Science Beat

Teens ought to know the ABCs of CPR

Columnist
Joann Rodgers

Early last summer, a Maryland man collapsed at his home, victim of a sudden heart attack. Nearby were his 15-year-old granddaughter and his middle-aged son, the girl's father.

Panicky, the son did his best to summon an ambulance and to keep the teen-ager away from his stricken father.

Under normal circumstances an obedient child, the girl this time ignored her father and calling on skills learned in her 9th grade health education class, applied rhythmic mouth-to-mouth breathing and rapid chest compressions over her grandfather's stilled heart until help arrived.

The old man was clinically dead — without spontaneous pulse or respiration — when she began her efforts to keep oxygen-rich blood flowing to his threatened brain and other vital organs.

Grandad made it safely to the hospital and, thanks to her, recovered fully without brain damage.

Helen Stemler, health educator in the Harford County public schools, developed the program responsible for this story's happy ending. "That," she says, "is just one of our many happy endings."

She is also a convincing spokeswoman for the major push under way to teach Cardiopulmonary Resuscitation, or CPR, to all teen-agers.

"CPR should be the fourth R," says Stemler. "We're often busy telling teen-agers what they can't do, yet here is something they can master.

"I always tell kids who go into the community to take a CPR course to take along the person they'd most like nearby if they had a heart attack. And I know I could depend on CPR-trained kids to take care of me — perfectly."

The "ABC" of CPR can be taught in one afternoon: (A) open the airway or breathing passage; (B), restore breathing through mouth-to-mouth resuscitation and (C), apply compression or pressure to the chest wall to push blood through the heart and around the circulatory system.

Thousands of teen-agers are among the more than 12 million Americans who have learned CPR in the United States through programs offered by the American Heart Association, the American Red Cross and, when people like Helen Stemler have their way, in junior and senior high schools.

Recently, emergency medical experts began efforts to expand CPR training to every teen and make CPR proficiency a requirement for high school graduation.

The News American

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A look at the statistics on heart attacks explains the need for teen-ager CPR skills on a widespread basis.

Three out of four sudden deaths are witnessed by bystanders, and studies show that at least 100,000 lives a year might be saved if enough "average citizens" could begin emergency CPR and life support quickly.

Results of a study by Dr. Mickey Eisenberg at the University of Washington in Seattle, published in the *Journal of the American Medical Association* earlier this month, showed that if basic life support is begun within four minutes of a heart attack and advanced treatment (drugs and electronic aids) within eight, more than half of all victims survive.

Simply training more doctors, paramedics and ambulance crews is only half the story, says Eisenberg. "Much as CPR alone is not lifesaving, definitive care . . . is not likely to be lifesaving unless CPR has been initiated quickly. The data suggest that early . . . CPR can buy several additional minutes of time before definitive care must be provided if the patient is to survive."

Since 1971, a fourth of Seattle's population has learned CPR and today, more than a third of all mobile rescue vehicles there are called by bystanders, including teenagers, who start CPR first.

Finally, says Bill Hathaway, of the Maryland Division of Emergency Medical Services, dozens of states developing teen CPR programs have gotten "overwhelmingly positive" responses.

"Teen-agers are absolutely perfect students of CPR because they want to be involved in the community in a way that really counts.

"Let's face it, learning to save a life is a lot more exciting in health class than learning to brush your teeth."

Perhaps even more vital to the community health is the fact that teens tend to be around people in need of rescue.

They are involved in or near a majority of serious auto accidents; they have aging parents and grandparents at risk of heart stoppage. They baby-sit for children who may choke.

The Heimlich maneuver, or "hug," which gets food out of the windpipe by applying inward and upward force against the stomach, between the navel and rib cage, is a central part of CPR training. Choking or drowning is often accompanied by heart problems.

CPR, emphasizes Stemler, is not quite as easy as "ABC," but it's no more difficult than learning to serve a tennis ball.

An 80- to 90-pounder can do it effectively, and even handicapped students can learn to "talk" a non-handicapped person through emergency CPR.

