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Automatic External Defibrillators: [Correspondence]

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DOCUMENT NO. AND TYPE	SUBJECT/TITLE	DATE	RESTRICTION
001. letter	Pat Bowser to Jerry Mande re AHA participants in Thursday's Meeting (partial) (2 pages)	06/30/1997	b(6)
002. form	Earnings and Leave Statement, Jerold Mande (1 page)	03/29/1997	b(6)

COLLECTION:

Clinton Presidential Records
Office of Science and Technology Policy
Jerold Mande
OA/Box Number: 13034

FOLDER TITLE:

Automatic External Defibrillators: [Correspondence]

2008-1524-F
kc1220

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

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MEMORANDUM
OF CALL

Previous editions usable

TO:

Jerry

☒ YOU WERE CALLED BY ☐ YOU WERE VISITED BY

Chief Leonard Materese

OF (Organization)

☒ PLEASE PHONE ☐ FTS ☐ AUTOVON

305-865-4121

☐ WILL CALL AGAIN ☐ IS WAITING TO SEE YOU

☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTMENT

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DATE

6/4

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9:50

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OFFICE OF SCIENCE AND TECHNOLOGY POLICY
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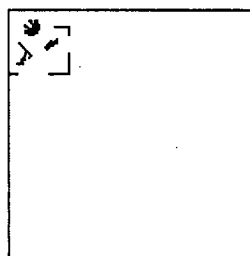


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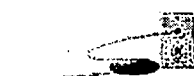
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REFINE YOUR SEARCH

The Wall Street Journal Interactive Edition -- February 23, 1998

Airlines Are Split on Need For Latest Medical Equipment

By **MARTHA BRANNIGAN**

Staff Reporter of THE WALL STREET JOURNAL

A health quiz for frequent fliers: You are cruising at 30,000 feet and go into cardiac arrest. Which airline carries the more sophisticated medical equipment to deal with the emergency?

a.) United Airlines

b.) Air Zimbabwe

If you picked "a," you're dead wrong.



Air Zimbabwe is one of a growing number of foreign carriers that have equipped their jets with portable **defibrillators**, state-of-the-art medical equipment for treating cardiac arrest. Many overseas airlines also carry an array of medicines to handle emergencies like seizures and severe pain.

UAL Corp.'s United and Delta Air Lines have announced plans to place **defibrillators** on their planes this year. But for now, AMR Corp.'s American Airlines is the only U.S. carrier to carry such devices, and an expanded medical kit, on any flights. Indeed, until quite recently, most U.S. airlines have been reluctant to go beyond a list of basic supplies drawn up 12 years ago by the Federal Aviation Administration.

In-Flight Emergencies

Top medical emergencies that resulted in flights being diverted in 1996

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	Number	% of Total
Cardiovascular	183	32.9%
Neurological	88	15.8
Seizure	51	9.2
Respiratory	37	6.6
Fainting or loss of consciousness	34	6.1
Others	164	29.5
TOTAL	557	100%

Source: Air Transport Association of America

One big reason is fears of legal liability. Cris Bisgard, director of health services for Delta, explains: "If we don't have something on board, which would be generally accepted as appropriate, there's liability associated with it. [But] if there's something on board that could be easily misused or do more harm than good, we have liability on that end of the spectrum."

On Jan. 30, United was sued for negligence in federal court in Boston by a woman who blames it for not having a **defibrillator** onboard when her 37-year-old husband died of cardiac arrest inflight. United says its decision to add the devices was unrelated.

Various state laws provide liability protection for those who render emergency assistance in good faith. But applying those laws on a plane is a muddle.

"You can make a case for jurisdiction being where the plane took off, where it lands, or where it's flying over" when an emergency occurs, Dr. Bisgard says. "It's just a mess."

While lawmakers in Washington are working to shield airborne Good Samaritans and to improve planes' medical equipment, the fact remains that a plane is far from an ideal place to perform anything but the most rudimentary medicine.

"How far do you go in making aircraft into flying hospitals?" asks John Hotard, an American spokesman. You can certainly go too far, says Myron L. Weisfeldt, past president of the American Heart Association and chairman of the department of medicine at Columbia University in New York. "We'll quickly get to where every aircraft is like a coronary-care unit, and that's ridiculous," Dr. Weisfeldt says.

The case in favor of **defibrillators** on planes won a strong piece of evidence on an American Airlines flight last week. The plane was still at the gate at the Dallas/Fort Worth airport when a 53-year-old passenger from North Carolina suffered cardiac arrest. A flight attendant and a paramedic revived him with a **defibrillator**. American, which now has the device on all international flights, plans to have the rest of its fleet equipped by November.

The debate over airlines' medical responsibilities is particularly urgent at a time when more elderly -- and ailing -- people are believed to be flying. According to a new study by the Air Transport Association, an industry group, U.S. airlines dealt with about 29 medical emergencies on average each day during 1996, far more than reported in earlier studies.

When passengers become seriously ill, U.S. airlines favor diverting flights to the nearest airport. During 1996, U.S. carriers diverted 557 flights for medical emergencies, nearly a third of those for cardiovascular problems, according to the ATA study, the first detailed analysis of its type. Forty-two passengers died on board, the study said.

In the case of cardiac arrest, time is of the essence: Doctors estimate that with each passing minute, the chances of survival drop by 10%. But it takes roughly 30 minutes to land a plane from cruising altitude.

"If you haven't got a **defibrillator**, you might as well stand there with your hat on," says Eric Donaldson, a physician and the general manager of aviation-health services for Qantas Airways the Australian airline, which was among the first carriers to outfit its fleet with **defibrillators** in 1991. Thus far, the devices, which use an electric shock to restore a heart's normal rhythm, have saved two of its passengers, Qantas says.

Delta unveiled its plans last month to begin equipping its flights with **defibrillators** in July, with the goal of adding the machines to all 558 Delta jets by the year 2000. Although the airline's executives say their decision resulted from a lengthy assessment, the company's announcement came on the heels of an in-flight tragedy. In December, a 25-year-old Florida woman died of cardiac arrest on a Delta flight from Atlanta to Miami, despite rescue efforts by John T. Knight, a Shreveport, La., surgeon who was a passenger on the flight.

Today, Dr. Knight is angry: He believes he may have been able to save the young woman's life if he had the proper equipment, including endotracheal tubing and a breathing bag. Delta's FAA-recommended kit "was basically like a Band-Aid bag; it was just pathetic," he says. (A Delta spokeswoman says the company's kit met FAA requirements and its crew followed all procedures.)

Dr. Knight adds that anyone volunteering to help in such emergencies does so at some peril. "If [airlines are] going to call doctors, they need to let them know there's no Good Samaritan law in the air, and we don't have any good equipment."

Democratic Rep. John Duncan of Tennessee introduced a bill in Congress last November to protect airlines and individuals from liability when acting in good faith to assist during air emergencies. The bill also calls for the FAA to decide whether **defibrillators** ought to be required on aircraft and for better data collection on airline medical emergencies.

Similar concerns surround the use of medicine on flights. American and Delta are in the process of equipping their planes with drugs to treat seizures, congestive heart failure and other emergencies. Each flight's captain is entrusted with deciding who is permitted to administer such drugs, typically releasing the kits only to physicians or, more rarely, other medical professionals.

The FAA says it is reassessing its list of medical supplies that airlines must carry.

Meantime, Delta's Dr. Bisgard says the airline recently decided, in tandem with its move to adopt **defibrillators**, to add the endotrachial airways that Dr. Knight says might have helped him save the passenger from Florida. The trouble is that endotrachial airways are difficult to use in a controlled hospital environment, let alone on a jet bouncing about.

"Even anesthesiologists who do it every day still get tubes in the wrong places, so we didn't put endotrachial airways," on planes in the past, Dr. Bisgard says. But following urging by doctors who say the devices could help save lives, Delta is adding them to its expanded medical kits. Dr. Bisgard says: "If they, in fact, do more harm than good, we'll take them off."

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[001]

National Center
7272 Greenville Avenue
Dallas, Texas 75231-4596
Tel 214 373 6300
<http://www.americanheart.org>

June 30, 1997

TO: Jerry Mande
FROM: Pat Bowser
SUBJECT: AHA Participants in Thursday's Meeting on Early Defibrillation Issues

The following American Heart Association volunteers and staff will attend the meeting scheduled for Thursday, July 3:

Myron Lee Weisfeldt, MD
Chairman, Department of Medicine
Columbia Presbyterian Medical Center
630 West 168th Street
New York, NY 10032
(Chairman, AHA Automatic External Defibrillation Task Force)

(b)(6)

Patricia Ann Bowser
Coordinator, AHA Automatic External Defibrillation Task Force
3636 Reposo Way
Belmont, CA 94002

(b)(6)

Richard Scott Hamburg
Legislative Representative, AHA Office of Public Advocacy
1150 Connecticut Ave, NW #810
Washington, DC 20036

(b)(6)

Martha Norton Hill, RN, PhD
Professor, Johns Hopkins University
1830 E. Monument St. Rm 233
Baltimore, MD 21205
(President, American Heart Association)

(b)(6)

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Vice President, Corporate Secretary and Counsel
David Wm. Livingston, Esq.

Joseph Pasquale Ornato, MD
Chairman, Department of Emergency Medicine
Medical College of Virginia
401 N. 12th Street, Rm G248
Richmond, VA 23298

(b)(6)

Terence David Valenzuela, MD, MPH
Associate Professor, Emergency Medicine
University of Arizona
1501 N. Campbell Avenue
Tucson, AZ 85724

(b)(6)

Roger Dean White, MD
Professor of Anesthesiology
Mayo Clinic
200 First Street SW
Rochester, MN 55905

(b)(6)

We will arrive at the 17th Street entrance of the Old Executive Office Building at 2:00 pm. If you need additional information or need to provide further details to us, reach me at 415 637-8500. If possible, we would like to know how many people, representing what agencies will be in attendance.

We look forward to this opportunity to focus attention on the need for expanded access to defibrillation. Thank you for your support.





OEOB CONFERENCE & ROOSEVELT ROOM RESERVATION

Date of Meeting: 7-3-97Time: 2 To: 3:30

All reservation forms should be submitted at least 48 hours prior to events.

Name of Individual Hosting Event: <u>Elena Kagan</u>		Office/Agency: <u>OPD</u>	
Staff Contact: <u>Jerry Mande</u>	Extension No.: <u>x66018</u>	Pager No.: <u>888-589-4877</u>	Room No.: <u>432.5</u>
Type of Event: ☒ Meeting ☐ Reception ☐ Other _____			
Name/Description of Event: <u>Briefing</u>			
Number of Outside Guests: <u>7</u>		In Attendance:	
Total Number of Attendees: <u>15-20</u>		☐ President ☐ First Lady ☐ Vice President ☐ Mrs. Gore	
Room(s) Requested:			
☐ Roosevelt Room * ☐ Room 476		☒ Room 180 ☐ Room 450	
		☐ Room 472 ☐ Room 459	
☐ Room 474 (Indian Treaty Room)			
General Services: ☐ Elevator Service (elevator #4)			
Time Reserved: _____ ☐ Podium ☐ Flags			
Special Room Arrangements for the Indian Treaty Room:			
☐ Conference Style ☐ Theatre Style ☐ Other _____			
Number of Chairs: _____		Number of Table(s): _____	
Entrance/Gate Preferred:			
☒ Pennsylvania Avenue (OEOB)		☐ East Visitors Gate	
Note: the 17th & "G" Street entrance is wheelchair accessible.			
Additional Requirements or Requests: <u>slide projector & screen</u>			

* Roosevelt Room Reservation Forms must be returned to the West Wing receptionist (FAX # 6-1210)

OEOB Room Reservation Forms must be returned to Room 1, OEOB (FAX # 6-6472)

All reservation forms should be submitted at least 48 hours prior to events.

- 5-7 min
1. Rochester MN Roger
White - Mayo
 2. AA
 3. Cardiac Arrest Survival Act.
FL law change
 3. Commending those contributing
to study.

Ornado - MCV

Barbara Riegel - CA

Martha Hill - JHU

Terry Valenzuela - Casino

HHS Comments Related to the Draft Legislation on
The Cardiac Arrest Survival Act and Cardiac Survival Activities
the Department Could Support

- o HHS/The National Institutes of Health/National Heart, Lung and Blood Institute (NHLBI), supports the "chain of survival" concept and the position that all emergency medical personnel should be trained to use a defibrillator and that all medical vehicles should be equipped with a manual or automated external defibrillator (AEDs).
- o With respect to the proposed legislation, it contains a number of provisions that are of concern to the Department. For example, it provides for the development and dissemination of a "core content" for a model state training program in lifesaving interventions, including cardiopulmonary resuscitation. Organizations such as the American Red Cross and the American Heart Association are currently involved in developing and disseminating training programs for cardiopulmonary resuscitation. We believe it is not appropriate for the NHLBI to assume this function and thus duplicate the ongoing efforts of private entities.
NHLBI comments?
- o The legislation also proposes a demonstration project to provide training in the core content to first responders and bystanders. While we would support such a project, we are concerned that implementation of a demonstration project of this type through the Department would require additional funding and staff resources.
NHLBI
- o HHS supports the development of a nation database related to the incidence of cardiac arrest. This is an important area that is not currently addressed. This also would involve the investment of substantial resources, both human and financial, that are not currently planned for within the Department. The proposed legislation does not address financial support in this regard.
- o We believe there is merit in developing model state legislation to ensure access to emergency medical services for basic life support. However, we have a concern about the appropriateness of the NHLBI in developing such legislation. The NHLBI has a research and education mandate. Thus, we do not believe NHLBI should be involved in the development of legislation at the state level especially legislation that may establish requirements for state licensure or credentials of health professionals.
no overlaps?

- o We strongly believe that any advances in this area should address research needs in cardiac arrest. For example, although the NHAAP supports the concept of placing AEDs in public places, it has emphasized the need for additional research before this occurs.
- o There is also a need for additional research on resuscitation. Electrical instability of the heart remains a vexing problem and research into understanding mechanisms and therapies to prevent it and or restore normal health rhythm, particularly following cardiac arrest, is urgently needed.
- o Additional studies of the feasibility and efficacy of public programs to treat cardiac arrest are also highly desirable and should precede implementation of any nation emergency action programs.
- o The Department will work with our health professional training programs in the Health Resources and Services Administration and the Health Care Financing Administration to explore the possibility of putting greater emphasis on the chain of survival training activities and the use of AEDs in their grant and contract training programs.
- o We also will explore with Public Health Service Agencies in the Department, including the Food and Drug Administration, the possibility of broadening the use of AEDs so that more non-EMT and other health professionals, who are first responders, are able to use AEDs.

Need
will

4TH STORY of Level 1 printed in FULL format.

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The New York Times

April 16, 1997, Wednesday, Late Edition - Final

SECTION: Section A; Page 1; Column 3; Metropolitan Desk

LENGTH: 2162 words

HEADLINE: RACING THE AMBULANCE: A special report.;
Doctors Say Defibrillators Save Lives, but Laws Slow Wider Use

BYLINE: By JANE FRITSCH

BODY:

When Tony Cox's heart stopped beating, he was working out on a treadmill at the Reebok Club on the Upper West Side.

Theoretically, his odds of survival were as high as 60 percent or 70 percent. A doctor was exercising nearby and a club employee was a trainee paramedic; they began working on him immediately. Others called 911. And the club was only 10 blocks from St. Luke's-Roosevelt Hospital, whose ambulances respond to 911 calls.

But Winston Hill (Tony) Cox, a 55-year-old father of four and the former chairman of Showtime, died that Saturday afternoon last September.

He might have had a chance, doctors said, if emergency medical workers had arrived sooner with a defibrillator, a machine that delivers an electric shock to restart the heart. But it took 16 excruciating minutes for the ambulance to arrive that day, far more than the 5- or 6-minute window of hope.

In New York City, in fact, the likelihood of being revived after cardiac arrest is only about 1 percent. The congealed traffic in New York -- and in most American cities -- and the vast distances ambulances must travel in rural areas mean that emergency workers simply cannot reach most cardiac arrest victims in time.

Cardiologists estimate that a half or more of the 350,000 people who die of cardiac arrest in the United States each year could have been saved.

Cardiologists now argue that it is time to give up on emergency medical squads as the chief means of reviving heart patients. In the last year, the American Heart Association has begun to push for much wider availability of defibrillators. The devices should be placed just about everywhere, the association contends -- in factories, health clubs, apartment buildings, and even in private homes, and available for use by a variety of nonmedical people, like security guards and doormen. Within a decade, the association hopes, the devices should become as common as fire extinguishers.

While the heart association's proposal may seem simple, state laws and Federal regulations are in the way.

The New York Times, April 16, 1997

The Food and Drug Administration, which regulates the machines, has not considered whether they are safe and effective for use by the general public.

State emergency medical directors have joined together to oppose the widespread use of defibrillators, saying that the matter needs more study.

Still, the heart specialists plan to fight aggressively for their plan, kicking it off at a meeting this week near Washington.

Not too long ago, defibrillators were so complicated that the operators had to be specially trained to read the screens and interpret the heart waves.

But the heart association says a new generation of automatic, easy-to-use machines has been developed that can be operated by almost anyone.

The new lightweight machines analyze heart rhythms, decide whether a shock is needed and give simple voice instructions. The machines will not shock a person who does not need it, the manufacturers say.

What has made the machines practical, the association says, are five-year lithium batteries that eliminate the need for regular maintenance.

The Food and Drug Administration approved several of the new, lightweight models last fall, but only for prescription use.

The average cost is about \$3,000, but the price is expected to drop significantly if the market is opened to all who want to buy them.

The collection of data on deaths from cardiac arrest is haphazard, making the rates difficult to compare.

But experts generally agree that dismal survival rates apply to all but a few American cities and most suburban and rural areas.

"This is an area that has been hidebound by rules and laws and regulations," said Dr. Myron L. Weisfeldt, the chairman of the Department of Medicine at Columbia-Presbyterian Medical Center and the head of the heart association's task force on defibrillators.

"If the defibrillators aren't there, and the survival rate is less than 5 percent, then you'd better find a way to get them there," Dr. Weisfeldt said.

The Condition

The Heart And Its Problems

Like Mr. Cox, about half of all those who die of heart disease die suddenly and unexpectedly, without ever having shown any symptoms, the heart association says. Many are unaware that they have clogged arteries or other types of heart disease.

In Mr. Cox's case, an autopsy showed that three coronary arteries were blocked, but there was no sign of the muscle damage that would have been present if he had had a heart attack.

The New York Times, April 16, 1997

If Mr. Cox's heart had been restarted, he might have been a candidate for cardiac bypass surgery, Dr. Nicholas J. Fortuin, a professor of medicine at Johns Hopkins, said. That procedure restores blood flow to the heart and can add decades to a life. But Mr. Cox might have died even with early defibrillation, Dr. Fortuin said.

Cardiac arrest does not necessarily mean a heart attack occurred. Arterial blockages alone can cause the heart's electrical impulses to become disorganized and incapable of coordinating the contractions that keep the heart beating normally.

The disorganized electrical activity, called ventricular fibrillation, can last for about five minutes. During that time, a shock from a defibrillator can reorganize the electrical impulses so that the heart resumes normal beating.

