

MINUTES OF THE HOUSE HEALTH AND HUMAN SERVICES COMMITTEE

The meeting was called to order by Chairman Brenda Landwehr at 1:30 p.m. on February 26, 2009, in Room 784 of the Docking State Office Building.

All members were present.

Committee staff present:

Norm Furse, Office of the Revisor of Statutes
Melissa Calderwood, Kansas Legislative Research Department
Reed Holwegner, Kansas Legislative Research Department
Janet Grace, Committee Assistant

Conferees appearing before the Committee:

Harold Swedlund, American Heart Association (Attachment 1)
Linda DeCoursey, American Heart Association (Attachment 2)
Jason Lutz, American Heart Association (Attachment 3)
Richard Morrissey, Kansas Department of Health and Environment (Attachment 4, 9)
Moji Fanimokun, League of Kansas Municipalities (Attachment 5)
Richard Sigle Jr., Paramedic (Attachment 6)
Robert Waller, Board of Emergency Medical Services (Attachment 7)
Phil Nusser (Attachment 8)
Dr. Jennifer Lowry, Children's Mercy Hospitals & Clinics (Attachment 10)

Others attending:

See attached list.

Vice Chairman Crum called the meeting to order. Chairman Landwehr was in the committee meeting.

The committee held a hearing, discussion and action on SB 102 - Emergency medical services; use of automated external defibrillator. Norm Furse provided the overview of the bill and answered the committees questions. There is not an age limitation for the current law.

Harold Swedlund, American Heart Association, state this bill is necessary to increase the survival rate of victims of witnessed sudden cardiac arrest or ventricular fibrillation. (Attachment 1) The automated external defibrillators (AED's) were designed for use by a lay rescuers to reduce time to defibrillation for victims of sudden cardiac arrest.

Linda DeCoursey, American Heart Association, provided proponent testimony for the AED use and a demonstration of AED (Attachment 2). Representative Schwab applied the AED to their demo dummy. The AED talked him through the procedure. They are operated by batteries that are checked frequently. The EMS may have regulations for age but this law does not. Ms. DeCoursey does not see this as an issue.

Jason Lutz provided testimony on AED's (Attachment 3). He is a teenager who is living testimony of how they save lives.

Richard Morrissey, Kansas Department of Health and Environment, provided testimony as a proponent of SB 102. (Attachment 4) This is a case of policy needs to catch up with technology. This bill makes the devices available in more public places which will save more lives.

Moji Fanimokun, League of Kansas Municipalities, provided proponent testimony for SB102 (Attachment 5). This bill removes the barrier limiting AED's to be used only by trained qualified individuals. It allows the opportunity for our member cities to better protect their staff and constituents. The user-friendly instructions accompanying each automated external defibrillator would allow almost anyone successful usage of the machine.

Written testimony was provided by Richard Sigle Jr., paramedic (Attachment 6); Robert Waller, Kansas Board of Emergency Medical Services (Attachment 7); and

CONTINUATION SHEET

Minutes of the House Health and Human Services Committee at 1:30 p.m. on February 26, 2009, in Room 784 of the Docking State Office Building.

Phil Nusser (Attachment 8)

There were no opponents to **SB 102**.

The committee then worked **SB 102**. Line 37, 38 a period is needed after "device" and eliminate the rest of the sentence. Representative Landwehr provided this as an amendment.

Chairman Landwehr closed on her amendment with a second by Representative Mast. The motion carried.

Representative Schwab moved to pass favorably SB 102 as amended. Representative Morrison seconded the motion. The motion carried.

The hearing was closed for **SB 102**.

Hearing, discussion, and action on SB 82 - Repealing K.S.A. 2008 Supp. 65-1,214.

Norm Furse provided an overview of this bill. The bill will repeal the expiration or sunset dates.