In a nation often criticized for "babying" its young and keeping them dependent too long, teenager CPR provides at least one adult role our youth can fill with our gratitude.

Joann Rodgers covers medicine for *The News American*.

CPR, paramedics help chances for survival

Photo by Fred Abel

GER SIMONDS, chief of the county's Emergency Medical Services Divi-
ds a model heart given to him as a gift by a graduating class of par-
Known for his no-nonsense programs on emergency care and tough
ls in the classroom, Simonds explained the gift by saying, with a
They told me I didn't have a heart!"

By FRED ABEL
Staff Writer

A Glen Burnie man several months ago was on his job along with several co-workers when, without warning, he suffered a massive heart attack. But except for calling an ambulance, none of the men and women in the office could help their fallen friend. No one knew how to identify a heart attack. No one pressed on his breastbone to force blood into the arteries. Nobody knew the proper way to administer artificial respiration during those first crucial minutes as the man's life passed away.

No one, that is, except the victim himself. For in this unfortunate but true story, paramedics who brought the body to North Arundel Hospital found the man had completed two classes in lifesaving techniques for heart attacks. He carried the certification cards in his back pocket. To his demise, however, he was the only person in the office with the training.

Five years ago, the victim's family and friends could have been consoled that the death "was God's will," and that may be true today as well. Then you could not expect the man on the street to save lives, since the public in general was, by and large, ignorant of cardio-pulmonary resuscitation, the lifesaving technique used on cardiac victims.

And then there was the emergency medical care system itself — a handful of gerry-rigged Cadillacs practicing what one local paramedic expert called the "swoop and scoop" method, manned by technicians who could do little more than check a patient's breathing and pulse. Like the rest of the country, heart victims in Anne Arundel County could only hope that speed would overcome the lack of sophistication outside the hospital.

In the last three years, the emergency medical service in the county has come of age. Large numbers of firemen and citizens have been trained in CPR classes sponsored by the county, state and private, non-profit organizations such as the American Heart Association.

Thanks to political support and a large dose of federal funds, Anne Arundel's ability to reach cardiac victims quickly and administer CPR and even drug treatment has advanced far beyond many similar subdivisions in the state, according to Cpt. Roger Simonds, chief of the emergency service here.

Starting with a pilot paramedic program in Galesville three years ago, the county's EMS has expanded to seven paramedic units within 15 minutes of anywhere in the county, said Simonds. The number of cardiac calls handled by these units has risen dramatically in Glen Burnie alone, the paramedics will chalk up more than 2,400 this year, he predicted.

"The system differs drastically from the system three years ago," said Simonds. As evidence of the unit's growth, next year Simonds will move his offices out of the temporary trailer on Fire Department training grounds to occupy space in main headquarters. In addition, the 1978 county Fire Department budget for the first time will list EMT requests as a separate budget item. The degree of success can also be measured by the fact that the government of Puerto Rico has sent a representative to the U.S. to study the Anne Arundel County EMS set-up.

Perhaps most significantly, statistics taken in the region during the past year show that the mortality rate for cardiac patients has dropped — and at least some of the credit can be given to the paramedics.

Area doctors specializing in heart patientsts call the paramedics and CPR-trained citizens "the front lines" of the medical community and suggest that expansion of emergency services outside the hospital continues to be an area of extreme importance.

"When there is ventricular fribulation of the heart, the main thing is to get somewhere fast," said Dr. Glen Robbins, a Glen Burnie cardiologist. "Time is important because 60 to 70 per

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...Heart attack

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cent of the mortalities occur in the first hour."

National statistics confirm the need for quick response. Of the 650,000 persons who died from heart attacks each year, 350,000 succumb outside the hospital, according to James O. Page, executive director of Advanced Coronary Treatment Foundation. The foundation estimated that one-third of the deaths might have been prevented with quick, professional treatment by paramedics, although more conservative sources say EMS could save 35,000 to 70,000 annually. Where it has worked, EMS has been credited with saving 150,000 persons, about 30 per cent of them heart attack victims.