But with each passing minute, the likelihood of successful defibrillation drops significantly. Expertly done cardiopulmonary resuscitation can buy the victim a little more time, but it is useless unless a defibrillator arrives quickly, before all electrical activity in the heart has ceased.

It is a common notion suggested by television shows and movies that defibrillation is not done until a flat line appears on a heart monitor, but that is not so. A flat line indicates that there is no electrical activity in the heart at all, and therefore no electrical impulses to be reorganized by a shock from a defibrillator.

Dr. John La Pook, a Manhattan internist and friend of Mr. Cox, was so disturbed by his friend's unexpected death that he has since purchased a defibrillator and keeps it at his apartment on Central Park West.

Sometimes, he even takes his defibrillator to his regular basketball game in Brooklyn, where he plays with friends with ages ranging from the 30's into the 50's. At first they laughed at him, Dr. La Pook said, but they seem to have come to appreciate having the thing around.

The Device

The Newest Models Come on the Market

Use of defibrillators by the public is generally not covered by state "good samaritan" laws, which protect amateur rescuers from liability. But cardiologists are afraid that at some point, health clubs, office buildings and other public buildings as well as airlines could be found negligent if they did not have defibrillators.

American Airlines recently became the first airline in this country to order defibrillators for its planes, and other domestic airlines are considering it because it is all but impossible to land a plane and get a defibrillator to a victim in time. Metro North has ordered defibrillators to be placed on its cart of emergency medical supplies in Grand Central Station, and a few casinos in Las Vegas have also bought defibrillators.

Dr. La Pook can legally have his own defibrillator because he is a physician. Under current Federal regulations and the law in most states, including New York, only doctors or people authorized by doctors may buy and operate

The New York Times, April 16, 1997

defibrillators, even the simplest models.

Last fall, the National Association of State Emergency Services Directors became so concerned with the push for public access to defibrillators that it passed a resolution calling on the heart association to postpone its defibrillator campaign until data show that use by the public is effective and safe.

"They are potentially wonderful devices," said Dr. Robert R. Bass, the executive director of the Maryland Institute for Emergency Medical Services. "But we don't see any evidence that the devices are going to be effective in the hands of the public. Before we call for a national movement to place these devices everywhere, we need to know how safe they are and what's the cost benefit."

Manufacturers of the devices say they are completely safe, and the heart association says they are all but foolproof. And, they add, if the choice is between defibrillation by an amateur and no defibrillation at all, the answer is clear.

But Food and Drug Administration officials say some safety and ethical considerations have yet to be addressed.

"There's a question of whether you can do as much harm as you can do good," said Thomas J. Callahan, the Food and Drug Administration official who oversees the evaluation of such devices. "In the hands of a lay person, are there going to be more disasters than there are benefits?"

He said he was not certain that in all cases the new machines could distinguish heart rhythms that should be shocked from those that should not. To evaluate fine distinctions, he said, trained technicians are necessary.

Late-stage resuscitation by amateurs, he said, might restore a heartbeat and do little more, leaving the victim with little brain function and permanently dependent on life support systems.

Advocates of greater distribution of defibrillators say such results are rare and no more likely to happen when rescuers are amateur than when they are highly trained.

"The reality is that none of us are that good at it," said Dr. Alexander Kuehl, the chairman of the New York City medical advisory committee for emergency services and the former head of the city's emergency services agency.

"There's always a danger that you're going to shock a heart back into a living rhythm, but that the brain is going to be dead," he said. "But if we can get the heart back, very few of us play God in terms of who lives and who dies. We bring back the one thing that we can bring back, which is the heart, and hope that the brain is intact."

And those who are brain dead need not linger on life supports, he said, adding, "Two days later, you unplug the respirator."

The Competition

4 Companies Vying For a Big Market

For the near future, at least, New Yorkers must depend on the Fire Department's emergency services for help with cardiac arrests. The department has worked aggressively for the last three years to improve response time, and there are indications that the efforts are working. But no statistics have been compiled to show whether the survival rate has improved. The study that showed a 1 percent survival rate in New York City was published in the Journal of the American Medical Association and was based on 1991 data.

Since then, the department has gradually equipped all fire engines in Brooklyn, Queens, the Bronx and Staten Island with defibrillators, on the theory that firetrucks are more likely to reach victims in time than are ambulances. Similar plans are under way in Manhattan.

The latest statistics show that the average response time for fire engines on cardiac arrest calls is only five minutes, according to Deputy Commissioner Edward M. Dolan. It takes another five minutes for an ambulance to arrive, he said.

The firefighters are using virtually the same models that the heart association is advocating for public use.

The Suffolk County Police Department has ordered the models for its police cars because the county is almost entirely served by volunteer ambulance squads, which have great difficulty reaching victims in time.

Four companies are now manufacturing the machines, and are in fierce competition for what they hope will be an exploding market over the next decade. They are Heartstream, of Seattle; Laerdal Medical Corporation, a Norwegian company with American headquarters in Wappingers Falls, N.Y.; Physio-Control Corporation of Redmond, Wash., and Survivalink Corporation, of Minneapolis.

Their machines, all similar, weigh about five pounds and were designed in consultation with the heart association to be as simple as possible for amateurs to use. The recent advance that makes them practical, according to cardiologists, is the inclusion of a lithium battery with a five-year life.

The batteries eliminate the need for constant maintenance or recharging, and computer chips perform complete tests of the operating systems each day.

When the machine is turned on, it gives a series of simple voice instructions, so that panicky users do not need to stop to read complex directions. The rescuer is told to attach two plastic leads to the victim's chest and then stand back.

The machine analyzes the heart rhythm and determines whether the victim's heart is in fibrillation. If so, it charges up, instructs the rescuer to stand clear, and then to push a red button that delivers a shock. The machine may call for a second or third shock if necessary, then a period of cardio-pulmonary resuscitation, followed by another cycle of shocks.

GRAPHIC: Photos: The Lifepak 500 is made by Physio-Control, one of four companies offering a new defibrillator. (Librado Romero/The New York Times) (pg.

The New York Times, April 16, 1997

A1); New York Hospital emergency room workers used a conventional defibrillator on a cardiac patient. The new portable type of defibrillator increases the chances that help will arrive in time for the patient to survive. (Librado Romero/The New York Times)(pg. B2)

LANGUAGE: ENGLISH

LOAD-DATE: April 16, 1997

AGENDA

Cardiac Arrest Survival

- I. Overview -- opportunity for lifesaving.
 - AEDs
 - Other
- II. Effectiveness of AEDs in different settings
 - Advanced Life Support (paramedics)
 - EMTs (less than half of non-paramedic EMTs have AEDs)
 - Non-EMT first responders (police/firefighters; 19% trained/equipped)
 - "Designated" responders (flight attendants; security guards; occupational)
 - Trained bystanders (CA city)
 - supervision
- III. Goals
 - Research
 - Access
- IV. Actions
 - a) Research
 - scope, timing, immediate effect on access, funding
 - b) Training
 - core content for first responders and bystanders (NHTSA/NHLBI)
 - c) Other actions to increase access (beyond research/training)
 - AED's in every ambulance? who pays? cost-effectiveness?
 - Advocated AED's in for every police force / firefighter?
 - d) National Database
 - e) Commission to increase survival from cardiac arrests

Medical
911
Responders

Cardiac Resuscitation Services/ Public Access to Automatic External Defibrillators (AEDs)

BACKGROUND: 350,000 sudden cardiac deaths(SCD)/year (AHA estimate); SCD incidence estimates range between 425-1000 people/day in America. It is estimated that 255 of these could be saved with an aggressive approach, including AEDs.

Large Spectrum of Results

- Current cardiac resuscitation success rate: 2 - 3% (NY & Chicago) up to 25% (Seattle & Rochester)
- Weaver 1984: 62% survival if first responder defibrillated; these patients also had better neurological recovery; compared with 27% survival if first responder provided CPR only.
- Stults 1984: 19% survived and discharged if defibrillated in the community; 3% survived if only CPR was available.
- Public access defibrillator clinical trial task force: 90% estimated to survive if defibrillated within the first minute of cardiac arrest; this survival decreases by 10% for each additional minutes' delay and is reduced to 10% at 10 minutes.
- White 1996: 49% survived to discharge if call-to-shock time was 5.8 minutes; if restoration of spontaneous circulation followed the shock, 96% survived. Of those requiring advanced cardiac life support (ACLS) in addition to AED, only 25% survived. Restoration of spontaneous circulation occurred when call-to-shock time was shorter (5.4 minutes) compared to 6.3 minutes in those patients who additionally required ACLS.
- Waisfeldt 1995: Survival increased from 9% to 30% when first responders were equipped with AEDs, but only if combined with a rapid response time.
- In Rochester, Minn., when police vehicles were equipped with AEDs, of 14 patients who had initial defibrillation by the police force, 10 survived to be discharged. This can be compared with the survival rate in NY, where 26 of 2329 victims survived.
- Tillinghast 1991: survival to 1-year after out-of-hospital cardiac arrest increased between 1972 and 1982: in males, from 1.8 to 11.7 per 100,000; in females, from .5 to 3.5 per 100,000.

- Brison 1992: a study in Ontario failed to show a difference in SCD survival with or without defibrillation.
- NOTE: interstudy differences make comparisons between above-mentioned studies difficult -- e.g., differences in response times, definition of survival, etc.
- The two recent studies on implantable defibrillators (MADIT and AVID) demonstrated dramatically improved survival for the ICD-implanted patients compared to those assigned to medical therapy -- reductions in mortality were 54% and 38%, respectively.

Factors Affecting Survival

- Best results: bystander CPR, rapid EMS response, early defibrillation.
- Worst results: poor myocardium & absence of defibrillation, CPR or transport.

Response Time and Time to Defibrillation are of the Essence

- The probability of survival declines sharply with each passing minute of cardiopulmonary compromise. Best outcomes are seen in patients in whom defibrillation alone restores spontaneous circulation; this occurs more often with a short time-to-defibrillation.
- Current focus is on early defibrillation through a network of responders and machines located (temporally) near the event

Currently Available Machines (SEE ATTCHMENT 1)

- Manual Defibrillators: \$3,000 - \$5,000
 - Low energy: class II device
 - High energy: class III device (preamendment)
- Semi automatic: \$3,000 - \$8,000
 - class III device (preamendment)
 - 14 approved
- Fully automatic
 - Class III device (preamendment)
 - Heartstart 1000 (only one approved)

- One pending: PowerHeart (SEE ATTACHMENT 2)
- fully automated defibrillators use an algorithm which identifies a shockable rhythm; accordingly, no knowledgeable input is required from the responder other than knowledge of lead placement.

Factors to Consider in Moving AEDs out of Professional Use

- Operating under state law - many state regulations limit use of defibrillators to first responders or on prescription of a physician.
- Medical direction/supervision to obviate:
 - misdiagnosis of other causes of loss of consciousness
 - inappropriate use of machine in patients with seizure, tremor or other muscle artifact
 - time lost in failure to resuscitate
- User training & feedback
- Equipment control & maintenance

Widespread Access to AEDs

- Factors to be considered: level of training, degree of medical supervision; equipment control & maintenance.
- GOAL: Walking/talking survivor -- requires rapid response time to restart cardiac activity and restore effective circulation to maintain intact brain function.
- True passerby access is not seriously advocated.

Current AHA Study Proposal

- AHA envisions moving to a designated responder system -- i.e., AED would be administered by persons such as security guards and building superintendents who spend extended amounts of time in highly populated areas.
- \$10 million multi-site clinical study; 1 year to plan and 3 - 5 years to conduct.

- Primary outcome of the study is number of patients surviving for one month without neurological deficit after cardiac arrest. Secondary outcomes are quality of life and cost-effectiveness.
- Funding: \$2 million NHLBI
\$1 million AHA
Balance from companies; 4 U.S. manufacturers are already signed up
- Expected to be announced in the next few weeks.
- FDA is confident that the IDE can be worked out; two major issues are: enrollment of study sites with waiver of informed consent and study size characteristics and accrual rate.

Attachment 1

Pre-Amendment

AEDs are Class III devices (all devices are semi-automatic unless indicated otherwise) *Most use rechargeable batteries*

AED Users: ACLS/BLS trained

expanded use---for newer AEDs---may be used by physician authorized designated users trained in emergency care and the specific device

AED'S supported with IDEs

Heartstream's Forerunner Biphasic AED --- cleared Sept 1996

AED's under IDE study or anticipated applications

Physio-Control's Lifepak 7B1 Biphasic Defibrillator (under investigation)

Zoll's PD2100 Biphasic Defibrillator (under investigation)

Survivalink's Transchest Biphasic Defibrillator (upcoming submission)

Available AEDs

Physio-Control	Lifepak 500 (most recently cleared AED, November 1996) Lifepak 300 (~\$7,200) Lifepak 9 SAA (~\$7,400) First Medic 710, 610 and 510 (Model 710 is about \$6,700; Model 510 is about \$4,000) (First Medic models are previously a SpaceLab defibrillators)
Heartstream, Inc.	Forerunner Biphasic AED (BLS/ACLS+ trained designated "first responders" e.g firefighters, police officers, etc.) <i>Disposable Lithium Battery (i.e., non-rechargeable) w/ 20.5 year shelf-life</i>
Laerdal Medical	Heartstart 911 Heartstart 3000 QR Heartstart 1000s (semi-) and Heartstart 1000 (fully-automatic) - <i>cleared for lay use</i>
SurVivaLink Corp	VivaLink AED (BLS/ACLS+ trained designated "first responders" e.g firefighters, police officers, etc.) (~\$2,800) <i>Rechargeable sealed-lead acid battery</i>
Zoll Medical	Zoll 1600 Zoll D 2000 (about \$7,200)
Howlett-Packard Co.	CodeMaster XL and XL+, Codemaster 100 (in-hospital transport, EMS)
Marquette	Marquette Responder 1500 (about \$8,000) Marquette Responder 1250 (about \$7,200)

Dan,

Quick + dirty search

Carole C. Carey

Attachment 2

NEW TECHNOLOGY - Under 510(k) Review as of May 27, 1997

Clinical Area: Fully automatic detection and delivery of therapy for ventricular tachyarrhythmia and ventricular fibrillation

Product Name: PowerHeart AECD (Automatic External Cardioverter/Defibrillator); Cordoc Science, Inc.

New Technology:

Use of improved software to better quantify shockable from non-shockable cardiac arrhythmias. The device is given full authority to detect and deliver shock therapy. Being AC powered, the device is indicated for the proactive treatment of in-hospital patients only.

Significance:

The PowerHeart is a fully automatic external defibrillator. At present it is being reviewed under 510(k) by ODE/DCRND/ADDG. If cleared to market, it will be the second fully automatic external defibrillator capable of detecting and delivering therapy (electrical shock) without human intervention, in accordance with a therapy strategy previously programmed by the physician. The first such device is pre-amendment and the shock/no shock decision is based on heart rate only. Other so-called "automatic" defibrillators on the market recommend shock or no shock, but require the concurrence of a human operator before the therapy can be delivered.

Contact person: Charles Ho, Ph.D.; HFZ-450; 443-8609; Email: CBH
Medical officer: Paul Chandeysson, M.D., HFZ-171, 443-8262
Statistician: Chang Lao, Ph.D., HFZ-542, 594-0616

Chuck Wexler

Inverness Creek Island, FL

- Survival to hospital discharge
 - neurologic impairment.
 - cost-benefit analysis
 - training necessary to maintain skills
 - side-effects injury

→ Joe Anuto
MCV

→ # of lives saved 360K / 18-5.40%
36K 15-20%

= Commission - to evaluate

→ Nat'l Heart Attack

=

Chuck Wexler
202-466-7820

F - 6

Glen Havelson
→ 690-7699

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ALL
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PERF
Forum



THE
INTERPARLIAMENTARY
CONFERENCE ON THE
GLOBAL ENVIRONMENT

259 -
#483 624-1252

Investor Group	
Kyle Michel	Long Aldrich Norman
Hungarian owned company	

Nudge from U.S. Gov't.

Tues or Wed
am

O: 213-345-5838
H: 914-591-6229

→ Mike Weisfeldt

HLBI \$2M

AHA \$1M

HP \$1M + device

Sunnie
-Link J&J K + 800

Heart
stream \$1M or device

PhysioControl

|| in a month ||

Used potency -

- FDA wants study done
- Major push in FDA to WH
interest WH

Withdrawal/Redaction Marker

Clinton Library

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002. form	Earnings and Leave Statement, Jerold Mande (1 page)	03/29/1997	b(6)

COLLECTION:

Clinton Presidential Records
Office of Science and Technology Policy
Jerold Mande
OA/Box Number: 13034

FOLDER TITLE:

Automatic External Defibrillators: [Correspondence]

2008-1524-F
kc1220

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P1 National Security Classified Information [(a)(1) of the PRA]
- P2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P3 Release would violate a Federal statute [(a)(3) of the PRA]
- P4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
- P5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
- P6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Personal record misfile defined in accordance with 44 U.S.C. 2201(3).

RR. Document will be reviewed upon request.

Freedom of Information Act - [5 U.S.C. 552(b)]

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- b(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
- b(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
- b(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
- b(9) Release would disclose geological or geophysical information concerning wells [(b)(9) of the FOIA]

Current Strategy

-
- Rural
-

1 Non-traditional 1st responders

→ Cardiac Survival Act

^{\$2M}
 NHLBI - \$7.9M over 3 yrs | Clinical Trial
 Co-funding from industry
 AHA - Clinical \$1M

- Leardal - Hewlett Packard
 - Physical Control - Marquette Electronics

5/1 deadline 3-4 devices

Tony Cox
 Snow
 Everett
 Sep-64%
 Trained 1st
 Responders

CA - covered by good Samaritan

Market Forces - Mercatello

→ More Sweden Deaths Casinos than Seattle

Public
 Awareness
 Two-weeks
 Ago.

- MDs lose down their licenses
 under their medical authority

914-591-6229
 3-5% in NY

212-345-5838 office

Roch^{Minh} 41-84
 26-2000

Dallas Miami
 Seattle DPH

150¢
 Pres
 AHA
 Tech
 Force
 3¢%

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CARDIAC ARREST SURVIVAL ACT (House of Representatives - May 20, 1997)

[Page: H2929]

The SPEAKER pro tempore (Ms. Pryce of Ohio). Under the Speaker's announced policy of January 21, 1997, the gentleman from Florida [Mr. Stearns] is recognized during morning hour debates for 5 minutes.

Mr. STEARNS. Madam Speaker, I am here to talk about a bill that I will be introducing today. The bill I am referring to is the Cardiac Arrest Survival Act. If this bill should become law, I say to my colleagues, it has the potential of saving thousands of lives each year.

I am pleased to have this opportunity to work with the American Heart Association on this important measure. Passage of this act would go a long way toward making the goal of saving the lives of people who suffer from sudden cardiac arrest possible. It would ensure that what the American Heart Association refers to as a cardiac chain of survival could go into effect.

Madam Speaker, the four links in a cardiac chain of survival are, one, early access to emergency care; early cardiopulmonary resuscitation; early defibrillation, which I will explain later; and early advanced life support.