Richard Morrissey, Kansas Department of Health and Environment (KDHE), provided proponent testimony for this bill (Attachment 9) The negative health effects of lead poisoning are well-documented. The passage of the Kansas Childhood Lead Poisoning Prevention Act in 1999 authorized the KDHE to begin lead poisoning prevention activities at a program level within the division of health. There are 70%-90% (depending on geographical area) of the homes in Kansas which were constructed prior to 1978 when lead-based paint was used. Over 250,000 blood lead tests on children have been performed and monitored in our state. The testing has identified over 16,000 Kansas children with dangerously high blood lead levels. The program has aided over 1,900 lead poisoned children in our state. This program has assisted over 800 workers who have obtained training and are now skilled in lead abatement techniques and certified by our program. The KDHE lead poisoning prevention program has contributed positively to improving public health and has created economic opportunity for business and workers in Kansas.

Dr. Jennifer Lowry, Children's Mercy Hospitals and Clinics, a specialist in Pediatric Pharmacology and Medical Toxicology, provided proponent testimony for **SB 82** (Attachment 10). Lead is a neurotoxin that is more commonly found in paint and soil. Lead was placed in paint in the early 1900's as a preservative and, thus, allowed the paint to last for years. The paint is sweet and attractive to children.

Dr. Lowry explained a neurotoxin; lead is a neurotoxin and has no purpose in the human body. It can have long-standing effects that may become permanent. Kansas provides a gold standard to the children and their families in regard to lead poisoning. Medicaid mandates that all children at ages 1 and 2 receive a blood draw for a lead level. This currently is not done within the state of Kansas to the degree that it should, due to a lack of training and education regarding the need of this blood draw and testing. In the high risk areas of the state universal testing is not done, including those children on Medicaid. KDHE staff has made a great effort in the prevention of lead poisoning. The prevention, education, and management of lead poisoning and the home environment lies in the continuation of the KDHE Childhood Lead Poisoning and Prevention Program. Lead poisoning will not be eradicated by the year 2010.

There were no opponents to this bill. The hearing on **SB 82** was closed.

Representative Morrison moved to report SB 82 favorably and request that it be placed on the consent calendar. Representative Slattery seconded the motion. The motion was carried.

A motion was made by Representative Morrison to approve the minutes for February 5 and 9. It was seconded by Representative Furtado. The motion was carried.

The next meeting is scheduled for March 3, 2009.

The meeting was adjourned at 2:30 p.m.



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February 26, 2009

TO: House Committee on Health and Human Services

FROM: Harold Swedlund
Chairman of the Kansas Advocacy Committee
For the American Heart Association

RE: Testimony on SB 102—concerning emergency medical services; relating to use of auto-
mated external defibrillator

Madam Chairwoman and members of the Committee:

Thank you for allowing me to testify on this important proposal. My name is Harold Swedlund and I am a volunteer for the American Heart Association.

Cardiovascular disease is the leading cause of death for adults in the United States, including Kansas. The American Heart Association (AHA) estimates that sudden cardiac arrest is responsible for about 250,000 out-of-hospital deaths annually.

Since the 1990's the AHA has called for innovative approaches to reduce time to cardiopulmonary resuscitation (CPR) and automated external defibrillators (AEDs) and improve survival from sudden cardiac arrest. The AED has become an important tool to treat a person in cardiac arrest. The AED device guides the user through the process by audible or visual prompts without requiring any discretion or judgment. As of 2001, all fifty states have enacted defibrillator laws or adopted regulations.

What SB 102 would allow is a "Good Samaritan" exemption from liability for any individual who renders emergency treatment with an AED. Why we support SB 102 and feel it necessary is to increase the survival rate of victims of witnessed sudden cardiac arrest or ventricular fibrillation, which causes the heart to quiver so that it does not pump blood effectively.

AEDs are highly accurate, user-friendly computerized devices with voice and audio prompts that guide the user through the critical steps of operation. AEDs were designed for use by lay rescuers to reduce time to defibrillation for victims of VF sudden cardiac arrest. The rescuer attaches the AED to the victim with adhesive electrodes or pads. If the device is fully automated and a shock is indicated, the AED can deliver a shock without further action by the rescuer.