Experts agree that mass training of the public in cardio-pulmonary resuscitation is equally important in keeping cardiac patients alive until help arrives. Two cases in Glen Burnie where "saves" were reported resulted shortly after North Arundel Hospital gave CPR training to the staff nurses. One of the husbands who collapsed while watching TV was only 28 years old, according to nurses there.

But according to several spokesmen for public and private sponsors of CPR training, the public demand for courses in the county has dropped since the classes first became popular three years ago. Peg Schemm, a nurse from Pasadena in charge of the north county's American Heart Association program, said classes and instructors sponsored by AHA are not being used to capacity by citizens.

"I think we can handle a lot more courses. I'm busy, but it's not frantic. There's definitely time and more people to do more courses," she said.

The county EMS division, which had a backlog of large classes for 50 to 75 residents once a month through June of last year, now finds that public enthusiasm for the training has fallen off somewhat as civic groups satisfy their active membership.

"It's now starting to taper down," said Simonds. "Two years ago, everybody and his uncle wanted CPR training and we had more than we could handle. Now we're able to meet the need."

At the same time, however, the local Red Cross chapter reported recently that it was hampered in extending CPR training to more citizens in the Annapolis area because it lacked training equipment. The need was filled when the Rotary Club donated two practice mannequins affectionately called "Resuscie-Annies."

While the private health groups concentrate on reaching more citizens with CPR training, the county has built an enviable reputation in its expanding EMS division, upgrading the firemen to cardiac rescue technicians (CRTs) and building a professional staff of 42 paramedics, who handle heart-stabilizing drugs and monitor EKGs. Three of the seven paramedic units are heavily-equipped station wagons which operate in tandem with the fire company ambulance. This allows paramedics to remain in service once a patient's heart is stabilized and is being rushed to the closest hospital, Simonds said. The other four units combine cardiac equipment and stretcher in one vehicle. In all heart calls, paramedics are in touch one of four Baltimore hospital's cardiologists by radio telemetry and are able to carry out medical assistance prescribed by the specialists.

The entire system, however, is not foolproof. Some areas of the county — in western neighborhoods such as Harmons, parts of Arnold, Cape St. Claire and south county's Lothian communities — response time in emergency situations may reach 15 to 20 minutes, Simonds said. These grey areas leave gaps that Simonds hopes to fill with future paramedic units. He said it appears the Harmons area will receive the next unit sometime next year.

Radio transmissions on emergency cases have been known to give incorrect addresses of the victims. Part of the reason lies in the county's rampant duplication of street names and the antiquated box number system now being phased out. But occasionally, human error comes into play. One heart patient, for example, was almost missed last December when a young man took down the wrong address of a heart attack reported in the Lake Shore district. Fortunately for the patient, a relative called the station back and corrected the address before the paramedics became lost.

The CPR citizens training program in the county likewise needs to be expanded, according to spokesmen for area heart association chapters. Experts agree that most persons are not aware of the symptoms of heart attacks or who to call when they happen.

"My wife is a field consultant in Anne Arundel County and a man called us one night without any idea what to do," said Morris Leberman, an AHA spokesman. "We told him to call his doctor and call the fire department immediately. I don't think most people really know what's out there available to them."

Although no hard figures are available, about 5,000 county residents have been trained by the AHA, but that hardly touches the tip of the iceberg, Leberman said.

"Right now I know of at least a half dozen resuscitations performed in the last six months," he said. "The American Heart Association is trying to bring the area up to where Seattle is, where you've got one out of four people passing you on the street with CPR training."

Despite a lack of hard data, reports of successful resuscitations continue to bolster the case for expansion of the CPR program here. Leberman tells of one local man, on a jet plane bound for the West Coast, who helped keep an elderly woman alive with the help of a stewardess for 45 minutes until they landed in Chicago. "It can happen anywhere," he concluded.

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CPR: Saving Lives Every Day

FRED VALLEJO

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The concept of CPR as an emergency medical technique was discovered at Johns Hopkins Hospital in the late 1950's and early 60's. Doctors there found a way to re-start primates' hearts without the use of open heart surgery. Ultimately, the technique was applied to man.