While defibrillation is the most effective mechanism to revive a heart that has stopped, it is also the least accessed tool we have available to treat victims suffering from heart failure.

Perhaps it would be helpful for those of my colleagues listening and not well versed on the subject if I just take a moment and walk you through what we mean when we use the term 'defibrillation.'

A large number of sudden cardiac arrests are due to an electrical malfunction of the heart called ventricular fibrillation, or VF. When VF occurs, the heart's electrical signals, which normally induce a coordinated heartbeat, suddenly become chaotic and the heart's function as a pump abruptly stops. Unless this state is reversed, then death will occur within a few minutes, 160 seconds. The only effective treatment for this condition is defibrillation, the electrical shock to the heart.

My colleagues might be interested to know that more than 1,000 Americans each and every day suffer from cardiac arrest. Of those, more than 95 percent die. My colleagues, I find that unacceptable, because we have the means at our disposal to change those statistics, and that is why I am committed myself to this cause.

Studies show that 250 lives can be saved each and every day from cardiac arrest by using the automatic

external defibrillator [AED]. Those are the kinds of statistics that nobody can argue with. Right now, the chance of survival due to sudden cardiac arrest is less than 1 in 10. We could change those odds for people through the development of model state training programs for first responders.

Madam Speaker, did my colleagues know that for each minute of delay in returning the heart to its normal pattern of beating it decreases the chance of that person's survival by 10 percent? Currently, only 14 States offer CPR training in schools and 28 States authorize first responders to use automatic external defibrillators. However, less than one-half of emergency medical technicians and less than one-fourth of nonemergency medical technician first responders in the United States are even trained or equipped with a defibrillator. Fortunately, one of those States is my State of Florida.

No one knows when sudden cardiac arrest might occur. According to a recent study the top five sites where cardiac arrest occurs, and I will list them in order of prevalence, at airports, county jails, shopping malls, sports stadiums, and golf courses.

I believe we all should take great comfort in knowing that those who are rushed to help us, to resuscitate us, have the most up-to-date equipment available and are trained to use it.

Some of my colleagues might ask, if 27 States have laws authorizing nonemergency medical technician first responders to use AED's, why do we need to pass this legislation? The reason is quite simply that prehospital medical care, which includes training, equipment, and standards of care, experiences variations from State to State, which in turn delivers inconsistent care to the public. Some might say that this is just another Federal mandate. They would be wrong in that assumption.

This legislation merely directs the National Heart, Lung and Blood Institute to develop and disseminate a model State training program for first responders and bystanders in lifesaving first aid, including CPR, and direct the development of model State legislation to ensure access to emergency medical service.

Several of my colleagues might ask, will this not cost a lot of money? No, it will not cost the Government any money because we would encourage the private sector, such as those working in the medical community, to form a partnership with industry to help defray the costs. Overall, we envision this as a joint venture, with this legislation providing the model program for States to use if they so desire and the private sector picking up the additional costs involved.

Madam Speaker, I hope my colleagues will join me in cosponsoring this important bill whose stated goal is to prevent thousands of people suffering sudden cardiac arrest from dying by making the equipment and trained personnel available at the scene of such emergencies.

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H.R.1679

Cardiac Arrest Survival Act (Introduced in the House)

HR 1679 IH

105th CONGRESS

1st Session

H. R. 1679

To amend the Public Health Service Act to provide for the establishment at the National Heart, Lung, and Blood Institute of a program regarding lifesaving interventions for individuals who experience **cardiac arrest** , and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

May 20, 1997

Mr. STEARNS (for himself, Mr. ABERCROMBIE, Mr. BACHUS, Mr. BARRETT of Wisconsin, Mr. BOUCHER, Mr. BURR of North Carolina, Mr. CALVERT, Mr. CANADY of Florida, Ms. CARSON, Mr. CASTLE, Mr. CLEMENT, Mr. COYNE, Mr. DAVIS of Virginia, Mr. DEFAZIO, Mr. DELLUMS, Mr. DUNCAN, Mr. ENGLISH of Pennsylvania, Mr. FATTAH, Mr. FOLEY, Mr. FRANK of Massachusetts, Mr. FROST, Mr. GALLEGLY, Mr. GEKAS, Mr. GOODLING, Ms. CHRISTIAN-GREEN, Mr. HASTINGS of Florida, Mr. HILLIARD, Mr. KLINK, Mr. LEACH, Mr. MCDERMOTT, Ms. MCKINNEY, Mr. MASCARA, Mr. MEEHAN, Mrs. MINK of Hawaii, Mr. MORAN of Virginia, Mr. OLVER, Mr. PALLONE, Mr. PAYNE, Mr. PETERSON of Pennsylvania, Ms. RIVERS, Mr. SCHUMER, Mr. SHAYS, Mr. TOWNS, Mr. WALSH, Mr. WAXMAN, and Mr. WELDON of Pennsylvania) introduced the following bill; which was referred to the Committee on Commerce

A BILL

To amend the Public Health Service Act to provide for the establishment at the National Heart, Lung, and Blood Institute of a program regarding lifesaving interventions for individuals who experience **cardiac arrest** , and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the '**Cardiac Arrest Survival Act**'.

SEC. 2. FINDINGS.

The Congress finds as follows:

- (1) Each year more than 350,000 adults suffer **cardiac arrest** , usually away from a hospital. More than 95 percent of them will die, in many cases, because lifesaving defibrillators arrive on the scene too late, if at all.
- (2) These **cardiac arrest** deaths occur primarily from occult underlying heart disease and from drownings, allergic or sensitivity reactions, or electrical shocks.
- (3) **Survival** from **cardiac arrest** requires successful early implementation of a chain of events--the chain of **survival** which begins when the person sustains a **cardiac arrest** and continues until the person arrives at the hospital.
- (4) A successful chain of **survival** requires the first person on the scene to take rapid and simple initial steps to care for the patient and to assure the patient promptly enters the emergency medical services system.
- (5) The first persons on the scene when an **arrest** occurs are typically lay persons who are friends or family of the victim, fire services, public safety personnel, basic life support emergency medical services providers, teachers, coaches, and supervisors of sports or other extracurricular activities, providers of day care, schoolbus drivers, lifeguards, attendants at public gatherings, coworkers, and other leaders within the community.
- (6) A coordinated Federal response is necessary to ensure that appropriate and timely lifesaving interventions are provided to persons sustaining nontraumatic **cardiac arrest** . The Federal response should include, but not be limited to--
 - (A) significantly expanded research concerning the efficacy of various methods of providing immediate out-of-hospital lifesaving interventions to the nontraumatic **cardiac arrest** patient;
 - (B) the development of research-based, nationally uniform, easily learned and well retained model core educational content concerning the use of such lifesaving interventions by health care professionals, allied health personnel, emergency medical services personnel, public safety personnel, and other persons who are likely to arrive immediately at the scene of a sudden **cardiac arrest** ;

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H.R.1679

Cardiac Arrest Survival Act (Introduced in the House)

(C) an identification of the legal, political, financial, and other barriers to implementing these lifesaving interventions; and

(D) the development of model State legislation to reduce identified barriers and to enhance each State's response to this significant problem.

SEC. 3. NATIONAL INSTITUTES OF HEALTH MODEL PROGRAM ON THE FIRST LINKS IN THE CHAIN OF SURVIVAL .

Section 421 of the Public Health Service Act (42 U.S.C. 285b-3) is amended by adding at the end the following subsection:

`(c) Programs under subsection (a)(1)(E) (relating to emergency medical services and preventive, diagnostic, therapeutic, and rehabilitative approaches) shall include programs for the following:

`(1) The development and dissemination, in coordination with the emergency services guidelines promulgated under section 402(a) of title 23, United States Code, by the Associate Administrator for Traffic Safety Programs, Department of Transportation, of a core content for a model State training

program applicable to **cardiac arrest** for inclusion in appropriate current emergency medical services educational curricula and training programs that address lifesaving interventions, including cardiopulmonary resuscitation. The core content of such program--

`(A) may be used by health care professionals, allied health personnel, emergency medical services personnel, public safety personnel, and any other persons who are likely to arrive immediately at the scene of a sudden **cardiac arrest** (in this subsection referred to as `**cardiac arrest** care providers') to provide lifesaving interventions, including cardiopulmonary resuscitation;

`(B) shall include age-specific criteria for the use of particular techniques, which shall include infants and children; and

`(C) shall be reevaluated as additional interventions are shown to be effective.

`(2) The operation of a demonstration project to provide training in such core content for

cardiac arrest care providers.

`(3) The definition and identification of **cardiac arrest** care providers, by personal relationship, exposure to **arrest** or trauma, occupation (including health professionals), or otherwise, who could provide benefit to victims of out-of-hospital **arrest** by comprehension of such core content.

`(4) The establishment of criteria for completion and comprehension of such core content, including consideration of inclusion in health and safety educational curricula.

`(5) The identification and development of equipment and supplies that should be accessible to **cardiac arrest** care providers to permit lifesaving interventions by preplacement of such equipment in appropriate locations.

`(6) The development of model State legislation (or Federal legislation applicable to Federal territories, facilities, and employees) in cooperation with the Attorney General, which model legislation shall be developed in accordance with the following:

 `(A) The purpose of the model legislation shall be to ensure--

 `(i) access to emergency medical services through consideration of a requirement for public placement of lifesaving equipment; and

 `(ii) good samaritan immunity for **cardiac arrest** care providers; those involved with the instruction of the training programs; and owners and managers of property where equipment is placed.

 `(B) In the development of the model legislation, there shall be consideration of requirements for training in the core content and use of lifesaving equipment for State licensure or credentialing of health professionals or other licensed occupations or employment of other individuals who may be defined as **cardiac arrest** care providers under paragraph (3).

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`(7) The development of a national database for reporting and collecting information relating to the incidence of **cardiac arrest** , the circumstances surrounding such **arrests** , the rate of **survival** , the effect of age, and whether interventions, including **cardiac arrest** care provider interventions, or other aspects of the chain of **survival** , improve the rate of **survival** .

`(8) The publication of a biennial public report summarizing progress in improving care to the **cardiac arrest** patient.'.

SEC. 4. COMMISSION ON CARDIAC ARREST SURVIVAL .

(a) ESTABLISHMENT- There shall be established as an independent agency within the executive branch a commission to be known as the Commission on **Cardiac Arrest Survival** (in this section referred to as the `Commission').

(b) MEMBERSHIP-

(1) IN GENERAL- The Commission shall be composed of 15 members appointed in accordance with paragraph (2), and the ex officio members designated in paragraph (3).

(2) APPOINTING OFFICIALS; EXPERTISE REQUIREMENTS-

(A) Of the members appointed to the Commission pursuant to paragraph (1)--

(i) five shall be appointed by the President;

(ii) five shall be appointed by the President Pro Tempore of the Senate, after consultation with the Minority Leader of the Senate; and

(iii) five shall be appointed by the Speaker of the House of Representatives, after consultation with the Minority Leader of the House.

(B) The individuals appointed to the Commission under subparagraph (A) shall collectively have expertise and experience in the following areas: Emergency medical care; pediatric emergency medicine; cardiology; State and local emergency medical services; delivery of State health services; public safety; trauma; public buildings or

governmental facilities management; epidemiology; lifesaving equipment design and manufacture; development of model State legislation; human factors engineering; and professional and public education. At least three of the members shall be qualified by scientific training and experience to evaluate the design or conduct of, and data derived from, clinical and educational research in the risks and benefits of resuscitative modalities.

(3) EX OFFICIO MEMBERS- The membership of the Commission shall include ex officio members from the following agencies: The National Institutes of Health, Department of Health and Human Services; the Department of Education; the National Highway Traffic Safety Administration, Department of Transportation; the General Services Administration; the Department of Defense; and the Department of Justice.

(c) FUNCTION OF THE COMMISSION - The Commission shall, in consultation with the National Heart, Lung, and Blood Institute, evaluate and provide recommendations on effective methods to increase **survival** from **cardiac arrest** . Such recommendations may include recommendations on implementation of this Act, further studies on emergency medical systems or other modalities for early intervention in the chain of **survival** , or further legislation to improve access to **cardiac arrest survival** modalities.

(d) REPORTS AND RECOMMENDATIONS- Not later than 18 months after the date of the enactment of this Act, or during the interim when the Commission believes necessary, the Commission shall prepare and submit to the President and to the Congress a final report.

(e) ADMINISTRATIVE POWERS OF THE COMMISSION- The Commission may hold hearings, sit and act at such times and places, take such testimony, and receive such evidence as the Commission considers advisable to carry out the purpose of this section. The Commission may secure directly from any Federal department or agency such information as the Commission considers necessary to carry out the provisions of this section.

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(f) AUTHORIZATION OF APPROPRIATIONS- There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.

High Discharge Survival Rate After Out-of-Hospital Ventricular Fibrillation With Rapid Defibrillation by Police and Paramedics

From the Mayo Clinic and Medical School* and Mayo Gold Cross Ambulance Service, Incorporated[†], Rochester, Minnesota; and the Affiliated Residency in Emergency Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania.[§]

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Study objective: To assess outcome in patients with ventricular fibrillation (VF) treated by defibrillator-equipped police and emergency medical technician-paramedics in an advanced life support (ALS) emergency medical services (EMS) system.

Methods: We carried out a retrospective observational outcome study of all consecutive adult patients with atraumatic cardiac arrest treated from November 1990 through July 1995. The study was carried out in a city with a population of 76,865 in an area of 32.6 square miles. Central 911 dispatched police and an ALS ambulance simultaneously. Accurate intervals were obtained with the synchronization of all defibrillator clocks with the 911 dispatch clock. The personnel who arrived first delivered the initial shock. After shocks delivered by police, paramedics provided additional treatment if needed. Main outcome measures were time elapsed before delivery of the first shock, restoration of spontaneous circulation (ROSC), and survival to discharge home.

Results: Of 84 patients, 31 (37%) were first shocked by police. Thirteen of the 31 demonstrated ROSC, without need for ALS treatment. All 13 survived to discharge. The other 18 patients required ALS; 5 (27.7%) survived. Among the 53 patients first shocked by paramedics, 15 had ROSC after shocks only, and 14 survived. The other 38 needed ALS treatment; 9 survived. Call-to-shock time for all patients was less in the police group than in the paramedic group (5.6 versus 6.3 minutes, $P=.038$). For all patients, call-to-shock time was less in those with ROSC after shocks only than in those who needed ALS (5.4 versus 6.3 minutes, $P=.011$). Survival to discharge was 49% (41 of 84), with 18 of 31 (58%) in the police group and 23 of 53 (43%) in the paramedic group. Call-to-shock time for survivors was 5.8 minutes; it was 6.4 minutes for the nonsurvivors ($P=.020$). Neither ROSC nor discharge survival was significantly different between police- and paramedic-shocked patients. ROSC after initial shock and call-to-shock time were major determinants of survival, whether the first shocks were administered by police or by

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INTRODUCTION

Rapid defibrillation (OHCA) is the most important factor in survival, such as with cardiac service maximum survival.³⁻¹⁰ Every effort to influence survival into EMS is beneficial in most cases observed.¹ From OHCA survival in another 5.3%.²¹ For settings, survival is a positive indicator of defibrillation. In 1994 with the addition to an existing system. In that study for the calculation of the determinants of survival also indicated that call-to-shock time and survival rate were major determinants of survival. At 33 months

paramedics. With ROSC after shocks only, 27 of 28 (96%) survived, whereas 14 of 56 (25%) needing ALS survived ($P < .001$).

Conclusion: A high discharge-to-home survival rate was obtained with early defibrillation by both police and paramedics. When shocks resulted in ROSC, the overwhelming majority of patients survived (96%). Even brief time decreases (eg, 1 minute) in call-to-shock time increase the likelihood of ROSC from shocks only, with a consequent decrease in the need for ALS intervention. Short call-to-shock time and ROSC response to shocks only are major determinants of a high rate of survival after VF.

[White RD, Asplin BR, Bugliosi TF, Hankins DG: High discharge survival rate after out-of-hospital ventricular fibrillation with rapid defibrillation by police and paramedics. *Ann Emerg Med* November 1996;28:480-485.]

INTRODUCTION

Rapid defibrillation after out-of-hospital cardiac arrest (OHCA) caused by ventricular fibrillation (VF) is the single most important determinant of outcome.^{1,2} Other variables such as witnessed arrest, rapid access to emergency medical services (EMS), prompt bystander CPR, and initial VF maximum amplitude have been shown to improve survival.³⁻¹⁰ However, the interval between collapse and delivery of defibrillatory shocks is the most critical variable influencing outcome.¹ Incorporation of early defibrillation into EMS systems has been followed by demonstrable benefit in most settings¹¹⁻¹⁶, although this has not always been observed.¹⁷⁻¹⁹ Also, in large metropolitan areas survival from OHCA has been shown to be very low.^{20,21} In one city, survival in patients with an initial rhythm of VF was 3%²⁰; in another, survival of bystander-witnessed VF arrest was 5.3%.²¹ For rapid defibrillation to be provided in such settings, substantial changes in EMS systems, or the innovative institution of alternative methods for making early defibrillation more accessible, will have to be carried out. In 1994 we reported our first 2 years of experience with the addition of early defibrillation provided by city police to an existing advanced life-support (ALS) EMS system.²² In that study we emphasized acquisition of accurate times for the calculation of intervals likely to be critical determinants of patient outcome after VF OHCA. Our findings also indicated that short critical intervals, most importantly call-to-shock time, might account for the relatively high survival rate (47.7 %) we noted during that study of time intervals. We now report our experience with an additional 33 months of ongoing observation of outcome from VF

OHCA in this EMS system in which both defibrillator-equipped police officers and ALS emergency medical technician-paramedics (EMT-Ps; referred to in this article as paramedics) respond to all in-city OHCA events.

MATERIALS AND METHODS

The city of Rochester, Minnesota (1993 population, 76,865; area, 32.6 square miles), is served by a private ambulance service (Gold Cross Ambulance Service, Incorporated). Patient care personnel are nationally registered EMT-Ps. Rochester Police Department police officers are trained as first responders in accord with the US Department of Transportation First Responder Training Program.²³ All officers are trained to operate automated external defibrillators (AEDs) with the American Heart Association Early Defibrillation Training Program as the format, with modifications to accommodate the versions of AED used.²⁴ At approximate 90-day intervals the officers undergo a brief skills-retention assessment.

In November 1990 the police defibrillation program was begun with four AEDs (First Medic 510 semiautomatic defibrillator; Physio-Control Corporation). In March 1993, four additional identical units were added, and in April 1995 four more AEDs were provided by the manufacturer for assessment purposes (VivaLink semiautomatic defibrillator; SurVivaLink Corporation). Thus for the first 27 months 4 AEDs were available, during the next 25 months 8 AEDs were in service, and for the final 5 months as many as 12 AEDs were in service at one time in police cars distributed throughout the city.