For every minute of delay between collapse and defibrillation, the victim's chance of survival from VF sudden cardiac arrest falls by 7 to 10%. Survival-to-hospital discharge rates of 49% - 75% have been reported in places when a victim of a witness VF sudden cardiac arrest receives immediate bystander CPR and AED shock delivery within 3 to 5 minutes of collapse.

We would respectfully ask for your favorable consideration of SB 102. Thank you.

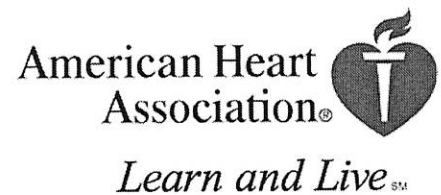
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HEALTH AND HUMAN SERVICES
DATE: 02/26/09
ATTACHMENT: 1

Circulation

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Community Lay Rescuer Automated External Defibrillation Programs. Key State Legislative Components and Implementation Strategies. A Summary of a Decade of Experience for Healthcare Providers, Policymakers, Legislators, Employers, and Community Leaders From the American Heart Association Emergency Cardiovascular Care Committee, Council on Clinical Cardiology, and Office of State Advocacy

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AHA Policy Recommendation

Community Lay Rescuer Automated External Defibrillation Programs

Key State Legislative Components and Implementation Strategies

A Summary of a Decade of Experience for Healthcare Providers, Policymakers, Legislators, Employers, and Community Leaders From the American Heart Association Emergency Cardiovascular Care Committee, Council on Clinical Cardiology, and Office of State Advocacy

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Brian Eigel, PhD; Andrew Epstein, MD, FAHA; Michael Sayre, MD;
Henry Halperin, MD, FAHA; Richard O. Cummins, MD, MPH, MSc

Abstract— Cardiovascular disease is a leading cause of death for adults ≥ 40 years of age. The American Heart Association (AHA) estimates that sudden cardiac arrest is responsible for about 250 000 out-of-hospital deaths annually in the United States. Since the early 1990s, the AHA has called for innovative approaches to reduce time to cardiopulmonary resuscitation (CPR) and defibrillation and improve survival from sudden cardiac arrest. In the mid-1990s, the AHA launched a public health initiative to promote early CPR and early use of automated external defibrillators (AEDs) by trained lay responders in community (lay rescuer) AED programs. Between 1995 and 2000, all 50 states passed laws and regulations concerning lay rescuer AED programs. In addition, the Cardiac Arrest Survival Act (CASA, Public Law 106-505) was passed and signed into federal law in 2000. The variations in state and federal legislation and regulations have complicated efforts to promote lay rescuer AED programs and in some cases have created impediments to such programs. Since 2000, most states have reexamined lay rescuer AED statutes, and many have passed legislation to remove impediments and encourage the development of lay rescuer AED programs. The purpose of this statement is to help policymakers develop new legislation or revise existing legislation to remove barriers to effective community lay rescuer AED programs. Important areas that should be considered in state legislation and regulations are highlighted, and sample legislation sections are included. Potential sources of controversy and the rationale for proposed legislative components are noted. This statement will not address legislation to support home AED programs. Such recommendations may be made after the conclusion of a large study of home AED use. (*Circulation*. 2006;113:0000-0000.)

Key Words: AHA Scientific Statements ■ fibrillation ■ defibrillation ■ resuscitation ■ sudden cardiac arrest

Cardiovascular disease is a leading cause of death for adults ≥ 40 years of age.^{1,2} The American Heart Association (AHA) estimates that sudden cardiac arrest is responsible for $\approx 250\,000$ out-of-hospital deaths annually in the United States.³ Since the early 1990s, the AHA has called for innovative approaches to reduce time to cardiopulmonary

resuscitation (CPR) and defibrillation and improve outcome from sudden cardiac arrest.⁴ In the mid-1990s, the AHA launched a public health initiative to promote early CPR and early use of automated external defibrillators (AEDs) by trained lay responders in community public access defibrillation (PAD) programs.⁵⁻⁷ In 1998, in response to requests