In the mid-60's, the American Heart Association (AHA) and the National Research Council (NRC) developed standards for CPR care and training programs for hospital personnel and paramedics. In May of 1973 at a conference in Washington the two bodies approved CPR programs for the public.

The city of Seattle, Wash., is in all probability the national leader in public CPR courses. Officials there have kept meticulous records of the affect CPR training has had on out-of-hospital resuscitative efforts.

During one six-month period, for example, 369 such efforts took place, 73 (or 20 percent) of which were initiated by someone other than fire department personnel. Twenty-seven victims, 37 percent, were revived.

The public's success rate was statistically higher than that of the Seattle fire department, members of which have more advanced CPR training. Seattle's public CPR courses (called Medic II programs) have trained well over 100,000 since their inception.

According to AHA statistics, 600,000 people die annually of acute myocardial infraction (heart attack). Two-thirds of the deaths occur out-of-hospital.

On the Eastern Shore, training programs are conducted by qualified members of the Maryland Heart Association, the American Red Cross and the local volunteer fire departments.

Cheezum said it is his personal opinion that everyone should learn CPR. He spoke of several emergency calls during which he was "able to render assistance, where they could have turned the other way."

According to Marie Warner, the associate coordinator of Emergency Medical Service (EMS) for the Shore, a public trained in CPR is especially important here because the service area for each ambulance crew is so large.

In metropolitan Baltimore and its five surrounding counties the service area per ambulance is 16.7 square miles compared with 48.4 square miles for the Shore.

The Denton ambulance crew has a service area of 90 square miles, while Easton's two ambulances serve a 304-square-mile area.

She termed the Shore's wide-spread population a "major difficulty" in the administration of fast, effective out-of-hospital medical treatment.

Timing, particularly in the case of circulatory and respiratory arrest, is important. Experts say the heart

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CPR Saving Lives Every Day

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must be started again within three to eight minutes or brain damage will result.

Dick Darrah, the associate director for community programs at the AHA office in Baltimore, explains that a public trained in CPR can, in effect, reduce the response time to an accident.

He went on to point out that people who do not know CPR but are familiar with the early warning signs of heart attack (chest pains, nausea, etc.) are important as well, for they can prompt a victim to visit a doctor or a hospital while he is still ambulatory.

A general rule of thumb has it: The earlier the attack is detected the better the chances of full recovery.

"We are trying to mount a program, using the media, to teach people how to recognize early warning signs," Darrah commented. He said he hopes to implement the program statewide in eight to 12 months.

Emergency medical care programs are also being started in high schools throughout the state. According to Miss Warner, only schools in Wicomico and Talbot counties on the Shore lack CPR training classes.

Frederick J. Distler, the director of instruction for the Talbot County Board of Education, said CPR is not taught in county schools because of a lack of qualified instructors.

Distler said he is the only person in the school system who is certified to teach CPR, and he simply doesn't have the time.

He said he frankly doesn't know exactly when CPR courses will be offered, but that when they are implemented, they will likely be offered as part of the health or physical education departments' curricula.

Oddly enough, some of the state's more affluent counties also lack CPR classes. Schools in the Washington suburbs of Prince Georges and Montgomery counties are without them.

Conceptually speaking, Darrah says, CPR is a stop-gap measure. Ultimately, he anticipates, through public education courses on early warning signs and programs about preventing and reducing the risk of heart failure (by not smoking and keeping one's cholesterol level and blood pressure in check) the practical need for CPR will diminish.

Darrah said it will take an other 20 to 30 years to make the public aware of and come to accept preventive measures as the "only answer."

For now, perhaps Cheezum put the value of CPR in the best light, saying:

"CPR won't hurt a soul. And it could save someone's life."

A TRAGIC POST-SCRIPT

by James O. Page, J.D
Executive Director
ACT Foundation

Last month, we used this column in an attempt to put civil law and CPR in proper perspective. By relating long-standing legal concepts to the immediate needs of pulseless, non-breathing humans, we asserted that CPR performed on someone who really needs it produces little probability of legal risk.

As the September issue of EMS Action was rolling off the press, we came across the latest development in a tragic case that lends credence to our earlier comments — at least for those who can reckon with the sophistry and technical distinctions of the law. At the same time, we have great concern that the combination of comments and events may add to the pervasive confusion.

In an eastern state, a lawsuit involving an abortive rescue effort is grinding its way through the courts. The case is significant in several ways. Most important, the resuscitative effort was attempted on a person who did not require it. The victim had merely fainted when two nearby police officers initiated a technique described in legal documents as "vigorous pounding" on the victim's chest. Also, it was alleged that members of a volunteer rescue squad continued "first aid" measures on the victim en-route to the hospital.

The most troubling revelation in the case is contained in the autopsy report. According to the medical examiner, the cause of death was thoracic hemorrhage. Several ribs and the sternum had been fractured, puncturing the superior vena cava, the largest vein in the body. The autopsy also revealed that the victim probably had not suffered a heart attack but had merely fainted. The death was listed as "accidental homicide."

The lawsuit was filed against the local government which employed the police officers and supported the volunteers. The suit was dismissed because it had not been filed within the time limit specified by state law. An appeals court has since upheld that dismissal. But there remains a question as to whether the officers and volunteers might be subject to individual liability.

What is the message? There is no "reasonable facsimile" for CPR. Properly performed, CPR can serve as a holding action pending administration of advanced life support measures. CPR is not an appropriate measure for persons who are merely unconscious. CPR, crudely performed on persons who do not truly need it, has the capacity to kill. "Homicide" is an ugly word.

An estimated 51 million Americans have heard of CPR and have some interest in learning the technique. How many would be inclined to engage in inexpert rescue heroics in the presence of mere fainting? Major national organizations have failed to agree on appropriate CPR training techniques and format. Many questions and doubts hover above the subjects of CPR instructor competence, appropriate instruction time, and skill retention (not to mention refresher training). Has appropriate emphasis been placed on assessing the "victim's" need for CPR?

We have heard heartwarming reports of hundreds (if not thousands) of lives saved where CPR was properly used as a holding action. We have heard of only one incident of misguided tragedy. That is one case too many!

In the aftermath of that sincere but misguided "accidental homicide," we urge a reconvening of the forces and organizations that set the original standards for CPR. We suggest the time has come for opposing viewpoints to be confronted in a national forum. What is the most efficient and effective method of CPR training? Are training hours really important? What is the minimum set of competencies to be required of CPR trainees? Is CPR of any value without the backup of advanced life support? What about skill retention? How can the national organizations combine their voices in a chorus of common sense to avoid "accidental homicide"? How best do we approach those who have heard about CPR, seen it on film or TV, but have not taken time to learn the essential precautions or techniques?

In the state where the "accidental homicide" occurred, we are hearing of efforts to strengthen the so-called "good samaritan" laws. That is not unlike an effort to design highways to make them safer for drunk drivers. The answer lies not with the law. The law has merely focused on the problem.

NAEMT PROPOSES LEGAL DEFENSE PROGRAM

An innovative concept to provide for pre-paid legal services for Emergency Medical Technicians and Paramedics has been proposed by the National Association of EMTs. According to Jeffrey Harris, that organization's Executive Director, the idea for the concept grew out of formal debates conducted last May in San Francisco.

In the debate, Mr. Ralph Flannery argued that liability insurance for EMTs would constitute a "pot of gold" for opportunistic litigants with questionable claims. The NAEMT program would provide qualified and enrolled EMTs with pre-paid legal counsel in the event they were named as a defendant in any lawsuit arising out of the performance of their duties in providing emergency care. According to Harris, the goal would be to provide affordable peace of mind for qualified EMTs while eliminating the "pot of gold" referred to by Flannery.

At the September 9th meeting of the American Trauma Society in Kansas City, Harris and ACT Foundation Executive Director James Page proposed ATS involvement in the proposed legal services program. It was suggested that ATS could establish a restricted trust for maintenance of program enrollment fees — to be used for legal defense purposes in the event of suit against enrolled members. Also, it was suggested that the ATS Committee on Standards develop minimum standards for enrollment in the program by EMTs.

Page explained that litigation risks would be minimized by enrolling only those EMTs and paramedics who meet national standards of training and competency. Further, he suggested that continuing education requirements, as well as important EMS system requirements — including medical control of advanced life support operations — be made a condition to enrollment of members. "It is clear that litigation is not occurring in those areas with adequately trained personnel, a well-designed EMS system, and medical control of paramedic operations," he said.

ATS involvement in the proposed program met a cool reception from its Board of Directors. Despite the lack of commitment, the Committee on Standards was authorized to continue study of the proposal. According to Harris, the lack of enthusiasm at ATS will not kill the proposal. "There's a definite need for this kind of a program and we'll be looking for an organization that would like to participate with us in it," he said.

SEARLE SUPPORTS ACT

Since the ACT Foundation was formed, G.D. Searle and Co. has provided both financial support and active participation in its programs. Samuel N. Turiel, Searle's corporate director of health care communications, serves as vice president and member of the ACT Foundation's Board of Directors.

"As a company, Searle is dedicated to the continuing improvement of coronary care," Mr. Turiel said. "Our involvement with the ACT Foundation is in keeping with this goal." In keeping with its commitment to ACT Foundation goals, Searle conducts a CPR program for employees at its Chicago and Milwaukee area facilities. More than 175 employees have participated in the program and received certification in CPR. "Since most heart attacks occur during the business day, we think its especially important that large numbers of employees at corporations like Searle learn how to give CPR when necessary," Turiel said.

He pointed out that Searle's participation in ACT during the past several years has also led to positive community action. For example, Searle in Puerto Rico contributed $20,000 to the City of Caguas for a community mobile intensive care.

Samuel N. Turiel

"Searle's association with the ACT Foundation also responds to our long-standing involvement in health care education," Turiel said. "We hope that our support of ACT will serve to encourage other industries to provide this training for their employees."

Searle provides a wide range of health care products and services that reach people in more than 125 countries. The company's major area of business includes pharmaceuticals, diagnostic products, optical products and hospital supplies. Total sales exceeded $761 million in 1976.

BIG SKY STATE MOVES TO ALS

Montana EMS moved toward development of advanced life support systems recently with three days of planning and educational sessions in Billings. The mid-September programs saw EMS professionals, paraprofessionals and activists flock to Billings for orientation to the many unique characteristics and operational distinctions of advanced life support programs.

Borrowing from the experience of other programs, Montana's EMS Medical Director, Jack Davis, M.D., and State EMS Chief, Drew Dawson, recruited speakers from throughout the U.S., including ACT's Executive Director. The heavily-attended program included discussion of "medical control," "modular approach to paramedic training," "financing the paramedic program," "clinical training and field internship," and "legal issues."

In conjunction with the ALS meeting, the Second Annual Emergency Medicine Seminar was sponsored by chapters of EDNA (Emergency Dept. Nurses Assn.) and ACEP (American College of Emergency Physicians). Labelled "The First 30 Minutes —

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HOPKINS SCIENTISTS REPORT IMPROVED CPR METHOD

An improved method for performing CPR, resulting in greater blood flow to the brain, has been described by a group of Johns Hopkins cardiologists in the New England Journal of Medicine.

The new approach to CPR is a modification of the standard method. According to the Hopkins researchers, it is critically important that each chest compression last 50% of each cycle of compression. "Our studies show that the duration of chest compression is more important than the rate of those compressions," say Dr. Myron Weisfeldt, Director of the Cardiology Division at the Johns Hopkins Hospital and School of Medicine.

Currently, CPR instructional materials emphasize compression rate which, according to the Hopkins researchers, is less important than compression duration. The main advantage claimed for the new technique is that blood flow and blood pressure in the arteries supplying the brain are increased. Consequently, more blood reaches the brain of the pulseless victim.

The immediate danger for heart attack victims is brain damage or brain death due to lack of oxygen when the heart stops. Blood transports oxygen to the brain and all other body tissues. Without the heart to pump the blood, oxygen supply is cut off. All tissues are affected, but brain cells die sooner than other cells from insufficient oxygen. Through proper use of CPR, blood flow can be maintained and oxygen supplied to the brain. Modern techniques permit paramedics or doctors to restart an arrested heart in many cases. But if there has been an absence (or insufficient flow) of blood to the brain before and during CPR, the patient is likely to show evidence of severe and often irreversible brain damage.

"We wanted to find out whether we could alter the technique to get more oxygen-carrying blood to the brain and thus improve our success rate in saving heart attack patients," says Dr. Weisfeldt. The discovery reported by Weisfeldt sprung from a larger research project aimed at monitoring changes in the function and chemical activity of the patient during cardiac arrest. The research has been supported by the National Heart, Lung and Blood Institute and the American Heart Association, Maryland Affiliate.

FORT WORTH LINEUP GROWS

In the final days of planning for November's National EMS Policy-Makers Symposium (Nov. 15-16, Fort Worth, Texas), additional names have been added to the list of major public figures to attend and participate in the meet. Sources at HEW in Washington advised EMS Action that Governors Lee (Maryland), Judge (Montana) and Garrahy (Rhode Island) are expected at the Texas sessions.

The National Association of Counties mailed more than 8,000 invitations to the meeting. Representing major cities will be Mayors Wheeler (Kansas City), Bilandic (Chicago) and former Mayor Harvey Sloan (Louisville).

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CPR: Saving Lives Every Day

BY FRED VALLEJO

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Cheezum, a Cordova volunteer fireman trained in cardio-pulmonary resuscitation (CPR) found the man on the ground with "people just standing around looking at him."

A retired police officer cleared the man's wind passage and Cheezum began hand percussions to stimulate his heart.

The victim began to breathe again. Cheezum continued with CPR until an ambulance crew, trained cardio-rescue technicians (CRTs), took over.

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must be started again within three to eight minutes or brain damage will result.

Dick Darrah, the associate director for community programs at the AHA office in Baltimore, explains that a public trained in CPR can, in effect, reduce the response time to an accident.

He went on to point out that people who do not know CPR but are familiar with the early warning signs of heart attack (chest pains, nausea, etc.) are important as well, for they can prompt a victim to visit a doctor or a hospital while he is still ambulatory.

A general rule of thumb has it: The earlier the attack is detected the better the chances of full recovery.

"We are trying to mount a program, using the media, to teach people how to recognize early warning signs," Darrah commented. He said he hopes to implement the program statewide in eight to 12 months.

Emergency medical care programs are also being started in high schools throughout the state. According to Miss Warner, only schools in Wicomico and Talbot counties on the Shore lack CPR training classes.

Frederick J. Distler, the director of instruction for the Talbot County Board of Education, said CPR is not taught in county schools because of a lack of qualified instructors.

Distler said he is the only person in the school system who is certified to teach CPR, and he simply doesn't have the time.

He said he frankly doesn't know exactly when CPR courses will be offered but that when they are implemented, they will likely be offered as part of the health or physical education departments' curricula.

Oddly enough, some of the state's more affluent counties also lack CPR classes. Schools in the Washington suburbs of Prince Georges and Montgomery counties are without them.

Conceptually speaking, Darrah says, CPR is a stop-gap measure. Ultimately, he anticipates, through public education courses on early warning signs and programs about preventing and reducing the risk of heart failure (by not smoking and keeping one's cholesterol level and blood pressure in check) the practical need for CPR will diminish.

Darrah said it will take an other 20 to 30 years to make the public aware of and come to accept preventive measures as the "only answer."

For now, perhaps Cheezum put the value of CPR in the best light, saying:

"CPR won't hurt a soul. And it could save someone's life."