In Rochester, all 911 calls are received at a central law enforcement dispatch console. When a 911 medical emergency call is received at central dispatch, it is immediately transferred to an EMS dispatcher at the ambulance dispatch center by telephone hotline. While this call is being processed, central dispatch locates the nearest available police car for dispatch to the site of the emergency. Thus dispatch of police and paramedics to medical emergency calls is nearly simultaneous. Ambulances are located at and dispatched from two ambulance stations. The first personnel to arrive at the scene began standard assessment procedures, connected an AED in pulseless and apneic patients, and delivered defibrillatory shocks if indicated. In the first 39 months of the study period, paramedics used AEDs (HeartStart 2000 semiautomatic defibrillator; Laerdal Medical Corporation). On a few occasions an AED was not available and a backup manual defibrillator was used (LifePak 5 cardioscope/recorder/DC defibrillator; Physio-Control Corporation). In the last 18 months of the study

period, paramedics used an ALS version of AED (First Medic 710 semiautomatic defibrillator; Physio-Control Corporation). At weekly intervals, central and EMS dispatch clocks were synchronized with the universal time coordinate and all defibrillator clocks, police and paramedic, were synchronized to this time. Thus all times used to calculate intervals were derived from synchronized times taken from central and ambulance dispatch Dictaphone time recordings and defibrillator clocks. Defibrillator clock times were obtained from memory modules, PCMCIA memory cards, or, in the case of the VivaLink AED, from internal memory. Significant error has resulted from lack of time synchronization in an EMS system.²⁵ Such error affects assessment of intrasystem performance and raises questions about the validity of time-dependent cardiac arrest clinical research.²⁵ All adult patients found in atraumatic VF cardiac arrest in the city were included in the data analysis. No change in patient treatment protocol was involved, and the methods and procedures used qualified for institutional review board approval. Confirmation of a cardiac origin as the cause of the arrest was obtained from in-hospital follow-up and review of all diagnostic studies or from findings at autopsy.

Patients were categorized as demonstrating ROSC if initial shocks restored a spontaneous circulation, with or without 1 minute or less of CPR, after initial shocks. No epinephrine or other vasoactive drug was needed in any of these patients. In accord with our current standard cardiac care protocol, ROSC patients received high-flow oxygen with a nonrebreather mask, IV line placement, and prophylactic lidocaine before or during transport. Patients classified as needing ALS required additional interventions, including epinephrine in all instances, and endotracheal intubation, in accordance with American Heart Association Advanced Cardiac Life Support guidelines incorporated into our ALS protocols.

Table 1.
Patient and arrest data.

Variable	All (N=84)	Police- Treated (n=31)	Paramedic- Treated (n=53)	Relative Risk of Police-Treated	95% CI for Relative Risk	P
Median age (range) [years]	65 (29–91)	65 (29–91)	64 (35–87)	1.1*	.7–1.5	.827
No. male (%)	65 (77)	25 (81)	40 (75)	1.4	.5–4.0	.584
No. of witnessed arrests (%)	69 (82)	26 (84)	43 (81)	1.2	.4–3.9	.752
No. given bystander CPR (%)	36 (43)	16 (52)	20 (38)	1.8	.7–4.3	.215
No. with ROSC (%)	28 (33)	13 (42)	15 (28)	1.8	.7–4.6	.201
No. of survivors (%)	41 (49)	18 (58)	23 (43)	1.8	.7–4.4	.194

*Per 10-year increase in age

All patients with ROSC at the scene were transported to a single receiving hospital. The target outcome was defined as survival to discharge home, with a functional status not requiring assistance for daily living. Any patient with neurologic impairment necessitating discharge to a nursing home for prolonged or permanent care was considered a nonsurvivor.

Interval comparisons between various subgroups were examined univariately with the two-sided Wilcoxon rank-sum test. Discrete variables were examined univariately with the two-sided χ^2 test. The main study endpoints were time to shock, ROSC, and survival to discharge.²⁶ Potential predictors were age, sex, bystander CPR, witnessed event, and paramedics as first responders. We used linear and logistic regression analyses to determine which variables were most strongly associated with the endpoints, using a stepwise selection process.^{27,28} We considered *P* values less than .05 significant.

RESULTS

During the 57-month study period, 84 OHCA patients presented with VF as the initial rhythm. Seventy-four patients in non-VF arrest (40 in asystole and 34 in pulseless electrical activity) were encountered but were excluded from this analysis for obvious reasons. All arrests included in the study occurred before the arrival of police or paramedics. None of the 74 survived. No patients were excluded because of insufficient, inaccurate, or unavailable data.

Thirty-one patients were first shocked by police. Because of the numbers of AEDs after the first 2 years, the first police car to arrive at a cardiac arrest scene carried an AED in 90% of cases. Of the 31 patients, 13 (42%) had ROSC from shocks only. All 13 survived. The other 18 patients (58%) required ALS treatment by paramedics. Five of the

18 (28%) paramedics survived. The neurologic exam 2 days after medical group survivors (24) sustained cardiac arrest to a nursing home.

Patient characteristics are shown in Table 1. No significant differences were found between the two groups for any of the variables. Age, sex, and categorical factors were not significant. Only initial diagnosis of ALS—was a significant factor. Charge survivors were significantly younger than paramedic survivors. Other byproducts of ALS were not increased.

Call-to-arrival time was 3.3 minutes. This included the time from whom the call was received to the time when the paramedics arrived at the scene. The time from the time of cardiac arrest to the time when the paramedics arrived at the scene was 3.3 minutes. This included the time from whom the call was received to the time when the paramedics arrived at the scene. The time from the time of cardiac arrest to the time when the paramedics arrived at the scene was 3.3 minutes. This included the time from whom the call was received to the time when the paramedics arrived at the scene.

Table 2.
Associations

Variable	Mean	SD	Range
Initial shocks	1.00	0.00	0-1
Sex	1.00	0.00	0-1
Witnessed arrest	0.00	0.00	0-1
Bystander CPI	1.00	0.00	0-1
Response to shock	0.00	0.00	0-1

18 (28%) survived. Among 53 patients first shocked by paramedics, 15 (28%) had ROSC with shocks only; 14 survived. The one nonsurvivor in this group made a complete neurologic recovery, but recurrent intractable VF developed 2 days after admission. The other 38 patients in the paramedic group (72%) required ALS treatment, with 9 survivors (24%). Three patients classed as nonsurvivors sustained neurologic impairment necessitating discharge to a nursing home for permanent or prolonged care.

Patient and arrest data for all patients are presented in Table 1. We detected no statistically significant differences between the police- and paramedic-treated groups among the variables in Table 1. Table 2 depicts association of categorical factors with discharge survival. Among these factors, only initial response to shock—whether ROSC or need for ALS—was significant. Bystander CPR did not increase discharge survival, and survival was not significantly higher among patients with witnessed arrests. When police and paramedic patient groups were analyzed individually, neither bystander CPR nor witnessed arrest significantly increased survival.

Call-to-shock times for all patients are shown in Table 3. This interval was significantly shorter in patients in whom spontaneous circulation was restored by the initial shock than in patients who needed ALS intervention to regain spontaneous circulation. Likewise, call-to-shock time was significantly shorter in the survivors than in the nonsurvivors.

Table 4 depicts call-to-shock times in the police and the paramedic groups. For all patients this interval was shorter in the police-defibrillated group. In the police group, call-to-shock time was significantly shorter in patients with ROSC after shock than in those who required ALS. This time difference was not significantly different between

ROSC and ALS patients treated first by paramedics. The time spread was wider in both ROSC and ALS patients first treated by paramedics.

We performed logistic regression to determine which variables were most strongly associated with the endpoints of survival to discharge and ROSC from shocks only. After ROSC from shocks only was added to the logistic model, no other variable predicted who would survive to discharge. After addition of time to shock, no other variable predicted who would have ROSC from shocks only. The major determinants of outcome were call-to-shock time and ROSC from shocks only, regardless of who delivered the shocks.

DISCUSSION

Our observations extend and affirm the conclusions of our earlier preliminary study.²² In that study, as in this one, we chose to use the call-to-shock interval rather than the collapse-to-shock interval because the latter is almost always, at best, an estimate. We prefer to use an interval that is precise and quantitative and can be correlated with outcome. The call-to-shock interval also can be used for accurate intersystem data comparisons, provided all EMS system clocks are synchronized at regular intervals. In our earlier evaluation of a police defibrillation program our primary objective was accurate measurement of critical time intervals considered important for improved survival from VF OHCA.²² As part of that study of intervals we noted a relatively high survival rate after VF OHCA (21 of 44 patients [47.7%]). The objective of this study was to assess patient outcome over a much longer period, thereby including more patients. We continued to acquire accurate synchronized times for calculation of call-to-shock intervals

Table 2.

Association of categorical factors with discharge survival.

Variable	Provider of Care	No. of Patients	No. of Survivors (%)	Relative Risk of Surviving	95% CI of Relative Risk	P
Initial shocks	Police	31	18 (58)	1.8	.7–4.4	.194
	Paramedics	53	23 (43)			
Sex	Male	65	33 (51)	1.4	.5–4.0	.506
	Female	19	8 (42)			
Witnessed arrest	Unwitnessed	15	4 (27)	.3	.1–1.1	.058
	Witnessed	69	37 (54)			
Bystander CPR	No CPR	48	23 (48)	.9	.4–2.2	.850
	CPR	36	18 (50)			
Response to shock	ROSC	28	27 (96)	81.0	10.1–652.0	< .001
	ALS	56	14 (25)			

as we had done earlier. Our results confirm that early defibrillation not only increases survival from VF OHCA but increases the likelihood that initial shocks will result in ROSC, without need for costly and time-consuming on-scene ALS care to restore stable circulation. Although we did not analyze other variables in this outcome study, it is probable that additional benefits are derived from early defibrillation with ROSC from shocks only (eg, shorter, less expensive hospitalizations).

In contrast to generally accepted and reported experience we could not confirm a significant impact of bystander CPR or of witnessed arrest on discharge survival. This lack of confirmation does not diminish the important role these variables may contribute to survival in many settings.^{3,29} With regard to witnessed arrest, it is possible that in our study the smaller number of patients in the unwitnessed-arrest group (15 of 84) limited the statistical power to detect a significant difference. Swor and associates^{30,31} observed that patients who received bystander CPR were more often found in VF and had a higher discharge survival rate. Although their data included response times, accurate call-to-shock times were not available. In our system the very short time from call to shock may negate a demonstrable benefit of bystander CPR. A similar observation has been reported in patients with VF OHCA in an EMS system with apparently short response times.³² With regard to unwitnessed arrests it can be assumed that some of these patients, if still in VF when found, may in fact have had a short "down time" and therefore might still be candidates for successful defibrillation and discharge survival. These observations further support the critical role rapid defibrillation assumes as a determinant of outcome from VF OHCA.

As noted above, the call-to-shock time in the police-defibrillated patients was shorter than in the patients first treated by paramedics. Likewise, in the police-defibrillated group the time to shock was shorter for ROSC patients than for those who required ALS treatment after initial shocks. In the paramedic group this time difference was

not significant. A greater spread of data in both the ROSC and ALS patients in the paramedic group, compared with those in the police group, is evident. These findings are consistent with shorter and less variable call-to-shock times made possible by citywide distribution and mobile rapid availability of police defibrillators. Extension of these observations to other means of providing short call-to-shock times appears to be substantiated by these findings. Our data lend credence to movement toward widespread implementation of rapid defibrillation by means of placement of AEDs in a variety of nontraditional settings that would make short call-to-shock times possible.³³ The documented expectations from short call-to-shock times are high survival rates from VF and ROSC from shocks only, without need in the ROSC patients for time-consuming and costly on-scene ALS interventions.

Our experience with a combined police/paramedic rapid-defibrillation EMS system confirms that short call-to-shock times are accompanied by frequent ROSC from shocks only and by a relatively high discharge survival rate. The critical determinant of these outcomes is the rapidity with which initial shocks are delivered rather than who provides those shocks. The additional benefit of ALS care by paramedics is for patients who do not achieve ROSC from shocks only, among whom a smaller, although significant, number of patients survive. In this system, rapid defibrillation is achieved by the combination of widespread citywide availability of defibrillators in mobile police cars along with paramedic-provided defibrillation and back-up ALS care. Extrapolation of these observations to other EMS systems and to alternative modes of delivery of rapid defibrillation, including implementation of study of the American Heart Association Public Access Defibrillation proposal, is both rational and timely.

Table 3.
Call-to-shock times for all patients.

Patient Group	Median Time (Range) (Minutes)	P
All	6 (2.0-12.1)	
ROSC	5.4 (2.0-7.9)	.011
ALS	6.3 (2.8-12.1)	
Survivors	5.8 (2.0-8.2)	.020
Nonsurvivors	6.4 (2.8-12.1)	

Table 4.
Call-to-shock times in police and paramedic groups (median [range]).

Patient Group	Police-Treated	Paramedic-Treated	P
All	5.6 (3.5-8.2)	6.3 (2.0-12.1)	.038
ROSC	5.0 (3.5-7.8)	6.0 (2.0-7.9)	.140
ALS	6.1 (3.5-8.2)*	6.4 (2.8-12.1) [†]	.317
Survivors	5.3 (3.5-7.8)	6.0 (2.0-8.2)	.156
Nonsurvivors	6.0 (3.5-8.2) [‡]	6.7 (2.8-12.1) [§]	.302

*P=.024 between police-treated ROSC and ALS groups

[†]P=.213 between paramedic-treated ROSC and ALS groups.

[‡]P=.123 between police-treated survivors and nonsurvivors

[§]P=.146 between paramedic survivors and nonsurvivors.

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Emergency Cardiac Care

Case for Support

More than 350,000 Americans suffer a sudden cardiac arrest each year. Less than ten percent will be discharged from a hospital alive. The key to survival is timely initiation of a series of events, coined the "Chain of Survival." The chain includes early activation of the emergency medical system; basic cardiopulmonary resuscitation (CPR); rapid defibrillation; and early advanced cardiac life support. Weakness in any link lessens the chance of survival and condemns the efforts of an emergency medical system to poor results. After as little as 10 minutes, very few resuscitation attempts are successful.

Unfortunately, pre-hospital medical care (including training, equipment and standards of care) suffers from state-by-state variation, which condemns the public to inconsistent care. It is clear that legislative interventions can substantially affect the delivery of pre-hospital care, resulting in increased survival rates. In cities such as Seattle, WA and Rochester, MN, where early access to EMS, early CPR, and early defibrillation have dramatically increased survival rates. However, according to data recently published in the Journal of Emergency Medical Services (JEMS), non-EMT first responders are legally permitted to use AEDs in only half the states and less than one half of EMTs, and less than one quarter of non-EMT first responders, in the U.S. are trained and equipped to defibrillate. As for basic life support training, more than half the states in a recent study had no secondary school curriculum requirements for first aid and CPR.

AHA position

In a few weeks, Representative Cliff Stearns (R-FL-8) will be introducing the Cardiac Arrest Survival Act. This legislation, drafted in large part by the American Heart Association, in partnership with the American Red Cross and nearly two dozen national organizations, establishes a federal program regarding training in lifesaving interventions and the use of lifesaving equipment, including automated external defibrillators (AEDs) to assist individuals experiencing cardiac arrest. Specifically, the legislation calls for:

- the National Heart, Lung, and Blood Institute (NHLBI) in cooperation with the National Highway Traffic Safety Administration (NHTSA) to develop and disseminate a model state training program for first responders and bystanders in lifesaving interventions, including cardiopulmonary resuscitation (CPR).
- the development of model state legislation to ensure access to emergency medical services, including consideration of the necessary location and placement of lifesaving equipment, including AEDs; the development of requirements for training in the core content and use of life-saving equipment, including AEDs; and the provision of good samaritan immunity for bystanders first responders instructors and owners and owners and managers of property where equipment is placed.
- the development of a national database for reporting and collecting information relating to the incidence of cardiac arrest and whether interventions, including bystander or first responder, improve the rate of survival.

Action requested

- Co-sponsor the Cardiac Arrest Survival Act, sponsored by Rep. Cliff Stearns (R-FL).

ANSWERS TO FREQUENTLY ASKED QUESTIONS ABOUT THE CARDIAC ARREST SURVIVAL ACT

Question

Is there support for the proposal?

Answer

Support for the Cardiac Arrest Survival Act in the 104th Congress was broad. A diverse cross-section of national health and safety groups endorsed the proposal, including the American Heart Association, American Red Cross, American Association for Respiratory Care, American Association of Critical Care Nurses, American College of Cardiology, American Nurses Association, Citizen CPR Foundation, Emergency Nurses Association, North American Society of Pacing and Electrophysiology, National Safety Council, Save a Life Foundation, Society for Academic Emergency Medicine, and The Institute of Critical Care Medicine.

Question

How important is rapid access to basic and advanced cardiac life support?

Answer

A recent study found that if CPR is initiated in less than four minutes, and advanced cardiac life support in less than eight minutes, then the survival rate of the cardiac arrest patient is 43%. When CPR is initiated in less than four minutes but advanced cardiac life support is not initiated for 16 minutes, the rate of survival for the patient drops precipitously to 10 percent.

Question

What is the "Chain of Survival"?

Answer

More people can survive sudden cardiac arrest when a particular sequence of events occurs as rapidly as possible: 1) recognition of early warning signs, 2) activation of the emergency medical system, 3) basic cardiopulmonary resuscitation (CPR), 4) defibrillation, and 5) advanced cardiac life support. The American Heart Association has embraced the phrase "Chain of Survival" to communicate this concept in a useful way. This legislation makes a concerted effort to remove the barriers to the Chain of Survival in order to increase the likelihood of people surviving sudden cardiac arrest.

Question

Is the Chain of Survival effective?

Answer

In Houston, 40% of patients with ventricular fibrillation/ventricular tachycardia were discharged from the hospital if they had received bystander CPR, versus 19% for patients not given bystander CPR. Some communities have widely deployed AEDs (Richmond, Seattle, Bay Area). In such places survival rates run as high as 30 percent. In other large cities, such as Chicago and New York, rates run as low as 1-2 percent. Up to 100,000 lives could be saved annually through removal of barriers to the chain of survival.

-all steps
in
chain?

Question

Haven't most states implemented the links in the Chain of Survival?

Answer

According to a 1995 survey, 31% of the population and 65% of the land area in the U.S. is not covered by the 911 system; only 14 states offer CPR training as part of their secondary school curricula; and only 22 states allow first responders to use an automatic external defibrillator. We have a long way to go!

Question

Isn't this just another burdensome federal mandate to the states?

Answer

The bill simply directs the National Heart, Lung, and Blood Institute to develop and disseminate a model state training program for first responders and bystanders in lifesaving first aid, including CPR, and directs the development of model state legislation to ensure access to emergency medical services, including consideration of mandatory location and placement of life-saving equipment and requirements for training in the core content and use of life-saving equipment for first responders.

Question

What is an example of life-saving equipment?

Answer

Automated external defibrillators. The vast majority of sudden cardiac arrests are due to an electrical malfunction of the heart called ventricular fibrillation (VF). In VF, the heart's electrical signals, which normally induce a coordinated heartbeat, suddenly become chaotic, and the heart's function as a pump abruptly ceases. Consciousness is quickly lost and unless this condition is reversed, death follows within a matter of minutes. The only effective treatment for this condition is defibrillation, the delivery of a powerful electrical shock to the heart. Defibrillation -- which can be compared to rebooting a 'frozen' computer -- eliminated VF and allows a coordinated rhythm to resume.

Question

Isn't this issue more properly addressed at the state level. Aren't we ignoring what the public asked for during the 104th Congress when they voted for less federal bureaucracy?

Answer

Pre-hospital medical care (training, equipment, standards of care) suffers from state-by-state variation which condemns the public to inconsistent care. A 1995 poll of state EMS directors identified obstacles to implementation of early defibrillation programs. Among the major obstacles identified was a lack of enabling legislation (34%). If a national standard were developed by DHHS, states would likely be more receptive to changes.

Development and dissemination of a core content for a recommended model state training program for first responders and bystanders in lifesaving first aid, including cardiopulmonary resuscitation (CPR) throughout the U.S., in a standardized fashion using current science, would be an efficient use of government resources.

(AHA - 12/96)

Question

With Congress moving to cut federal appropriations, won't additional funds be scarce for implementing this legislation?

Answer

Existing resources at DHHS can be used if the leadership mission were assigned, because industry, academia, and the medical community would all be available to contribute to the development of the legislation's recommendations.

Question

Aren't all ambulances already equipped with defibrillators?

Answer

AEDs are designed for trained basic life support (BLS) personnel. Currently, only 25 percent of BLS responders have defibrillators. First responders include fire rescue, police, BLS, flight attendants, or security personnel with a minimum of four hours AED training.

Question

Even if first responders are authorized to use AEDs, won't the costs be prohibitive?

Answer

The expense and time involved in equipping emergency vehicles with AEDs and training all first responders how to use them is minimal in proportion to the number of lives that can be saved. A Tucson, Arizona study showed the cost per year of life saved for care of sudden cardiac arrest by paramedics to be \$8,000. The actual cost of some AEDs is now under \$3,000 and training in its use takes less than four hours per person.

*Fuzzy
Vannan*

1 **CARDIAC ARREST SURVIVAL ACT**
2 **105th Congress**
3
4

5 **SECTION 1. SHORT TITLE**

6 This Act may be cited as the "Cardiac Arrest Survival Act".

7 **SEC. 2. FINDINGS**

8 The Congress finds as follows:

9 (1) Each year more than 350,000 adults suffer cardiac arrest, usually away
10 from a hospital. More than 95% of them will die, in many cases because
11 lifesaving defibrillators arrive on the scene too late, if at all.

12 (2) These cardiac arrest deaths occur primarily from occult underlying heart
13 disease and from drownings, allergic or sensitivity reactions, electrical shocks, or
14 motor vehicle injuries.

15 (3) Survival from cardiac arrest requires successful early implementation of
16 a chain of events--the chain of survival--from the scene of the arrest to the
17 hospital.

18 (4) A successful chain of survival requires the first person on the scene to
19 take rapid and simple initial steps that will then lead to entry into the medical care
20 system.

21 (5) The first persons on the scene when an arrest occurs are typically lay
22 persons who are friends or family of the victim, firefighters, law enforcement
23 officers, teachers, coaches and supervisors of sports or other extracurricular
24 activities, providers of day-care, school-bus drivers, lifeguards, attendants at
25 public gatherings, co-workers and other leaders within the community.

26 (6) A federal response to this epidemic is needed -- the development of a
27 simple, short, convenient training program.

(7) The training program should be easily learned and easily retained and it should be nationally uniform.

Sec. 3 NATIONAL INSTITUTE OF HEALTH MODEL PROGRAM ON THE FIRST LINKS IN THE CHAIN OF SURVIVAL

Section 421(a)(1) of the Public Health Service Act (42 U.S.C. 285b-3(a)(1)) is amended by striking (E) and inserting in lieu thereof:

"(E) establishment of programs for the conduct and direction of field studies, large-scale testing and evaluation, and demonstration of preventive, diagnostic, therapeutic, and rehabilitative approaches to, and emergency medical services for, such diseases, which shall include:

"(i) development and dissemination, in coordination with the emergency services guidelines promulgated under Title 23, U.S. Code, § 402(a), by the Associate Administrator for Traffic Safety Programs, Department of Transportation, of a core content for a recommended model state training program for both first responders and bystanders in life saving interventions, including cardiopulmonary resuscitation;

(ii) the core content of such program shall include age-specific criteria for the use of particular techniques which shall include infants and children;

(iii) the core content of such program should be re-evaluated as additional interventions are shown to be effective;

(iv) operation of a demonstration project to provide training in such core content for first responders and bystanders;

"(v) definition and identification of both first responders and bystanders, by personal relationship, exposure to arrest or trauma, occupation (including health professionals), or otherwise, who could

1 provide benefit to victims of out-of-hospital arrest by comprehension
2 of a core content;

3 "(vi) establishment of criteria for completion and
4 comprehension of core content, including consideration of inclusion
5 in health and safety educational curricula;

6 "(vii) identification and development of equipment and supplies
7 that should be accessible to bystanders and first responders to
8 permit life-saving interventions by pre-placement of such equipment
9 in appropriate locations;

10 "(viii) development of model state legislation (or federal
11 legislation applicable to federal territories, facilities, and employees),
12 in cooperation with the Department of Justice, to ensure: (a) access to
13 emergency medical services through consideration of a requirement
14 for public placement of life-saving equipment and/or consideration of
15 requirements for training in the core content and use of lifesaving
16 equipment for State licensure or credentialing of health professionals
17 or other licensed occupations or employment of other individuals who
18 may be defined as first responders under clause (iv); and, (b) good
19 samaritan immunity for: (1) bystanders; (2) first responders; (3) those
20 involved with the instruction of the training programs; and, (4) owners
21 and managers of property where equipment is placed.

22 "(ix) development of a national database for reporting and
23 collecting information relating to the incidence of cardiac arrest, the
24 circumstances surrounding such arrests, the rate of survival, the
25 effect of age, and whether interventions, including bystander or first

1 responder interventions, or other aspects of the chain of survival,
2 improve the rate of survival;

3 (x) publication of a biennial public report summarizing progress
4 in life saving first aid;

5 **SEC. 4 COMMISSION ON CARDIAC ARREST SURVIVAL**

6 a) **ESTABLISHMENT** - There shall be established as an
7 independent agency within the executive branch a commission to be
8 known as the Commission on Cardiac Arrest Survival (hereinafter in
9 this section referred to as the "Commission").

10 b) **MEMBERSHIP**

11 1) **COMPOSITION** - The Commission shall be composed of 15
12 members who shall be appointed by the President.

13 2) **EXPERTISE REQUIREMENTS** - The members of the
14 Commission shall consist of individuals with expertise and
15 experience in one or several of the following areas: emergency
16 medical care, cardiology, state and local emergency medical services,
17 delivery of state health services, public safety, trauma, public
18 buildings or governmental facilities management, epidemiology, life-
19 saving equipment design and manufacture, development of model
20 state legislation, human factors engineering, and professional and
21 public education. At least three of the members shall be qualified by
22 scientific training and experience to evaluate the design or conduct
23 of, and data derived from, clinical and educational research, in the
24 risks and benefits of resuscitative modalities. Ex officio liaison to the
25 commission shall be provided by the Department of Health and
26 Human Services (National Institutes of Health), Department of

1 Education, Department of Transportation (National Highway Traffic
2 Safety Administration), General Services Administration, Department
3 of Defense and Department of Justice.

4 c) FUNCTION OF THE COMMISSION - The Commission shall, in
5 consultation with the National Heart Lung and Blood Institute,
6 evaluate and provide recommendations on effective methods to
7 increase survival from cardiac arrest. Such recommendations may
8 include recommendations on implementation of this Act, further
9 studies on emergency medical systems or other modalities for early
10 intervention in the chain of survival, or further legislation to improve
11 access to cardiac arrest survival modalities.

12 d) REPORTS AND RECOMMENDATIONS - Not later than 18
13 months after the date of enactment of this Act, or during the interim
14 when the Commission believes necessary, the Commission shall
15 prepare and submit to the President and to the Congress a final
16 report.

17 e) ADMINISTRATIVE POWERS OF THE COMMISSION - The
18 commission may hold hearings, set and act at such time and places,
19 take such testimony, receive such evidence as the Commission
20 considers advisable to carry out the purpose of this section. The
21 Commission may secure directly from any federal department or
22 agency such information as the commission considers necessary to
23 carry out the provisions of this section.

24 f) AUTHORIZATION OF APPROPRIATIONS - There are
25 authorized to be appropriated such sums as may be necessary to
26 carry out the provisions of this section.



POLICE EXECUTIVE
RESEARCH FORUM

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INDIAN CREEK PUBLIC SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

NUMBER: 46.2 TITLE: EMERGENCY SERVICES, MEDICAL PAGE: 1 OF 7

46.2. EMERGENCY SERVICES, MEDICAL

*** Automatic External Defibrillator**

PURPOSE: To establish guidelines of the use of the Automatic External Defibrillator (AED).

SCOPE: This Standard Operating Procedure applies to all MOS.

POLICY: It is the policy of the Indian Creek Public Safety Department to maintain a high quality Automatic External Defibrillator (AED) program under the direction of the Indian Creek Public Safety Department and the Medical Director. All medical procedures carried out by personnel must be done by order from a physician or through Temporary Orders issued by the medical director.

INTENT: The Automatic External Defibrillator (AED) shall allow the police officer to deliver unsynchronized cardioversion to a patient without the need for the police officer to analyze the presence of the appropriate rhythm to deliver a counter shock. The software developed and present in the Automated Advisory Defibrillator shall analyze the presence of the appropriate rhythm for counter shock and shall automatically deliver the shock to the patient. Police officer use of Automated Advisory Defibrillator shall not supersede the care provided by recognized ALS providers but shall enable providers to deliver early defibrillation to those patients requiring such care. Upon the arrival of ALS providers patient care shall be transferred following approved Standard Operating Procedures. In accordance with Section 401.291 F.S., police officers shall fully cooperate with established medical control authority with respect to all requested aspects of quality assurance and with the guidelines herein regarding training and certified updates with Automated Advisory Defibrillation.

46.2.1. Scene safety

- A. Assess the surroundings for personal safety.
- B. Do not defibrillate the patient if the patient is lying in water. Move the patient to dry area and dry the patients chest prior to electrode pad placement.

46.2.2. General guidelines

- A. The Chief of Public Safety will designate the AED coordinator.
- B. There will be no patient contact while the AED is in operation. This includes when the defibrillator is analyzing, charging, or discharging. Allow 6-20 seconds for the unit to analyze the patients rhythm.
- C. If the defibrillator advises shock after successful conversion restart the protocol from the beginning.
- D. Do not use of patients who weigh less than 90 pounds.

INDIAN CREEK PUBLIC SAFETY DEPARTMENT

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E. Do not use on patients with a pulse

46.2.3. Procedures

46.2.3.1. Unwitnessed cardiac arrest

A. Initial assessment-ensure rescue is enroute

1. Determine absence of respiration's and pulse.

B. Initiate CPR (for adult according to American Heart Assoc.)

1. One or two person at compression rate of 80-100/minute.

2. Observe universal precautions using barrier device, pocket mask or BVM for ventilation's.

3. Supplemental oxygen should be used with a reservoir bag if using the BVM.

C. Attach the AED as soon as possible (for adults only)

1. Stop CPR and analyze the rhythm.

2. If a shockable rhythm is determined by the AED the unit will charge to 200 joules.

D. With unit charged, verbally and visually clear the area and discharge the AED upon command.

1. Following the discharge check a pulse and if absent press to analyze the rhythm again. DO NOT INITIATE CPR.

2. If a shockable rhythm is determined by the AED the unit will charge to 300 Joules.

E. With unit charged, verbally and visually clear the area and discharge the AED upon command.

1. Following the discharge check a pulse and if absent press to analyze the rhythm again. DO NOT INITIATE CPR.

2. If a shockable rhythm is determined by the AED the unit will charge to 360 Joules.

F. With unit charged, verbally and visually clear the area and discharge the AED upon command.

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1. Following the discharge, check a pulse and if absent, initiate CPR.

G. After one (1) minute of CPR, repeat steps 3-6 above.

H. If at anytime the AED does not detect a shockable rhythm and the patient is without a pulse maintain CPR and re-analyze with the AED every 1-2 minutes.

46.2.4. Cardiac arrest witnessed by emergency personnel

A. Ensure fire rescue is enroute.

B. Check pulse, if no pulse proceed to unwitnessed Cardiac Arrest section and comply.

46.2.5. Post resuscitation care

A. If the patient regains a pulse continue to provide supportive care with one of more of the following:

1. Proper airway control and ventilatory management
2. Supplemental oxygen
3. Airway clearance if vomiting occurs

46.2.6. On scene coordination with fire rescue

A. Once on scene, fire rescue will have patient care authority.

B. Upon arrival give fire rescue a quick verbal report. This should include the patient history, care provided, and results.

C. Fire rescue may elect to continue to use the AED for additional shocks. Indian Creek personnel will continue to operate the unit to assist fire rescue personnel and save time to avoid delays. In most cases the AED should be removed and a fire rescue monitor attached when the patients has regained a spontaneous rhythm or is ready for transport.

D. Fire rescue personnel should consider the shocks delivered by the AED as part of their protocols.

46.2.7. Documentation

46.2.7.1. If the AED is used

A. Name, model of the AED

INDIAN CREEK PUBLIC SAFETY DEPARTMENT

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- B. Id AED malfunction occurred. If yes, note the nature of the malfunction, cause if known and corrective actions taken to rectify the malfunction.
- C. Number of shocks administered.
- D. Name of Indian Creek personnel on scene and who operated the AED.

46.2.8. *Daily automatic defibrillator inspection*

- A. Inspect for general mechanical integrity.
- B. Check for patient monitor cables and defibrillator pads.
- C. Check cables for damage, cuts wire, bare wires, etc.. Replace if damage is noted. Do not use damaged cables.
- D. Check quality of displays.
- E. Check audio and indicator signals.
- F. Check for battery charge.
- G. Charge the defibrillator and discharge into test load to verify the energy output.
- H. Check the presence and condition of accessories and supplies.
 - 1. Spare defibrillator electrode pads.
 - 2. Spare battery.
- I. If any component fails to function properly, immediately take the AED out of service and report the problem to a supervisor.

46.2.9. *Training and testing in the use of automatic external defibrillators.*

46.2.9.1. *Only personnel who have successfully completed the Automatic External Defibrillator course will be qualified to use and AED. Testing and evaluation will follow 401.291 F.S. and include;*

- A. The proper use, maintenance and periodic inspection of the automatic external defibrillator.
- B. Defibrillator safety precaution to enable the user to administer a shock without jeopardizing the safety of the patient, the user, or other persons on scene.
- C. Assessment of an unconscious person to determine if cardiac arrest has occurred and the appropriateness of applying the automatic external defibrillator.

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- D. Recognizing that an electrical shock has been delivered to the patient and that the defibrillator is no longer charged.
- E. Rapid, accurate assessment of the patient's post shock status to determine if further activation of the automatic defibrillator is necessary.
- F. The operations of the local emergency medical services system, including methods of access to the emergency response system and interaction with emergency medical services personnel.
- G. The role of the user and coordination with other emergency medical service providers in the provision of cardiopulmonary resuscitation, defibrillation, basic life support and advanced life support.

46.2.10. Semi-annual skills review and proficiency demonstrations

- A. The proficiency demonstrations will be completed on a quarterly basis.
- B. In addition to the proficiency demonstrations there will be a semi-annual review that will include the proficiency demonstrations and additional review, training and practice sessions.
- C. The semi-annual review and proficiency demonstrations will include at a minimum the following:
 - 1. Performance review of recent patients.
 - 2. Review of equipment operation and maintenance.
 - 3. Review of Temporary Orders.
 - 4. Discussion of treatment possibilities.
 - 5. Scenario practice of field protocols with a training mannequin, a defibrillator and a rhythm simulator, this practice should simulate actual cardiac arrests and include entrance to the scene, one and two-person response teams, ongoing CPR, a variety of initial rhythms and a variety of postshock responses.
 - 6. An objective skills test, checklist will be completed on each participant.

46.2.11. Records

46.2.11.1. The following documents shall be maintained at the Indian Creek Public Safety Department on the personnel authorized to use the automatic external defibrillator.

- A. Name of the individual

INDIAN CREEK PUBLIC SAFETY DEPARTMENT

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- B. Date of the initial AED authorization.
- C. Current level of first responder training or EMT status including any certification expiration dates.
- D. Dates of Semi-annual AED review and proficiency demonstrations.
- E. CPR expiration dates.

46.2.12. Medical control and review

46.2.12.1. Every incident that an AED is used or could have been used will be reviewed by the AED coordinator and the Medical Director.

- A. The AED Coordinator will review all records from each use of the AED or potential AED incident for quality improvement.
- B. The AED Coordinator will be responsible to forward the patient data and all records to the Medical Director.
- C. The AED Coordinator will complete any follow-up involving the incident as deemed necessary by the Medical Director.

46.2.13. Termination of AED use authorization

46.2.13.1. The Medical Director shall have the sole authority to grant authorization for the use of an AED by any of the Indian Creek personnel as outlined by State Statute (F.S. 401.291). At any time, in the opinion of the Medical Director, that and authorized person is no longer competent to utilize the AED, the Medical Director may summarily terminate authorization for that person to utilize the AED. Such termination will be recorded and documentation will be available for review by the local EMS provider.

EFFECTIVE DATE: 08-01-96
REVOCATION: NONE

Approved: _____
LEONARD A. MATARESE
Chief of Public Safety

INDIAN CREEK PUBLIC SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

NUMBER: 46.2 TITLE: EMERGENCY SERVICES, MEDICAL PAGE: 7 OF 7



PUBLIC SAFETY DEPARTMENT

INDIAN CREEK VILLAGE, FLORIDA

'Protecting & Serving America's Most Exclusive Municipality'

LEONARD A. MATARESE, Chief

May 14, 1997

Mr. Chuck Wexler,
Executive Director
Police Executive Research Forum
1120 Connecticut Avenue, N.W. Suite 930
Washington, DC 20036

Dear Mr. Wexler *Chuck*

As you are aware, I and my agency has been in the forefront of the effort to provide *Rapid Access Defibrillation* to the residents of Florida. As the first police agency in Florida to implement such a program, we have focused on Police response to *Sudden Cardiac Arrest* with Automatic External Defibrillators (AED). I am writing to bring to your attention some issues surrounding the expanded use of AEDs by police.

Background

Sudden cardiac arrest occurs when the heart's electrical system causes the heart to erratically quiver, preventing the pumping of blood throughout the body and brain, known as *Ventricular Fibrillation*. Death occurs within minutes unless the normal rhythm of the heart is restored, and that can only be done with an electric shock delivered by a defibrillator. *Cardio Pulmonary Resuscitation* (CPR) can keep blood flowing to the brain and buys precious minutes. However, unless defibrillation occurs quickly, the patient will inevitably die. The Automatic External Defibrillator allows first responders, with minimal training, to deliver the life giving shock.

Even in those communities with excellent Emergency Medical Services (EMS) response, police responding to cardiac emergencies almost always arrive minutes faster than the EMS response, (as a function of random patrol vs. Fixed location response). And those few minutes make the difference in survival rates since approximately 10% of the ability to restart the heart is lost for every minute which lapses after the onset of arrest. After ten minutes, there is virtually no chance of survival.