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from its training network, the AHA circulated an internal report to assist in developing legislation that would remove barriers to these programs.⁸

Between 1995 and 2000, all 50 states passed laws and regulations governing lay rescuer AED programs. In 2000, the Cardiac Arrest Survival Act (CASA) was passed and signed into federal law (Public Law 106-505). CASA called for the development of guidelines for establishing AED programs in federal buildings. CASA provides limited immunity from civil liability for the emergency AED user and the AED acquirer if the state has not otherwise granted immunity for such persons under other statutes. Since 2000, most states have reexamined lay rescuer AED statutes, and many have passed legislation giving grants to local governments to obtain AEDs and to require AEDs or AED programs in certain venues (eg, state buildings, health clubs).

The AHA applauds state and federal policymakers and advocates across the country for enacting lifesaving legislation to promote lay rescuer AED programs. After a decade of experience, the AHA has collected information about policies, legislation, and regulations and their impact on the establishment and success of community lay rescuer AED programs.

The purpose of this policy statement is to help policymakers develop new legislation or revise existing legislation to remove barriers to effective community lay rescuer AED programs. Important areas that should be considered in state legislation and regulations are highlighted, and examples of model legislation are included. Potential sources of controversy and the rationale for proposed legislative components are noted. This statement will not address legislation to support home AED programs. Such recommendations may be made after the conclusion of a large study of home AED use.

Background

As noted above, the AHA estimates that \approx 250 000 deaths are caused by coronary artery disease in the out-of-hospital setting annually in the United States.³ This number is commonly accepted as a surrogate for the number of sudden cardiac arrests that occur in the out-of-hospital setting annually. The median published rate of survival to hospital discharge for witnessed sudden cardiac arrest in the United States is 6.4%.⁹⁻¹¹

In the first minutes after collapse, many victims of witnessed sudden cardiac arrest demonstrate an abnormal heart rhythm called ventricular fibrillation (VF), which causes the heart to quiver so that it does not pump blood effectively.¹² Treatment of VF requires delivery of a shock with a defibrillator. Delivery of a shock can stop VF (defibrillation), allowing the victim's normal heart rhythm to resume. The victim needs CPR to maintain blood flow to the heart and brain until a defibrillator is available and often requires CPR in the first minutes *after* defibrillation until the heart is able to pump blood effectively.^{13,14} CPR is important both before¹⁵ and after¹⁶ defibrillation for improving survival from VF sudden cardiac arrest. Even a brief interruption of chest compression can be detrimental.¹⁷

AEDs are highly accurate, user-friendly computerized devices with voice and audio prompts that guide the user

through the critical steps of operation. AEDs were designed for use by lay rescuers and first responders to reduce time to defibrillation for victims of VF sudden cardiac arrest.¹⁸ The rescuer turns the AED on and attaches it to the victim with adhesive electrodes or pads. The AED records and analyzes the victim's cardiac rhythm. If a shock is indicated, the AED charges to the appropriate energy level and prompts the rescuer to deliver a shock. If the device is fully automated and a shock is indicated, the AED can deliver a shock without further action by the rescuer. AEDs require little maintenance and are relatively inexpensive (<\$2000).

As of August 8, 2005, the US Food and Drug Administration (FDA) classified AEDs as Class 3 medical devices, with most requiring a prescription. This means that AEDs require "special controls" to ensure their safety and effectiveness. One goal of the prescription requirement is to ensure that AEDs are used in organized programs with appropriate planning and oversight, appropriate training of anticipated rescuers, and appropriate monitoring of the quality of care associated with use of these devices. Although the AHA strongly supports these program elements, it could find no published evidence that the prescription requirement itself increased the likelihood of rescuer training or effective AED use. In 2004, the FDA cleared the labeling of one commercially available AED without a prescription. It is anticipated that similar labeling will be cleared for more AEDs in the near future. Such labeling may make AEDs available for home use. At this time there is insufficient evidence for the AHA Emergency Cardiovascular Care (ECC) Committee to make recommendations about home AED programs.

Successful lay rescuer AED programs should increase the survival rate of victims of witnessed VF sudden cardiac arrest. Two factors have a significant impact on adult survival from VF sudden cardiac arrest: the time from collapse to defibrillation and the time from collapse to CPR. If no CPR is provided, for every minute of delay between collapse and defibrillation, the victim's chance of survival from VF sudden cardiac arrest falls by 7% to 10%.^{19,20} If bystander CPR begins immediately after collapse, the fall in survival is more gradual, decreasing \approx 3% to 4% for every minute between collapse and defibrillation.^{19,20} Survival-to-hospital discharge rates of 49% to 74% have been reported in airports,²¹ commercial airlines,^{22,23} casinos,²⁴ and community police AED programs^{16,25-28} when a victim of witnessed VF sudden cardiac arrest receives immediate bystander CPR and shock delivery within 3 to 5 minutes of collapse. Bystander CPR can double^{19,20} or triple²⁹ survival rates at many intervals to defibrillation. AED programs that fail to shorten time to defibrillation and time to bystander CPR have not documented any improvement in survival rates.³⁰

In 2000, to determine the effectiveness of community lay rescuer AED programs on survival from out-of-hospital sudden cardiac arrest in a large prospective study, the AHA joined the National Heart, Lung, and Blood Institute (NHLBI) and others to fund a randomized controlled trial of community lay rescuer AED programs. In this study, the Public Access Defibrillation (PAD) trial,³¹ nearly 20 000 rescuers were trained in 993 facilities in 24 urban and suburban regions in North America. The trial reported the

outcome of attempted resuscitation in 239 episodes of out-of-hospital sudden cardiac arrest. In this study, all lay rescuers in all study units were trained to recognize emergencies, phone 9-1-1, and provide CPR. Lay rescuers in half of the study sites were also trained and equipped to use AEDs. Fifteen victims of VF sudden cardiac arrest treated in lay rescuer CPR programs without AEDs survived to hospital discharge. During the same period, 30 victims of VF sudden cardiac arrest who were treated in programs that also included early defibrillation with AEDs survived to hospital discharge.³¹ The differences between the programs were statistically significant and supported the authors' conclusion that promotion of organized lay rescuer AED programs could save thousands of lives in the United States every year.

Grassroots support for community lay rescuer AED programs has been strong, but placement of AEDs and their use by lay rescuers have raised concerns about legal liability for rescuers, owners of the premises on which AEDs are placed, buyers of AEDs, physician prescribers (if appropriate) of AEDs, public defibrillation program directors, and persons responsible for rescuer training. These nonrescuer program participants are referred to as "facilitators" in this statement.

Questions also have been raised about the amount of training and support required to establish the programs. In the PAD trial, even when extensive initial training was provided to anticipated rescuers, bystander CPR was performed for only ≈65% of the victims of sudden cardiac arrest, and AEDs delivered shocks to only 34% of victims at sites where rescuers were trained and equipped to use AEDs.³¹ These results show that even in a well-designed lay rescuer AED program, training in CPR as well as AED use is needed.

Successful community lay rescuer programs require attention to planning as well as training. For example, AEDs must be placed in conspicuous locations, and rescuers must rehearse early recognition of an emergency, early call to the emergency medical services (EMS) system, early CPR, and early defibrillation. The program must be linked with the EMS system and must have a plan for retraining and ongoing quality improvement.

Legislative Efforts to Support Community Lay Rescuer AED Programs

As noted above, all states have legislation or regulations to facilitate lay rescuer AED programs, but these laws and regulations and their components vary widely from state to state. A complete list of existing state legislation and regulations is available at the AHA Web site (www.americanheart.org/statepolicy).

The passage of CASA in 2000 played an important role in triggering the acceptance of AEDs as lifesaving devices and setting the standards for immunity protection for AED use. As noted above, CASA provides limited immunity for rescuers and, under some conditions, for those who acquire AEDs. CASA "supersedes the law of the state" if the state "has no statute or regulations to provide persons in such class with immunity from civil liability for. . .[the use]. . .of automated external defibrillator devices in emergency situations." At the time CASA was enacted, it filled the gap in liability protection for AED acquirers in ≈12 states.

Essential Elements of Community AED Programs

The AHA has identified 4 essential elements of AED programs.^{32,33} These elements have been ratified by experts of the AHA ECC Committee as important for increasing survival from witnessed prehospital VF sudden cardiac arrest. These program elements are briefly described below, and they are further explained in the subsequent discussion of key legislation elements.

1. **Planned and practiced response.** The AHA recommends planning and oversight of community lay rescuer AED programs by a person with experience and expertise in resuscitation programs. Such a person is typically a health-care professional with experience in occupational health, emergency, or cardiovascular care. The program director decides on the number and location of AEDs placed. AEDs should be placed where there is a high likelihood of sudden cardiac arrest. In the PAD trial, such locations had the equivalent of ≥250 adults >50 years of age present for 16 hours per day or a history of an average of ≥1 witnessed sudden cardiac arrest every 2 years.³¹ The local EMS agency may provide useful information on placement of AEDs (see below). When possible, AEDs should be placed where they can be reached within a short (1 to 1½ min) brisk walk from all areas in the program site. The program director helps to decide whether AEDs should be placed in a highly visible location to facilitate their use by bystanders who are not part of the organized response plan. The program director also oversees the training and retraining of anticipated rescuers, confirms that devices are properly maintained, develops a mechanism to report AED use, establishes a link to the local EMS service, evaluates AED use, and supports a process of quality improvement.
2. **Training of anticipated rescuers in CPR and use of the AED.** This element does not require training of every *potential* rescuer but does require the training of *anticipated* rescuers. Thus, rescuers who are likely to be present should be trained, but the site should not be expected to train every person who could possibly be present. The goal is to ensure that a trained rescuer is present at all times (eg, during business hours). In training, high priority should be placed on recognizing the emergency; phoning 9-1-1; providing CPR and early defibrillation; and using an AED in a safe, appropriate, and effective manner. CPR training should stress that rescuers must deliver effective chest compressions with minimal interruption.³³ Training should include practice in response to a simulated arrest at regular intervals so that responders are familiar with their roles in the resuscitation effort.
3. **Link to the local EMS system.** At a minimum, the program director should inform the local EMS dispatcher that an AED program has been established and give the type and location of AED(s) on site. The AED program must develop a reporting procedure with the EMS system to share patient information. The EMS system also may be able to give information about public locations where sudden cardiac arrest has occurred or provide personnel or other resources to help establish the program and the process of ongoing quality improvement (see below). Each community must decide on the best course of action for its members.
4. **A process of continuous quality improvement, including a plan for on-site AED maintenance and readiness-**

for-use checks. Quality improvement protocols should be used to evaluate the program response to any cardiac arrest. The *Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care* recommended that programs establish a goal of ≤ 90 seconds from arrival of the AED at the victim's side to delivery of the first shock.³² Program directors and participants must identify and eliminate factors that cause delay in CPR or delivery of the first shock with the AED. In airports²¹ and casinos,²⁴ high rates of survival to hospital discharge after witnessed VF arrest have been documented when immediate CPR was provided and defibrillation occurred within 3 to 5 minutes of the victim's collapse. In the casino study, the rate of survival from witnessed VF sudden cardiac arrest was 74% when the first shock was delivered within 3 minutes but fell to 49% when the first shock was delivered between 3 and 5 minutes after collapse.²⁴ In the airport study,²¹ the rate of survival from witnessed VF sudden cardiac arrest was 74%; all victims received bystander CPR, and a shock was delivered within 5 minutes of collapse. In that study, AEDs were located within a brisk 1-minute walk from any location.

Additional information on AED program implementation is available at <http://www.americanheart.org/presenter.jhtml?identifier=3027304>.

Recommended State AED Legislation

In general, advocates for AED legislation will need to adapt legislation for each state, but all AED legislation should be broad enough to be "permissive" or "facilitating." The AHA has a policy Web site (www.americanheart.org/statepolicy) to assist policymakers in developing legislation tailored to their state's needs.

The legislation typically begins with a preamble to document the need for the legislation and its potential benefits. Specific sections within the legislation should recommend important program components without "micromanaging" implementation. The AHA recommends addressing these 4 key components in AED legislation:

1. Good Samaritan limited immunity (without qualification) for rescuers and program facilitators
2. CPR and AED training for anticipated rescuers
3. Link with the EMS system
4. Support of the following program elements to increase the likelihood of successful resuscitation of victims of sudden cardiac arrest:
 - a. Planned and practiced response
 - b. Plan for training of anticipated rescuers in CPR and use of an AED
 - c. Plan for link with EMS system
 - d. Plan for ongoing process of quality improvement, including evaluation of each episode of sudden cardiac arrest, on-site maintenance, and readiness-for-use checks

State AED Legislation Preamble

Simple yet powerful statistics support this type of AED legislation. First, the legislation should note the approximate number of state deaths from sudden cardiac arrest. The number of state deaths can be found in state reports, or

TABLE 1. Preamble for State Legislation Supporting Community Lay Rescuer Automated External Defibrillation Programs

- Whereas out-of-hospital sudden cardiac arrest results in the death of approximately 55 persons/100 000 population per year and approximately 20% of these arrests are caused by sudden ventricular fibrillation that occurs in the presence of witnesses (so-called "witnessed ventricular fibrillation sudden cardiac arrest"), and
- Whereas, in the population of (state), approximately (state population* divided by 1818) citizens will die of cardiac arrest every year, and
- Whereas lay rescuer programs that provide early recognition, early cardiopulmonary resuscitation, and early defibrillation within the first minutes of a cardiac arrest can increase survival of victims of witnessed ventricular fibrillation sudden cardiac arrest by 7 times or more and so should save an estimated (the state population* divided by 27 750) or more additional victims of sudden cardiac arrest every year in this state, and
- Whereas automated external defibrillators are extremely accurate computerized devices that can be operated by laypersons with minimal training, and
- Now, therefore, be it enacted by the ____ of the State of ____, etc.

Note: This increase in survival rate is derived from the estimated frequency of sudden cardiac arrest in the population (55/100 000 population per year) and predicted improvement in survival of witnessed VF sudden cardiac arrest with activation of a community lay rescuer AED program. An estimated 20% of all episodes of sudden cardiac arrest are witnessed VF arrests (most in public places). The estimated increase in survival is conservatively calculated as an increase from $\approx 6\%$ survival of victims of witnessed VF sudden cardiac arrest with delayed CPR and defibrillation to survival of $\geq 40\%$ of victims of witnessed VF sudden cardiac arrest with prompt recognition, early CPR, and early defibrillation. Therefore, of the 11 people who die of witnessed VF sudden cardiac arrest per year per 100 000 population, $\geq 40\%$ (4.4 per 100 000 per year) would be expected to survive with establishment of community lay rescuer AED programs.

advocates can use the population of the state to estimate this number (see Table 1). The estimated incidence of sudden cardiac arrest reported in the United States is 0.55 per 1000 (55 per 100 000).^{1,2,31,34,35}

Key Components in Legislation to Facilitate Successful Community Lay Rescuer AED Programs

Good Samaritan Limited Immunity for Rescuers and Program Facilitators

Key: Good Samaritan Limited Immunity for Rescuers
A major impediment to lay rescuer use of AEDs is the failure to provide Good Samaritan limited immunity to lay rescuers who use AEDs in emergencies. Good Samaritan legislation is intended to protect rescuers from civil liability as long as the rescuer provides reasonable and prudent care in good faith. The AHA recommends that state legislation extend Good Samaritan limited immunity to any AED user, without conditions such as a requirement for training. Good Samaritan limited immunity should extend to anyone who acts in good faith, without specific compensation, as a reasonable and prudent person with the same level of training would respond. Although training of anticipated rescuers is recommended, Good Samaritan limited immunity should cover serendipitous or unexpected users who act in good faith.

Many states have removed an important impediment to the establishment of community lay rescuer AED programs by

TABLE 2. Sample Wording of Legislation to Address Good Samaritan Limited Immunity for AED Users

Wording That May Create an Impediment (Not Recommended)*	Wording That May Facilitate Legislation (Recommended)†
<p>"Any person who has attended and successfully completed a course in cardiopulmonary resuscitation that has been approved by the State Board of Health, who in good faith and without compensation, renders or administers emergency cardiopulmonary resuscitation, cardiac defibrillation, including, but not limited to, the use of an automated external defibrillator . . . shall not be liable."</p>	<p>"Any person who in good faith and without compensation renders or administers emergency cardiopulmonary resuscitation, cardiac defibrillation, including, but not limited to, the use of an automated external defibrillator . . . shall not be liable."</p>

*From House Bill 2097, General Assembly of Virginia, 1999 (amended in 2003). The 1999 legislation was amended because it required training as a condition for Good Samaritan limited immunity. This created an expectation for serendipitous rescuers that is more stringent than for any other Good Samaritan acts.

†From House Bill 1860, General Assembly of Virginia, 2003.

extending Good Samaritan limited immunity to lay rescuers who use the AED as part of gratuitous service in an emergency. CASA also provides limited immunity for lay rescuers in federal buildings. Some states, however, have added conditions to the limited immunity provision for lay rescuers, even when rescuers operate as Good Samaritans. Such conditions can create impediments to establishment of community AED programs (see Table 2).

As noted above, Good Samaritan laws typically require that emergency care be rendered gratuitously, or they differentiate Good Samaritan care from that delivered by health-care professionals in the context of employment. Responders such as police officers and firefighters who are required to provide CPR and use AEDs in the course of their duties still can be considered Good Samaritans if they are not specifically paid for the attempted resuscitation itself. For example, the Good Samaritan statute may state, "For purposes of this section, the term 'compensation' shall not be construed to include the salaries of police, fire, or other public officials or personnel who render such emergency service." These potential rescuers are typically paid the same salary whether or not they are called on to render aid on a given day: They receive no specific compensation for the emergency response or rescue, so their response is considered gratuitous.

Corporations may attempt to maintain Good Samaritan status for their employees who are AED rescuers by requesting that employees volunteer for resuscitation training and rescue "duty" and be trained and equipped to provide CPR and use an AED. Whether this approach is helpful for a specific entity must be assessed on the basis of local laws and after consultation with competent counsel and risk-management professionals.

Some corporations have added insurance riders to existing policies to cover AED use by their personnel. The Las Vegas gaming casinos, for example, took this approach to their AED program, in which security officers were trained in AED use.²⁴ The purchase of insurance riders for lay rescuers is not the norm, however.

In recent years, some insurance carriers have advised policyholders that placement of AEDs on a property is covered under a general liability plan. In fact, some insurance companies offer resources to encourage the development of community lay rescuer AED programs. For example, some insurers offer grants for the purchase of AEDs.³⁶

In some states, opposition to broadening of the Good Samaritan legislation raises the concern that actions beyond

ordinary and simple negligence (ie, *gross negligence, willful or wanton behavior, flagrant indifference to safety, intent to harm*, and other standards set out by specific states) will be protected by such amendments to the Good Samaritan legislation. However, Good Samaritan *limited* immunity means that immunity is limited to simple negligence.

The definition of misuse of the AED that constitutes an action beyond simple negligence will need to be determined by the courts. