge is planning to donate an AED in the near future.

Lisa Bindis, the owner of a local retail establishment, has also donated two AEDs to the city. In addition, a piece of furniture donated by her store helped raise money when auctioned off at the Rotary fundraiser. Of the two AEDs purchased by the Rotary club, one was donated in memory of Lisa's father, who had suffered a fatal heart attack about twenty years ago. That particular unit was placed on an engine at the fire station in the center of town, just across the street from where her father passed away so many years ago.

Ms. Bindis is an eager supporter of early defibrillation, and wants to raise funding to purchase additional AEDs for New Bedford. In conjunction with the Mayor's office, she plans to donate a \$4,000 bench to Buttonwood Park, a scenic venue with a courtyard and floral garden. A brick walkway will surround the bench, and people can "buy" a brick and have it inscribed with their name, or dedicate it in memory of a loved one. With the proceeds from this fund-raising effort, Ms. Bindis plans to purchase ten additional AED units for the city.

## GETTING THE PROGRAM OFF THE GROUND

**Most participants agree that getting this ambitious program off the ground was not a major challenge, primarily for two reasons. First, the participants carefully planned in advance how the AED units would be deployed throughout the city, and set up a training program that could commence the moment the AEDs arrived. Second, and no less important, was due to the commitment of everyone involved.**

A team, including Captain Trout and Mayor Kalisz, analyzed the areas within New Bedford where the AEDs would provide the most coverage. Then, according to Mayor Kalisz, "We began deploying the units in a systematic approach between the police and fire departments."

Based upon criteria such as the frequency and nature of calls from the different geographic regions of New Bedford, the team decided that the first AEDs to arrive would go to fire trucks in the northern parts of the city and to police cars in the southern section. As more AEDs were purchased or donated, they were alternatively allotted to the Fire and Police departments.

The Fire Department strategically placed the units on trucks according to their response areas. Training the firefighters revolved around their 24-hour shift schedule. As soon as an AED arrived, a fire company was immediately equipped, and the firefighters on that truck received their training. Due to the 24-hour shift schedule, all the firefighters for that truck received their training in just four consecutive days. Captain Trout taught each class, sometimes with assistance from EMS or fire department personnel.

Training police officers was more difficult to coordinate, since they are trained by shift, rather than by car. To date, not all members of the Police Department have received AED training. Until that time, the certified officers are assigned an AED during roll call to carry with them in their cruisers. If there's an

emergency elsewhere in the city, the department calls a certified officer to respond. Currently, there is usually one equipped police cruiser on the north side of city, one in the city center, and two in the south end.

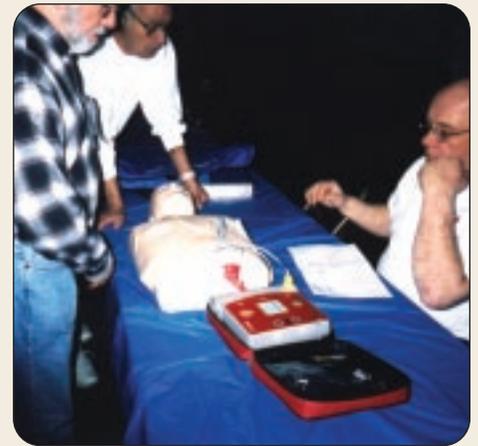
In an effort to maximize coverage, an AED is also planned for the Mayor's car, since he attends most major events in the community, such as banquets and sporting competitions.

## AEDS IN ACTION, SAVING PEOPLE'S LIVES

**New Bedford received its new AEDs in the spring of 2001. Within eight months, these AEDs saved the lives of two local citizens.**

The first SCA victim went into cardiac arrest behind the wheel of his car, and subsequently was involved in a motor vehicle accident. An off-duty EMT happened to see the accident and began performing CPR. Within minutes, a police officer arrived with an AED to "shock" and save the victim. Ten days later, the man was discharged from the hospital.

In the second incident, a seventy-one year old woman suffered cardiac arrest during her aerobics class. Fortunately, an AED had just been placed on the fire rescue car that responded to the 911 call. The firefighter on duty was amazed at the AED's success. "It really works, she's alive," he told Captain Trout after the incident. "Guess what, you saved her," Captain Trout replied.



New Bedford Masons receive AED training



Roosevelt School

### **OUTFITTING THE PUBLIC SCHOOLS WITH AEDS**

**New Bedford has been progressive in its push to outfit its public schools with AEDs. The school system currently has four AEDs. Two units were purchased through the school department budget. The other two units were purchased through a school health grant sponsored by the Massachusetts Department of Public Health.**

**With approximately 3,200 students, New Bedford High School is one of the largest educational institutions in Massachusetts. This school has two AED units; one is placed in the gymnasium, the other near the nurse's office. From these locations, an AED can be accessed from any other point within the school in four minutes or less.**

Currently, two middle schools are being built in the city. These schools, and any other school built in the future, will be equipped with two AED units.

Karen Regan, the Supervisor of School Nurses for the city of New Bedford, does all the training for the school department. To date, she has trained about thirty people. These targeted responders include gym teachers, adults who run after-school activities, the custodians and janitors who work the night shift, and all nurses who work the day shift. They also encourage teachers to become AED certified.

Training lay responders presents its own set of challenges. As Ms. Regan notes, "There is anxiety at the beginning. Then once they receive training, they're fine." Fortunately, in the six months since they've received their AED units, the school system has not had an occasion to use them.

#### **FACING BIG CHALLENGES IN A SHORT AMOUNT OF TIME**

Captain Trout's biggest challenge was the sheer number of people who had to be trained in a short time. He estimates that he and his fellow trainers have taught about 200 firefighters and 120 police officers in less than nine months. At one point, Captain Trout and his fellow trainers were holding one training class per week for fire department personnel. Since these sessions consist of city employees who are on duty, the city of New Bedford pays for the training classes. According to Captain Trout, they use the American Heart Association's "Heart Saver AED Program" for training.

Although most people trained to date have been police, fire, or EMS personnel, Captain Trout hopes to recruit lay responders in the future. He has already trained some lay people employed at Johnson & Johnson's DuPuy division. **If these lay responders are understandably anxious during training, he tells them, "Just listen to the AED and, even if you forgot everything from class, you'll still be doing the right thing."**

All first responders (i.e., EMS, fire, and police department personnel) must take a recertification refresher course every two years. In addition, Massachusetts requires these first-responders to attend a biannual hands-on refresher course.

#### **FUTURE PLANS FOR NEW BEDFORD'S EARLY DEFIBRILLATION PROGRAM**

Since this program has flourished in such a short time, the major challenge is to keep up the momentum and grow the program even further. According to Mayor Kalisz, "Our next step is to move into industry. We've tried to work hand-in-hand with the private sector, many of which are already investigating getting AEDs within their establishments. We've encouraged them. If there's anything we can do to help with training or acquisition, we'll stand up ready to do it."

Captain Trout plans to continue work with Rotary International to raise additional funding. He'll also approach other local service organizations and businesses to see if they are interested in watching an AED presentation, which includes a slide show as well as a demonstration with a mannequin and a defibrillator training unit. He hopes that these demonstrations will result in a donation of an AED unit to the city, and perhaps a private acquisition of an AED unit for their own business establishments. As Captain Trout notes, "How can you argue with a device that's going to save someone's life?"

As the committed citizens of New Bedford have demonstrated, the key to establishing a successful early defibrillation program is to simply introduce the issue into the social fabric of the community, both in the public and private sectors. From there, according to Captain Trout, the commitment simply "mushrooms."



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Printed in U.S. June 2002

Part #5990-0565EN