Public Access Defibrillation & the American Heart Association

The American Heart Association (AHA) has, as one of its major goals, the implementation of Public Access Defibrillation nationwide. The AHA ultimately envisions semi-automatic defibrillators to be readily accessible to a "CPR-D" trained public, much in the way fire extinguishers are currently. The first stage in achieving this goal is the outfitting of every emergency vehicle with AEDs and police response to cardiac emergencies.

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Mr. Chuck Wexler
May 14, 1997

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The Heart Association estimates that 100,000 of the 350,000 deaths per year due to sudden cardiac arrest could be saved were this to occur. Currently the survival rate nationwide for sudden cardiac arrest is less than 5%. In some cities it is virtually 0%. However the research shows clearly that the rate could be increased at least up to 50% with police providing first responder defibrillation.

Successful Field Experiences

Several communities have already successfully implemented AED programs which confirm this. Rochester, Minnesota already was a national leader in response to cardiac arrests thanks to an outstanding EMS system, with a survival rate of close to 30%. However, after installing AEDs in its police cars, the rate jumped to 49%. The Bellevue, Nebraska Police Department acquired Automatic External Defibrillators several years ago and the first night it had the units on patrol it recorded a save. Their second save happened at a Christmas Eve mass!

Allegheny County, Pennsylvania has over 160 police officers trained to respond with AEDs to medical emergencies. And the Medley, Florida Police Department recorded their first AED save only two weeks after implementing the program. (Medley, by the way, was one of the agencies we assisted in implementing an AED program). Some federal law enforcement agencies, including the Secret Service, are routinely carrying AEDs.

Future Efforts

While some of the more progressive police agencies in the country have implemented AED programs, and documented the resultant life saving benefits, what is missing is a coordinated, focused, national initiative by government and leading law enforcement organizations to bring the message to every police agency in the nation.. Further, there is no central registry of police agencies using AEDs nor of their records of use and saves. The AHA believes that such records are critical to fully evaluate the success of the AED effort and to identify appropriate protocols and response plans. Finally there is no standardized protocols for police response with AEDs. As you know from several of the articles I have authored on the subject, it appears to me that police response with AEDs should be an integral part of the movement towards Community Policing.

A great deal remains to be done if the AHA's goal of an AED in every emergency vehicle is to be achieved. Much of this effort must be directed to America's law enforcement community. To accomplish this I would suggest that we consider the following;

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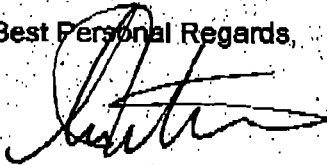
1. A partnership between the Department of Justice's Community Oriented Policing (COPS) Office, the Food & Drug Administration, the Police Executive Research Forum and the American Heart Association to facilitate and support the use of AEDs by police.
2. The establishment of a national registry to identify police agencies responding with AEDs as well as to record responses and outcomes. This could, perhaps, be undertaken as a PERF project.
3. The development of standardized protocols and response plans, again perhaps a PERF project.
4. PERF's support for the reclassification by FDA of AEDs from a Class 2 medical device to a Class 3 medical device. (This would permit greater field usage of the equipment by further reducing restrictions on the purchase and use of the equipment.)

Florida's Efforts

Florida, last week, enacted the nation's most progressive AED legislation. The act reduces dramatically the mandated training required for use of an AED and extends the good Samaritan laws specifically to AED use. Essentially, anyone certified in CPR will also receive the necessary training to operate a defibrillator. (I am proud to tell you that I am a member of the Heart Association's Florida Affiliate Task Force on AED which spearheaded this effort.) Unfortunately, some states have far more restrictive regulations which prohibit the use of an AED by police. For example, in what could be a classic example of over regulation, New Jersey requires an EMT-D certification to operate an automatic external defibrillator. Efforts must be directed at eliminating these artificial barriers to police and public use of the machines.

PERF could dramatically affect the successful implementation of the AED program by taking a leadership role in this effort. I would be most pleased to assist that effort in any way possible.

Best Personal Regards,



Leonard A. Matarese

Enclosures

A Historic Step Forward in Emergency Medical Care in Florida

by Chief Leonard Matarese



Each AED is about the size of a car battery, is waterproof, and is completely self-contained. Pads are carried in built-in pockets in the machine.

All Indian Creek patrol vehicles and vessels carry defibrillators.

In June of this year, the Indian Creek Public Safety Department ensured that a visitor to the village would have a significantly reduced chance to die from sudden death due to injury or heart attack than in other communities in the state. The department accomplished this relatively inexpensively and with minimal additional training for its officers.

We did so by becoming the first law enforcement agency in Florida to carry semi-automatic defibrillators in our patrol vehicles and boats, joining a small but rapidly growing number of police agencies throughout the country committed to providing

early defibrillation to victims of cardiac arrest.

Cardiac arrest generally strikes without warning when the heart's electrical system causes the heart to erratically quiver, preventing the pumping of blood throughout the body and to the brain, known as ventricular fibrillation. The cause can be heart disease, electrocution, drowning, or trauma. Death occurs within minutes unless the normal rhythm of the heart is restored, and that can only be done with a defibrillator. CPR can keep the blood oxygenated and flowing to the brain and buys precious minutes. However, unless

defibrillation occurs quickly, the patient will inevitably die.

The window of opportunity to defibrillate is narrow, however. For each minute that the heart stays in fibrillation, approximately 10 percent of the ability to restart the heart is lost. Herein lies the problem. It is rare that trained paramedics can arrive with a defibrillator within that 10-minute window; this delay fatally breaks the *Chain of Survival* (see Figure 1).

Despite the many millions of dollars spent annually to deliver emergency medical services, the thousands of dedicated paid and volunteer rescue workers, and the tremendous ad-

vances in medical technology, the sad fact is that only 5 percent of Americans who go into sudden cardiac arrest live. The rest, about 350,000 a year, die from what is called Sudden Cardiac Death, the leading medical emergency in the country.

The American Heart Association has concluded that a much different strategy will be required to save more victims from sudden death. The AHA has endorsed a plan called public access defibrillation, which will put defibrillators in the hands of people most likely to be able to respond quickly to the scene of an emergency. Clearly, that is the police. By virtue of random patrol, a police officer can almost always arrive at the scene of an emergency before units responding from a fixed location. And, when the officer is equipped with a defibrillator and trained to use it, there can be a significant reduction in death rates for persons suffering a cardiac event.

The Equipment

We have all seen the defibrillators carried by most ambulances in Florida. They are bulky, heavy, complicated and require extensive training to operate. The new Automatic External Defibrillators (AED) are about the size and weight of a car battery; the newest models are even smaller and lighter. The computerized units provide simple verbal instructions to the user, and are fail-safe. They cannot deliver shocks to a patient whose heart is not in ventricular fibrillation, eliminating the possibility of improper use. And, they are built to take the abuse and punishment that comes with being carried around in a patrol vehicle. Some are fully waterproofed.

The Florida Law

The Florida Legislature has already addressed the issue of early defibrillation in F.S. 401.291, entitled Automatic External Defibrillators. The statute provides the minimum training requirement for operators and spells out clearly the requirements to establish a defibrillation program. Training necessary to operate the unit is minimal, since the computer does most of the thinking. Persons holding CPR certification (as all police officers are required) need only six additional hours of training.

The statute requires that there be a medical director or other authorized physician to establish or review written procedures and protocols. In Indian Creek Village, the Metro-Dade County Fire Rescue Department provides our fire suppression and EMS Services. Their Medical Director, Dr. Joseph Rosenberg, serves as our Medical Director as well. This ensures a seamless approach to delivering defibrillation and the later, advanced cardiac care.

"By placing defibrillators in the hands of the police, we could expect almost doubling the chances of survival compared to perhaps the best city in the country in which to have a heart attack."

The Rochester Experience

We now know with certainty what the effects on a community can be when police officers are equipped to provide early defibrillation. The Rochester (Minnesota) Police Department placed defibrillators in all of its police vehicles as part of a study conducted by Roger D. White, M.D. The results were nothing short of astounding.

The city, home of the Mayo Clinic, has a population of 76,865 people in 32.6 square miles. Depending upon the daily patrol assignments, up to 12 AEDs could be on the street at one time in patrol units. During the study period:

- Police defibrillated 31 patients.
- In 13 of these patients, circulation was restored with shocks only.
- All 13 patients survived to be discharged from the hospital.
- The remaining 18 patients required advanced cardiac life support, and 5 survived.
- 18 out of 31 patients (58 percent) who were defibrillated by the police survived to be discharged from the hospital.

Prior to this program, the highest cardiac survival rates generally occurred in Seattle due to that city's well-known, long-time commitment to CPR training for its citizens. However, even there the survival rate is only around 28 percent. Thus, by placing defibrillators in the hands of the police, we could expect almost doubling the chances of survival compared to perhaps the best city in the country in which to have a heart attack. Compared to most other communities in the U.S., which have far lower survival rates, the percentage increase would even be higher. (Traffic-congested cities have the worst rates. New York City, for example, has a survival rate of approximately 2 percent.)

The Role of the Fire Service

When we initially decided to implement the defibrillator program, we sought the advice and assistance of the Metro-Dade Fire Rescue Department, which provides fire suppression and EMS services to our community and most of Dade County. MDFRD is the premier fire rescue agency in the country, internationally recognized for their leadership in the profession and their willingness to assist other communities. Their response to our request for help was most enthusiastic.

Captain Michael Canfield, paramedic training coordinator for the agency, has served as our liaison, and their Medical Director, noted cardiologist and professor of cardiology Dr. Joe Rosenberg, now

serves as our medical director for the defibrillator program.

Metro-Dade has recognized the changing role and skills of the paramedic. Today's paramedics and their advanced life support units (ALS) are truly operating an emergency room on wheels. They are trained to perform life-saving techniques which, a few years ago, could only be performed by a physician in a hospital setting. As this evolution in training and equipment occurs, techniques previously performed by the paramedics are now being conducted by Emergency Medical Technicians. Also, procedures formerly restricted to EMTs are now often handled by trained First Responders.

The paramedics and the advanced life support units they operate are a limited and costly resource. It is critical that emergency services providers maximize these resources by utilizing the full range of responses available to medical calls for service. As the technology continues to develop, it is clear that it makes little sense for expensive, limited ALS units to handle calls, at least initially, which could be handled more quickly by lesser trained alternatives, with better results.

Spreading the Word

At Indian Creek we knew that having an impact on sudden death in South Florida would require all of the area police agencies to participate in a defibrillator program. We wanted to help and encourage them through the process, based upon our experience. In July, our agency convened a meeting of interested chiefs and their staff members with presentations by the Metro-Dade Fire Rescue Department and the manufacturers of the defibrillator units we use, Physio-Control. The outcome of that meeting was the establishment of a two-county coalition to help each other establish standardized protocols, medical director agreements, purchase defibrillation units and explore possible funding sources. Captain Michael Canfield and I will co-chair this coalition with the ultimate goal of taking this message statewide.

Summary

In the early 1970s when I entered the law enforcement profession, police officers routinely responded to medical emergency calls. Our patrol vehicles car-

ried first aid kits and oxygen and we trained in the academy in what was then called Advanced First Aid and Water Lifesaving as well. I remember well bandaging kids' scraped knees and even helping to transport victims. Back then, the police were who you called first when you had a medical emergency, and this resulted in many positive citizen contacts in a non-enforcement, helping mode. There were many times when our rapid response prevented further injuries to victims of medical emergencies.

Over the years, with the advent of emergency medical services, paramedics, advanced life supports systems, and efforts to handle increasing greater law enforcement workloads, police have moved further and further away from involvement with medical emergencies. But we know that for us to be effective in our crime prevention activities, we need also to be more in-

involved with the communities we serve. Providing early defibrillation appears to be the proper vehicle for us to do so, which provides positive results for victims and our agencies. □

Leonard A. Matarese is the Chief of Public Safety of Indian Creek Village. Chief Matarese has served as a police officer, deputy sheriff, city manager, and public safety director in communities in four states. He has been a consultant to many cities throughout the country and presented to annual conferences, including the IACP, International Association of Fire Chiefs, the International City Management Association, and the National League of Cities. Chief Matarese holds a bachelor's degree in Public Administration from Rutgers University and a Master's degree in Public Administration from Florida Atlantic University.

FIGURE 1

THE CHAIN OF SURVIVAL

The Chain of Survival describes the actions necessary to reduce the number of sudden cardiac deaths. It consists of four links.

First Link: Early Access

- Teaching the public to recognize the need for EMS support prior to sudden death.
- Teaching the warning signs of cardiac events.
- Encouraging rapid 911 calls upon the signs of a cardiac event.
- Providing telephone assistance emergency medical instructions from dispatchers.
- Shortening response times for first responders to less than four minutes after 911 call.

Second Link: Early CPR

- Development of community-wide CPR programs.
- Target areas of those who are 50 years or older.
- Lone rescuer for adults should call 911 before beginning CPR. In children, CPR should be performed for one minute before calling 911.

Third Link: Early Defibrillation

- The link most likely to improve survival chances.
- All police personnel should be expected, as part of their professional duties, to perform basic CPR and carry automatic external defibrillators (AED) and be trained to operate it.
- Responsible personnel should authorize and implement more widespread use of AED by community responders and allied health responders.

Fourth Link: Early Advanced Life Support

- Advanced life support units should be combined with first-responding units that provide early defibrillation.

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Tel 202 785 7900
Fax 202 785 7950

November 7, 1997

Mr. Jerry Mande
Office of Policy Development
Old Executive Office Building
17th and Pennsylvania, NW
Washington, DC 20504

Dear Jerry:

Thanks for taking the time to meet with our CEO, Cass Wheeler; Vice President for Advocacy, Diane Canova and me to discuss issues of interest to the American Heart Association.

On the tobacco front, we are grateful for your longtime support, and look forward to working with the White House to pass strong, meaningful, well-funded national tobacco control legislation.

As for automatic external defibrillators, attached is a copy of the recent Reader's Digest piece, a video of the ABC News 20/20 segment and a packet on the *Cardiac Arrest Survival Act*. Please feel free to contact us if you need further information.

Sincerely,



Richard S. Hamburg
Director, Legislative and Regulatory Affairs

Encls.

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emergency vehicle in America.

Last winter police in Cincinnati started testing AEDs in patrol cars. Similar programs have begun in Camden County, Georgia, and Greenwich, Conn. Within two weeks of training, Greenwich police saved two lives with the defibrillators.

Last July 2 fire-brigade members at New York City's Grand Central Terminal were trained to operate a newly purchased AED. The next day they used it to save the life of 42-year-old attorney Bob Adams, who went into cardiac arrest while trying to catch a train.

There are still legal and bureaucratic hurdles to wider AED access. In many states defibrillation is considered a medical procedure limited to doctors and EMTs. Chafing against such hidebound regulations, Dr. Weisfeldt stresses that the new AEDs are fail-safe in the hands of trained adults. He predicts that 100,000 people could be saved each year if AED use were expanded to include firefighters, police officers, security guards and family members of heart-disease patients. "We should press ahead to provide defibrillators and training to thousands of people, such as apartment-house custodians, bus drivers and train conductors," Weisfeldt urges.

But the strongest advocates for this innovative technology are those whose lives it has saved.

On the afternoon of Monday, December 30, 1996, Steve Parinisi, 30, and his wife Karen, 31, sat in Boston's Logan Airport. The newlyweds were returning to their Pennsylvania home after a weekend trip. Suddenly Karen saw Steve go pale and his lips turn blue. *Oh, no*, she thought. On their honeymoon in Italy two months earlier, Steve had suffered symptoms of heart trouble, but had seemed in good health since.

But now a massive coronary-artery blockage had triggered ventricular fibrillation. Bystanders administered CPR until medics arrived. They had to shock Steve twice with an AED before his heart resumed spontaneous contractions.

"I was within minutes of death," Parinisi says. "But that defibrillator gave me back my life."

Reflecting on such rescues, David Dutton's widow, Sandra, notes sadly that her husband could also be alive today if AEDs had been available that March night on the commuter train. "David's needless death should be a lesson to all of us," she says. The equipment to save thousands of lives exists. Now we must demand that it be made available everywhere.

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This Machine Could Save Your Life

So why isn't it widely available?

BY MALCOLM McCONNELL

COMMERCIAL ARTIST David Dutton, 56, sat on a commuter train, returning from New York City to his Long Island home on the evening of March 20, 1997. Dutton had no known health problems, but as the train clattered through Queens, he suddenly gasped, his face turned a mottled red, and he slumped unconscious in his seat. It was 7:30 p.m. He had gone into cardiac arrest.

While the train crew called ahead

for medical aid, a passenger performed CPR, alternately doing chest compressions and mouth-to-mouth breathing. But Dutton's heart was seized by the chaotic rhythm called ventricular fibrillation (VF), and CPR alone could not jump-start it.

Dutton's only hope was the process called defibrillation: a brief electrical shock that overpowers the irregular VF rhythm so the heart can resume its natural contractions.

But by the time a rescue team

PHOTOCOPY
PRESERVATION

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READER'S DIGEST

carrying a defibrillator reached the train, it had been more than six minutes since Dutton's collapse, and his heart did not respond to attempts to restart it.

The great majority of cardiac-arrest victims die before help can reach them. But these deaths are not inevitable. "Many of the thousand cardiac-arrest incidents each day are clearly survivable," says Dr. Myron Weisfeldt, chairman of the American Heart Association's (AHA) task force on automatic external defibrillation. Time is critical: many cardiac arrests become fatal four to seven minutes after VF begins, so early defibrillation is the single most crucial factor. Every minute that passes before returning the heart to its normal rhythm decreases the chance of survival by ten percent; after just four minutes without defibrillation, only about 60 percent of victims survive. After ten minutes, few survive.

But in congested cities, emergency medical technicians (EMTs) equipped with defibrillators usually arrive too late. For years the cardiac-arrest survival rate in New York City, for example, was just over one percent. Nationwide it averages less than ten percent.

But a safe and effective technology exists that could improve these odds dramatically. It is the automatic external defibrillator (AED), a small computerized, battery-operated device, which can be as small as a book and weigh as little as four pounds. AEDs are nearly foolproof to operate. And

their cost keeps going down: some devices now sell for around \$3000.

In Rochester, Minn., automatic defibrillators have transformed emergency care of cardiac-arrest patients. In 1990 the Mayo Clinic's Dr. Roger D. White, medical director of the city's ambulance service, noted that police cars often reached cardiac-arrest victims two to three minutes before EMTs did. As trained "first responders," police officers gave CPR, but had no way of defibrillating victims, who often died. "What if we equip cars with defibrillators and train patrol officers to use them?" White suggested to the police.

Seven years later Rochester boasts what may be the highest cardiac-arrest survival rate in the world—45 percent. In the program's first five years, police defibrillated 31 cardiac-arrest patients, 18 of whom survived. Their lifesaving efficiency was tested last January 3.

Software designer Peter Czok, 50, had complained to co-worker Doreen Marks that his chest felt congested. "Maybe I'm catching pneumonia," he said. Then after lunch his head dropped, and Marks heard a weird gurgling from his throat. "Peter, don't fool around," she chided.

Czok toppled limply from his swivel chair. His face was a muddy red, his mouth agape, his sightless eyes open and blank. Terrified, Marks called 911 at 2:27 p.m.

Officer Eldon Morrison and his partner, rookie Steve Thompson, arrived at 2:30 p.m. By then Czok's

THIS MACHINE COULD SAVE YOUR LIFE

To Make Sure This Device Is in Your Life:

1. Ask your community police and fire departments if their "first response" vehicles contain AEDs. If not, send a letter or fax requesting them, and suggest they call Leonard Matarese, who heads the International Association of Chiefs of Police defibrillation effort, at 305-865-7586 for more information.
2. Call the nurse or medical department at your workplace to find out if your employer provides AEDs and has trained operators. If not, send a copy of this article. As Dr. Weisfeldt notes, "Thousands of people needlessly die of cardiac arrest each year in our offices and factories."
3. If your state limits access to AEDs, to find out, call the AHA at the number below, write your state senator or legislator, telling them you support changes in the law permitting trained responders to use AEDs, and that sample legislation is available from the AHA.

To learn more about sudden cardiac arrest and what you can do to bring early defibrillation to your community, contact the American Heart Association at 1-800-AHA-USA-1 or on-line at <http://www.amehr.org>.

face was a ghastly purple. Probing for a pulse, Thompson announced, "He's in cardiac arrest!"

As Morrison cut open Czok's shirt, Thompson pressed defibrillation pads firmly onto his chest. The computer's voice announced, "Analyzing heart rhythm. Do not touch the patient."

Within seconds the recorded voice intoned, "Shock advised. Stay clear of patient." The orange shock button flashed. "Deliver shock now." Thompson stabbed the button. "Shock delivered," the computer announced. It was 2:31 p.m. Less than five minutes had elapsed since the 911 call.

Peter Czok was released from the hospital a week later. "I was dying when the officers arrived," he says.

"If they hadn't used a defibrillator, I never would have survived."

Rochester's experience has demonstrated that nonmedical professionals equipped with AEDs and proper training can save many cardiac-arrest victims. Following this city's lead, other police agencies nationwide have embraced the use of AEDs.

"The Rochester experience has shown that the police can consistently reach cardiac-arrested patients before EMTs do," stresses Leonard Matarese, chief of public safety in Florida's Indian Creek Village. Last year he equipped all of his squad cars and patrol boats with AEDs. And Matarese is helping forge an alliance between the nation's fire and police chiefs that he hopes will soon put an AED in every

Richard S. Hamburg

Director of Legislative
and Regulatory Affairs

**American Heart
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*Fighting Heart Disease
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CARDIAC ARREST SURVIVAL ACT, H.R. 1679

Case for Support

More than 350,000 Americans suffer a sudden cardiac arrest each year. Less than ten percent will be discharged from a hospital alive. The key to survival is timely initiation of a series of events, coined the "Chain of Survival." The chain includes early activation of the emergency medical system; basic cardiopulmonary resuscitation (CPR); rapid defibrillation; and early advanced cardiac life support. Weakness in any link lessens the chance of survival and condemns the efforts of an emergency medical system to poor results. After as little as 10 minutes, very few resuscitation attempts are successful.

Unfortunately, pre-hospital medical care (including training, equipment and standards of care) suffers from state-by-state variation, which condemns the public to inconsistent care. It is clear that legislative interventions can substantially affect the delivery of pre-hospital care, resulting in increased survival rates. In cities such as Seattle, WA and Rochester, MN, where early access to EMS, early CPR, and early defibrillation have dramatically increased survival rates. However, according to data recently published in the *Journal of Emergency Medical Services (JEMS)*, non-EMT first responders are legally permitted to use AEDs in only half the states and less than one half of EMTs, and less than one quarter of non-EMT first responders, in the U.S. are trained and equipped to defibrillate. As for basic life support training, more than half the states in a recent study had no secondary school curriculum requirements for first aid and CPR.

AHA position

The AHA supports the Cardiac Arrest Survival Act, H.R. 1679, sponsored by Representative Cliff Stearns (R-FL), and co-sponsored by over 70 members of the House. This legislation, drafted in large part by the American Heart Association, in partnership with the American Red Cross and nearly two dozen national organizations, establishes a federal program regarding training in lifesaving interventions and the use of lifesaving equipment, including automated external defibrillators (AEDs), to assist individuals experiencing cardiac arrest. Specifically, the legislation calls for:

- the National Heart, Lung, and Blood Institute (NHLBI), in cooperation with the National Highway Traffic Safety Administration (NHTSA), to develop and disseminate a model state training program for first responders and bystanders in lifesaving interventions, including cardiopulmonary resuscitation (CPR).
- the development of model state legislation to ensure access to emergency medical services, including consideration of the necessary location and placement of lifesaving equipment, including AEDs; the development of requirements for training in the core content and use of life-saving equipment, including AEDs; and the provision of good samaritan immunity for bystanders, first responders, instructors, and owners and managers of property where equipment is placed.
- the development of a national database for reporting and collecting information relating to the incidence of cardiac arrest and whether interventions, including bystander or first responder, improve the rate of survival.

Action requested

- **Co-sponsor the Cardiac Arrest Survival Act, H.R. 1679, sponsored by Rep. Cliff Stearns (R-FL).**

CARDIAC ARREST SURVIVAL ACT 105th CONGRESS SUPPORTERS

**American Heart Association
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American Academy of Pediatrics
American Association for Respiratory Care
American College of Cardiology
American College of Emergency Physicians
Association of Black Cardiologists
Citizen CPR Foundation
*Congressional Fire Services Institute Advisory Committee
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Physio-Control Corporation
Save a Life Foundation
SOS Technologies & Oxygen Therapy Institute
Sudden Arrhythmia Death Syndromes Foundations (SADS)
SurVivaLink Corporation
The Institute of Critical Care Medicine
Wisconsin Indianhead Technical College, New Richmond Campus
Wyoming Department of Health**

***see CFSI National Advisory Committee on reverse**

CFSI National Advisory Committee Organizations

*American Fire Sprinkler Association
Association of Public-Safety Communications Officials
Board of Certified Fire Protection Specialists
Building & Fire Protection Specialists
Building Officials & code Administrators
Class 1, Inc.
Cooperative Haz-Mat Enforcement Development (COHMED)
Council of American Building Officials
Defense Fire Protection Association
Factory Mutual Research Cooperation
Federation of Fire Chaplains
Fire and Emergency Manufacturers & Services Association
Fire Apparatus Manufacturers & Services Association
Fire Chief Magazine
Fire Department Safety Officers Association
Fire Engineering Magazine
Fire Marshals Association of North America
Firehouse Magazine
Foundation for Firefighter Health & Safety
Grinnell Corporation
Insurance Committee for Arson Control
International Association of Arson control
International Association of Fire Chiefs
International Fire Buff Associates
International Fire Service Training Association
International Municipal Signal Association
International Society of Fire Service Instructors
Journal of Emergency Medical Services Communications (JEMS)
Metropolitan Committee of the IAFC
National Association of Emergency Vehicle Technicians
National Association of Fire Equipment Distributors
National Association of State Fire Marshals
National association of State Foresters
National Electrical Manufacturers Association
National Emergency Number Association
National Fire Protection Association
National Fire Sprinkler Association
National Society of Executive Fire Officers
National Volunteer Fire Council
Natural Disaster Coalition
The Society of the Plastics Industry
The Tobacco Institute
Underwriters Laboratories
VFIS*

Cardiac Arrest Survival Act - Stearns (R-FL)

Current House co-sponsors (71) (11/1/97)

Bachus (R-AL)
Callahan (R-AL)
Hilliard (D-AL)
Faleomavaega (D-AS)
Calvert (R-CA)
Dellums (D-CA)
Gallegly (R-CA)
Lantos (D-CA)
Lofgren (D-CA)
Waxman (D-CA)
DeGette (D-CO)
Skaggs (D-CO)
DeLauro (D-CT)
Johnson (R-CT)
Kennelly (D-CT)
Maloney (D-CT)
Shays (R-CT)
Castle (R-DE)
Canady (R-FL)
Deutsch (D-FL)
Foley (R-FL)
Hastings (D-FL)
McCollum (R-FL)
Thurman (D-FL)
Wexler (D-FL)
McKinney (D-GA)
Abercrombie (D-HI)
Mink (D-HI)
Leach (R-IA)
Fawell (R-IL)
Carson (D-IN)
Frank (D-MA)
McGovern (D-MA)
Meehan (D-MA)
Olver (D-MA)
Hoyer (D-MD)
Rivers (D-MI)

Burr (R-NC)
Andrews (D-NJ)
Pallone (D-NJ)
Payne (D-NJ)
Boehlert (R-NY)
Schumer (D-NY)
Slaughter (D-NY)
Townes (D-NY)
Walsh (R-NY)
DeFazio (D-OR)
Coyne (D-PA)
Doyle (D-PA)
Gekas (R-PA)
Goodling (R-PA)
Greenwood (R-PA)
English (R-PA)
Fattah (D-PA)
Fox (R-PA)
Kanjorski (D-PA)
Klink (D-PA)
Mascara (D-PA)
McDade (R-PA)
Murtha (D-PA)
Peterson (R-PA)
Weldon (R-PA)
Duncan (R-TN)
Clement (D-TN)
Barton (R-TX)
Frost (D-TX)
Boucher (D-VA)
Moran (D-VA)
Wolf (R-VA)
Greene (D-VI)
McDermott (D-WA)
Christian-Green (VI)
Barrett (D-WI)

ANSWERS TO FREQUENTLY ASKED QUESTIONS ABOUT THE CARDIAC ARREST SURVIVAL ACT

Question

Is there organizational support for the proposal?

Answer

Support for the Cardiac Arrest Survival Act in the 105th Congress is broad. A diverse cross-section of national health and safety groups endorse the proposal, including the American Heart Association, American Red Cross, American Academy of Pediatrics, American College of Emergency Physicians, American Association for Respiratory Care, American College of Cardiology, Emergency Nurses Association, International Association of Firefighters, International Association of Fire Chiefs, the National Association of State EMS Directors, and the North American Society of Pacing and Electrophysiology.

Question

Is there congressional support for the proposal?

Answer

As of October 10th, the legislation had 67 House co-sponsors, representing a broad range of bi-partisan support.

Question

Isn't this another burdensome federal mandate to the states?

Answer

The Congressional Budget Office has determined that the bill contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act of 1995, and would impose no costs on state, local or tribal governments.

Question

Isn't this issue more properly addressed at the state level. Aren't we ignoring what the public asked for during the 104th Congress when they voted for less federal bureaucracy?

Answer

Pre-hospital medical care (training, equipment, standards of care) suffers from state-by-state variation which condemns the public to inconsistent care. A 1995 poll of state EMS directors identified lack of enabling legislation as one of the primary obstacles to implementation of early defibrillation programs. If a model national standard were developed by DHHS, states would likely be more receptive to changes.

Development and dissemination of a core content for a recommended model state training program for first responders and bystanders (defined as cardiac arrest care providers) in lifesaving interventions, including cardiopulmonary resuscitation (CPR), throughout the U.S., in a standardized fashion using current science, would be an efficient use of federal government resources.

Question

How important is rapid access to basic and advanced cardiac life support?

Answer

In a recent study, when CPR was initiated in less than four minutes, and advanced cardiac life support in less than eight minutes, then the survival rate of the cardiac arrest patient was 43%. When CPR was initiated in less than four minutes but advanced cardiac life support was not initiated for 16 minutes, the rate of survival for the patient dropped precipitously to 10 percent. In general, it is estimated that for each minute of delay in administering defibrillation, survival rates drop by 10 percent.

Question

What are the critical links in the emergency treatment of sudden cardiac arrest?

Answer

More people can survive sudden cardiac arrest when a particular sequence of events occurs as rapidly as possible: 1) recognition of early warning signs, 2) early activation of the emergency medical system, 3) early basic cardiopulmonary resuscitation (CPR), 4) early defibrillation, and 5) early advanced cardiac life support. The American Heart Association has embraced the phrase "Chain of Survival" to communicate this concept in a useful way.

Question

Is the Chain of Survival effective?

Answer

In Houston, 40% of patients with ventricular fibrillation/ventricular tachycardia were discharged from the hospital if they had received bystander CPR, versus 19% for patients not given bystander CPR. Some communities have widely deployed AEDs (Richmond, Seattle, Rochester, MN). In such places survival rates have reached over 30 percent. In other large

cities, such as Chicago and New York, rates run as low as 1-2 percent.

Question

Haven't most states implemented the links in the Chain of Survival?

Answer

According to recent surveys: (1) 31 percent of the population and 65 percent of the land area in the U.S. is not covered by the 911 system; (2) only a small percentage - about 10 to 15 percent in most studies - of witnessed cardiopulmonary emergencies have a citizen attempt resuscitation; and (3) only 28 states allow first responders to use an automatic external defibrillator. We have a long way to go!

Question

What is an example of life-saving equipment?

Answer

Automated external defibrillators. The vast majority of sudden cardiac arrests are due to an electrical malfunction of the heart called ventricular fibrillation (VF). In VF, the heart's electrical signals, which normally induce a coordinated heartbeat, suddenly become chaotic, and the heart's function as a pump abruptly ceases. Consciousness is quickly lost and unless this condition is reversed, death follows within a matter of minutes. The only effective treatment for this condition is defibrillation, the delivery of a powerful electrical shock to the heart. Defibrillation -- which can be compared to rebooting a 'frozen' computer -- eliminates VF and allows a coordinated rhythm to resume.

Question

Are AEDs safe in the hands of non-medical cardiac arrest care providers?

Answer

AEDs are already being widely deployed to cardiac arrest care providers. Recent breakthroughs in technology have resulted in AEDs which are easier to use and maintain; smaller, lightweight and rugged; and lower in cost. AEDs have built-in safeguards to protect both patient and user, and safety records are excellent. AEDs are programmed to administer a shock only when necessary, and have verbal and visual prompts that tell everyone near the victim to stand back before the shock is delivered. Cardiac arrest is a life or death situation. Without defibrillation, the patient has very little chance of survival.

Question

Aren't all ambulances already equipped with defibrillators?

Answer

Only about 50 percent of EMTs are trained and equipped to defibrillate. Less than 1 in 5 of non-EMT first responders (individuals trained to the U.S. Dept. of Transportation First Responder level or its equivalent) are trained and equipped.

Question

Even if first responders are authorized to use AEDs, won't the costs be prohibitive?

Answer

The expense and time involved in equipping emergency vehicles with AEDs and training all first responders how to use them is minimal in proportion to the number of lives that can be saved. A report from Richmond, VA found that the cost-per-life-year saved from sudden cardiac arrest with defibrillation was about \$2,200. Other cardiovascular interventions cost up to \$50,000 per year. The actual cost of some AEDs is now under \$3,000 and training is now being incorporated into basic life support courses.

Question

What if AEDs were more widely available to cardiac arrest care providers such as police officers and fire department personnel?

Answer

Up to 100,000 lives could be saved annually.

HHS Comments Related to the Draft Legislation on
The Cardiac Arrest Survival Act and Cardiac Survival Activities
the Department Could Support

- o HHS/The National Institutes of Health/National Heart, Lung and Blood Institute (NHLBI), supports the "chain of survival" concept and the position that all emergency medical personnel should be trained to use a defibrillator and that all medical vehicles should be equipped with a manual or automated external defibrillator (AEDs).
- o With respect to the proposed legislation, it contains a number of provisions that are of concern to the Department. For example, it provides for the development and dissemination of a "core content" for a model state training program in lifesaving interventions, including cardiopulmonary resuscitation. Organizations such as the American Red Cross and the American Heart Association are currently involved in developing and disseminating training programs for cardiopulmonary resuscitation. We believe it is not appropriate for the NHLBI to assume this function and thus duplicate the ongoing efforts of private entities.
NHLBI comments?
- o ~~The legislation also proposes a demonstration project to provide training in the core content to first responders and bystanders. While we would support such a project, we are concerned that implementation of a demonstration project of this type through the Department would require additional funding and staff resources.~~
NHLBI
- o ~~HHS supports the development of a nation database related to the incidence of cardiac arrest. This is an important area that is not currently addressed. This also would involve the investment of substantial resources, both human and financial, that are not currently planned for within the Department. The proposed legislation does not address financial support in this regard.~~
- o ~~We believe there is merit in developing model state legislation to ensure access to emergency medical services for basic life support. However, we have a concern about the appropriateness of the NHLBI in developing such legislation. The NHLBI has a research and education mandate. Thus, we do not believe NHLBI should be involved in the development of legislation at the state level especially legislation that may establish requirements for state licensure or credentials of health professionals.~~
who develops?

- o We strongly believe that any advances in this area should address research needs in cardiac arrest. For example, although the NHAAP supports the concept of placing AEDs in public places, it has emphasized the need for additional research before this occurs.
- o There is also a need for additional research on resuscitation. Electrical instability of the heart remains a vexing problem and research into understanding mechanisms and therapies to prevent it and or restore normal health rhythm, particularly following cardiac arrest, is urgently needed.
- o Additional studies of the feasibility and efficacy of public programs to treat cardiac arrest are also highly desirable and should precede implementation of any nation emergency action programs.
- o *Need more* The Department will work with our health professional training programs in the Health Resources and Services Administration and the Health Care Financing Administration to explore the possibility of putting greater emphasis on the chain of survival training activities and the use of AEDs in their grant and contract training programs.
- o We also will explore with Public Health Service Agencies in the Department, including the Food and Drug Administration, the possibility of broadening the use of AEDs so that more non-EMT and other health professionals, who are first responders, are able to use AEDs.

Early Defibrillation

Liability/Immunity Aspect of AED use

I. Duty Concept

A. 40/50 states have Good Sam. laws that protect "any person" from civil damages.

1. questions to ask

a. what is good faith emergency care/aid? - i.e. is the use of an AED by a lay person or non medical person like a cop w/ the scope of this?

b. would use of an AED by a non-med person in doc's absence be gross negligence even if that person was trained?

any legis. would have to make clear the standard of care.

2. only Vermont's Good Sam law creates a duty to render care. In the other states, no one has to help if they don't want to.

a. therefore, you have to keep this in mind when answering the question "who should defibrillate?" You have to pick people who have a duty to help - like cops or ambulance personnel. Putting them all over the place is useless.

June Groceries \$125
 Drycleaning \$60
 Suit, etc. \$300
 Travel. \$55

 \$540.00

\$2,165.72
 540.00

 1,625.72
 380.00

red suit
~~black suit~~
~~black suit~~
 ivory

July Groc. \$200
 Drycl. \$100
 Travel. \$80

if no one has the duty to use them.

3. Lots way X has a duty to help V or has assumed the duty by volunteering to help. What will constitute reas. care? :: misuse/misunderstanding of equipment/equipment failure. A lot of this will depend on how easy technology makes things.

II. Access to Defibrillators (St. Employees)

A. Duty & ability/authority to use AED's won't matter if AED's aren't available.

1. discretionary immunity — states can choose whether to put AED's on cop cars & ambulances, & they can't be sued for any harm to V b/c of this decision → inconsistent case, w/ better care going to richer states/townships.
a. there are currently no legal mandates that require a state to implement an AED program

B. Access to AED's in the private sector

1. where there is a special relationship there is a duty to help V — i.e. common carriers, spouse, innkeepers, etc. Should they have to use AED's? — i.e. would that be w/ the scope of the reas. care that they have to provide?

2. AED's are medical devices that are regulated by the FDA. You need to be authorized to use it (by training) on order of a physician. Not hard. BUT states can make this alot stricter. → inconsistent care.

a. handling of manufacturer's liability is vital, too. They could lower the price of AED's in places where they have less liability → more care. They'll put a premium of cost on AED's in areas where they have more liability → less AED's & less care.

to see in the Good Sam legis?

PRELIMINARY DISCUSSION OF AED ISSUE

I. Scope of Problem (terminology)

SCA- 365,000 deaths/yr from sudden cardiac arrests; most of these are caused by VF (ventricular fibrillation)- 1/3 of these VF SCA's can be saved with AED's

I think their legislation wishes to primarily focus on the dissemination of AED's.

II. Basic Questions to Keep in Mind (What do they want us to do?!)

They talk alot about core content. What exactly do they want in this core content that will be the meat of ^{model state} any training program/AED requirement. _{for 1st resps. & bystanders.}

AHA talks alot about model state legislation. Do they have a clear idea of what they want in it- and can they back up those requests w/research?

The AHA wants a demo project. Doing what? Why do they need one when there is the Rochester example. How closely have they looked at the Rochester ex.? What are the characteristics of the city that made the program a success? Could it be duplicated easily elsewhere?

III. Efficient Use of Resources

How closely has the AHA looked at this? We would like to see figures in this area.

5 Steps in the Chain of Survival- recognition of early warning signs/activation of the EMS/ basic CPR/ defibrillation/ advanced cardiac life support

What are the most crucial steps here? Where should funds be targeted? Would focusing on 1,2, and 3 be cheaper than the AED business? Would such a focus save as many lives? After all, existing public edu. structures could be used for 1- how many minutes are generally wasted bec. of shoddiness in this area?

Even with the AED idea, to what extent can existing public edu. structures be used? The HHS is concerned about duplicating Red Cross efforts. Could the Red Cross add AED classes to the CPR ones at an incremental cost?

Who would pay for the AED's? Do you want the govt. to mandate that the state purchase (or suggest) a certain number of AED's? Can the govt. do that?

IV. Police v. Bystanders

Exactly how are you defining bystanders? (imp. for the liability issue)- are innkeepers in a different category from spouses or a random citizen?)

Police is a good idea- speedier response since they are in the field and get there first w/ 2-3 minutes. Everyone isn't covered by EMS. Liability is less of a problem. They already have the duty to act and are covered by govt. immunity. The public, on the other hand, doesn't have the duty to act even where they are insured against damages by Good Sam legis.

Maintenance

The police is also an already organized group, and we know who they are. Why not the AED in every ambulance if part of the problem is the fact that EMS doesn't get there in time? Moreover, their AEDs are likely to be used and maintained. Putting AED's everywhere is a bad idea. They might not be used for a long time- and who will maintain them? Who supports the ambulance idea? the bystander idea? Why?

We should ask for some figures on the number of bystanders who give CPR on site to aid in emergencies. Of course these numbers may have gone down because of AIDS fear, but they can give us an idea of the efficiency of putting AED's everywhere for bystanders to use.

What scope of care do you want to put onto bystanders with a duty? to call the cops? To use an AED? What is going to be the definition of reasonable care?

It is easier to organize the cops for AED training, because they are already organized. You can also guarantee that they are retrained, too.

Also giving the cops a good hearted role to play will improve their tarnished image in urban communities.

How can the EMS system be used more efficiently? What has been/can be done to speed up the response time? Is it helpful to focus resources in this area when you need someone there in 4 minutes?

Maintenance adds to the inefficiency of the bystander idea. Paramedics can make shock decisions without an AED very accurately. But bystanders can't. EMT's can't. So the maintenance is important. A maintenance program would have to be put in place if you put AED's everywhere and that costs a lot of money.

Why even worry about Non-EMT's? Only 43% of EMT's in 47 states are both trained and equipped to use AED's. Why? What impact would moving that figure closer to 100% have on the survival rates? How would that cut down on costs. Ditto for non-EMT 1st responders. like cops and firefighters. In 13 of 47 states, they are not trained and equipped with AEDs. The situation is unknown in 14 states. In the other 32, only 19% are trained and equipped.

V. State Power and Finances

Exactly what do they want the govt. to tell the states? What discretion should the states have in deciding on the number and placement of AED's? How many cop cars should be outfitted? Or just tell them to have one demo project? Only cops that patrol areas with a lot of elderly? How specific should the model program be?

Inconsistent handling of manslaughter liability will lead to inconsistent costs of AED's and thus inconsistent care.

Old AED's aren't simple and easy to use. So if they give them to the cops or bystanders, they have to be new ones. Is that causing state reluctance to implement such programs, or is it mainly safety considerations?

What could the govt. do to get the manufacturers to lower the price?

VI. Good Sam legis.
A. Duty issue.

July 31



THE NATIONAL ASSOCIATION OF State Emergency Medical Services Directors

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AUTOMATED DEFIBRILLATOR STUDY RESULTS

(41 RESPONSES AS OF MARCH 12, 1996)

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WEST REGION

Donna Masera
Hawaii

State	Is defibrillation by means of an Automated External Defibrillator (AED) considered a medical act in your state?			Are individuals who use AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
AL							
AK	x		In state statute passed by the legislature in 1977. Does not distinguish between manual and automatic.	x		State EMS.	First responder plus 8 hrs. (will be reduced to 4 hrs.) or EMT-B plus AED training.
Am. Samoa							
AZ	x		Office of EMS has established rules for defibrillators by Basic & Intermediate EMT's.	x		ADHS/OEMS.	Completion of 4 hr. training program by certified training program or AES Care Hospital.
AR	x		We have "Rules and Regulations" approved by Board of Health and Governor. Rationale - at the time AED still considered an "advanced" procedure requiring regulation, special training, etc.	x		Division of EMS of AR Dept. of Health.	1) EMT; 2) Complete either a stand-alone course, 94 transition course, or 94 curriculum full-course; 3) Can only use AED w/ specifically licensed service under medical direction.

02 ELS

State	Is defibrillation by _____ of an Automated External Defibrillator (AED) considered a medical act in your state?			Are indiv _____ who use AEDs re _____ id to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
CA		x	Individuals must be trained & approved to use AED's in accordance with state regulations, but the use of AED's is not restricted to any certificate or license; see below information.		x		Individuals who use AED's are required to be trained to use AED's. We have state regulations for lay persons to be trained (overseen by physician) in the use of AED's. Public Safety personnel (peace officers, firefighters and lifeguards) can be trained to use AED's if local Medical Director approves. AED is optional skill for EMT-I's (basic) and included in scope of practice for EMT-II's (intermediate) and EMT-Paramedics. If you would like copies of CA regulations pertaining to use of AED let me know.
CO							
CT		x		x		OEM's.	Medical Response Technician (MRT) or EMT with defibrillator authorization from OEM's.
DE	x		The Delaware Board of Medical Practice - to be consistent with the regulations governing the scope of practice for paramedics within the State. This decision was directed primarily toward BLS pre-hospital providers.	x		Certified by the Office of Pramedic Administration.	Providers must meet minimum educational requirements, be an active member of a licensed BLS provider agency, complete a six hour initial course and recertify every twelve months thereafter. Our office has no jurisdiction or knowledge of requirements for corporate providers.
DC	x		Commission of Public Health. Mayor's EMS Advisory Committee.	x		Commission of Public Health.	Completion of approved training course recertification annually.

State	Is defibrillation by means of an Automated External Defibrillator (AED) considered a medical act in your state?			Are individuals who use AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
FL	x		Yes, in that Chapter 401 F.S. requires that first response organizations and EMT's receive specified training and perform under medical supervision.		x	No, required to receive training specified below if first responders or be EMT certified.	CPR certification or completion of an 8 hr. basic first-aid course that includes CPR and 6 hrs. of training in at least two sessions.
GA	x		State law. Rationale: advanced procedure.	x	x	Office of EMS 1st responders with medical direction.	EMT certified by state. 1st responder courses approved by region.
Guam	x		Supervised and controlled by the EMS Medical Director	x		EMS Office.	Have to pass the AED Course.
HI	x		Hawaii state legislature changed state statutes through recommendation of the American Heart Association.	x		U.S. DOT First Responder.	40 hr. U.S. DOT First Responder certification/course completion.
ID	x		Very astute wording for your question, Bob! The Board of Medicine made the declaration; probably based on the historical limitation of defibrillation of any kind to the EMT-I & P levels. The striking part was that this determination and the policy which followed was in direct opposition to the regulation stating that acts which may be performed by EMT-B's was to be determined by the Board of Health & Welfare.	x		Currently the Board of Medicine for EMT-I's, EMS Bureau for EMT's. After July, EMS Bureau will be certifying authority for all.	Successful completion of 4 hr. training module; affiliation with a licensed EMS unit which functions using an AED and Medical Director.
IL							
IN	x		Legislation.	x		Indiana EMS Commission.	First Responder.
IA							
KS	x		Legislation.	x		Board of EMS.	First Responder certification.

State	Is defibrillation by _____ of an Automated External Defibrillator (AED) considered a medical act in your state?			Are individuals who use AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
KY		x			x		EMT certification - however, only EMT's working for licensed ambulance service, which has a medical director, and is an approved service by the EMS Branch, can perform this skill. However, we do not have authority over the fire service or security guards, etc., who may be using AED's in their jobs.
LA		x		x			State approved training program based upon American Heart Association guidelines, certification local jurisdiction. AED's covered in LA law - well send under separate cover.
ME							
MD		x			x		
MA		x	The irony is EMT's and First Responders are required to have training, etc. The general public may use the devices with no training whatever!	x		OEM's.	Participation in SIAED program, include minimum 9 hrs. training, ambulance service or First Responder agency officials affiliation. EMT's are required to be currently certified AND authorized by local system medical director. First Responders are required to have "current training" (they are neither certified nor licensed by the state) AND authorized by local system medical director.

State	Is defibrillation by means of Automated External Defibrillator (AED) considered a medical act in your state?			Are individuals who AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
MI	x		Determined by EMS Division implementation and oversight. Left to local medical control authorities.		x		
MN							
MS	x		MS EMS Advisory Council, DEMS, added AED with regulations to EMT-basic; must have medical/control documented forwarding at DEM's.	x		DEM's, MS Board of Health.	EMT-basic with approved training in AED and medical control. Bob, these are rules for EMS other medical groups not impacted by these EMS rules.
MO	x		Bureau of EMS - persons using AED's would be under the supervision of a medical director and responsible to state regulations.	x		MO Department of Health, Bureau of EMS.	All MO EMT's are trained and licensed to use AED's. Legislation is pending to enable First Responders to use AED's.
MT	x		The MT Board of Medical Examiners made the decision several years ago on an informal basis... based on the medical practices ACL.	x		Board of Medical Examiners, Board of Nursing (for nurses).	At the pre-hospital level, it is EMT-defibrillation. With implementation of new EMT curriculum, it will be EMT-basic NOT First Responder at this time.
NE							
NV							
NH	x		State Medical Advisory Board and EMS Coordinating Board.	x		Bureau of EMS.	First Responder (rescuer) or (ARC Emergency Response) and current CPR certification.
NJ	x		NJ Board of Medical Examiners - Through legislation defibrillation has been delegated to the level of EMT-basic.	x		NJ Department of Health.	1) Member of an approved EMT-D agency. 2) Current EMT and CPR certification. 3) Four hours of continued education per year. 4) Annual skills verification. 5) Annual endorsement of Medical Director.

State	Is defibrillation by _____s of an Automated External Defibrillator (AED) considered a medical act in your state?			Are individuals who use AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
NM	x	x	Yes, within EMS context AED is regulated. No, to my knowledge, it is not regulated in general.	x	*	Yes, EMS.	x-Certified EMS First Responder with medical direction. *:Not regulated for general public as far as I know. Bob, let me know what you learn.
NY							
NC							
ND	x		Jointly between State EMS Office and Board of Medical Examiners (BOME).	x		Certification by our office in AED, perception filed with (BOME).	Certified First Responder, completion of 4 hr. AED course and state AED test.
MP		x					
OH							
OK		x		x	x	No, Only EMT's. OSDH.	AHA standards.
OR			Neither defined or not defined. "subject of discussion."	x		First Responder.	With 4-6 hr. training.
PA							
PR		x					
RI							
SC	x		The Medical Control Committee of the S.C. EMS Advisory Council.	x		DHEC EMS.	EMT-basic. New curriculum.
SD	x		SD Health Department.	x		SD Health Department.	8 hrs. of training and 1 hr. recertification every six months.
TN	x		This is covered under the Medical Practices Act. Use by EMS personnel is governed by the EMS Act and the EMS Board.	x		EMS Board.	First Responder (certified) with AED endorsement. EMT with AED endorsement or EMT-paramedic under scope of practice.
TX							

State	Is defibrillation by means of an Automated External Defibrillator (AED) considered a medical act in your state?			Are indiv who use AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
UT	x		For certified pre-hospital providers it is covered by the State EMS Act.	x		Bureau of Emergency Medical Services. Utah Department of Health.	4 hrs. minimum DOT National Standard Curriculum or 4 hrs. DOT transitional (bridge training) or (until 12/31) 8 hrs. Utah AED course all with appropriate testing.
VT	x		The Department of Health EMS office is establishing in rule the requirement that squads using AED's have a medical director.	x		VT EMS.	18 year old EMT-basic (1994 curriculum) written and practical exam and a squad affiliation.
VI		x					We are not using AED's in the field as yet.
VA		x	Not sure I understand, Bob. It is part of own EMT course like the other skills.		x	Not as a stand alone skill.	16 years of age - EMT-B certified.
WA	x		By consensus decision with the WA State Medical Association. EMS Standards Committee and State EMS Committee. Studies conducted by University of WA and King Co. EMS (Dr. Richard Cummins) supported defibrillation as a key life saving skill for EMS personnel.	x		Yes, Certified as First Responder or EMT's, than 4-6 hrs. of special training on the use of AED. WA Dept. of Health.	First Responders or EMT. Medical program director approval. Completion of state approved specialized training program.
WV	x		The state critical care committee. Historical perspective-the procedure is potentially harmful, individuals need to understand its purpose and physiology, etc. on a basic level.	x		WV Office of EMS.	EMT-b national curriculum/national registry test.

State	Is defibrillation by means of an Automated External Defibrillator (AED) considered a medical act in your state?			Are individuals who use AEDs required to be certified or licensed?			
	Yes	No	If yes, which organization/board made the declaration, and what was the rationale?	Yes	No	If yes, what is the licensure or certifying body?	What are the minimum certification requirements?
WI		x		x		Department of Health EMS section.	1) EMT license or First Responder certification. 2) Training - 5 hr. module or as part of EMT-basic course. 3) Affiliation with approved ambulance provider. 4) Signature of Medical Director.
WY	x		Final authorizing agency for all EMS skills is the Board of Medicine.	x		EMS Office.	Basic EMT with an identified ambulance service or a state authorized first responder unit.
Totals	28	13		32	9		

*Current legislation
Waiting for passage*

HOUSE AMENDMENT FOR COMMITTEE PURPOSES

Bill No. HB 411Amendment No. B (for drafter's use only)

COMMITTEE ACTION

FLORIDA

	Y	N		Y	N
1	ADOPTED	___	___	FAILED TO ADOPT	___
2	ADOPTED AS AMENDED	___	___	WITHDRAWN	___
3	ADOPTED w/o OBJECTION	___	___	OTHER	___

Committee hearing bill: Health Care Services

Representative(s) _____

offered the following:

Amendment (with title amendment)

Remove from the bill: Everything after the enacting clause

and insert in lieu thereof:

Section 1. It is the intent of the Legislature that an automatic external defibrillator may be used by any person for the purpose of saving the life of another person in cardiac arrest. In order to ensure public health and safety:

(1) All persons who have access to or use an automatic external defibrillator must obtain appropriate training to include completion of a course in cardiopulmonary resuscitation or successful completion of a basic first aid course that includes cardiopulmonary resuscitation training and demonstrated proficiency in the use of an automatic external defibrillator, and

(2) Any person or entity in possession of an automatic external defibrillator is encouraged to register with the local emergency medical services medical director the existence and location of the automatic external defibrillator, and

(3) Any person who uses an automatic external

HOUSE AMENDMENT FOR COMMITTEE PURPOSES

Bill No. HB 411Amendment No. B (for drafter's use only)

1 defibrillator is required to activate the emergency medical
 2 services system as soon as possible upon use of the automatic
 3 external defibrillator.

4 Section 2. Section 401.291, Florida Statutes, is
 5 hereby repealed.

6 Section 3. New subsection (4) is added to section
 7 768.13, Florida Statutes, to read:

8 768.13 Good Samaritan Act; immunity from civil
 9 liability.--

10 (4) Any person, including those licensed to practice
 11 medicine, who gratuitously and in good faith renders emergency
 12 care or treatment by the use of or provision of an automatic
 13 external defibrillator, without objection of the injured
 14 victim or victims thereof, shall not be held liable for any
 15 civil damages as a result of such care or treatment or as a
 16 result of any act or failure to act in providing or arranging
 17 further medical treatment where the person acts as an ordinary
 18 reasonably prudent person would have acted under the same or
 19 similar circumstances.

20 Section 4. This act shall take effect upon becoming a
 21 law.

22
 23
 24 ===== T I T L E A M E N D M E N T =====

25 And the title is amended as follows:

26 On page, line(s),
 27 remove from the title of the bill: the entire title

28
 29 and insert in lieu thereof:

30 An act relating to automatic external
 31 defibrillators; providing legislative intent

HOUSE AMENDMENT FOR COMMITTEE PURPOSES

Bill No. HB 411

Amendment No. B (for drafter's use only)

that automatic external defibrillators may be used by any person; requiring persons to obtain training and to activate the emergency medical services system upon use of a defibrillator; encouraging certain persons and entities to register a defibrillator; repealing s. 401.291, F.S., relating to automatic external defibrillators; creating s. 768.13(4), F.S., providing immunity from liability for certain persons; providing an effective date.

WHEREAS, the Legislature finds that the number of deaths due to sudden cardiac arrest is too high, and

WHEREAS, the key to preventing this high number of deaths is to dramatically expand the availability of defibrillation therapy in a timely fashion, and

WHEREAS, recent breakthroughs in automatic external defibrillator technology have resulted in the availability of devices that have proven to be exceptionally safe and effective in treating sudden cardiac arrest, and

WHEREAS, these new devices are virtually maintenance free, safe and easy to use with minimum training, small, lightweight, durable and less expensive, and

WHEREAS, the widespread availability of these new devices will make sudden cardiac arrest a truly treatable disease, preventing hundreds of unnecessary deaths, and

WHEREAS, the Legislature has determined that it is in the public interest to make these devices readily available to the general public, but that the public be trained to properly use these devices and to activate the emergency medical services system immediately upon using the device, NOW,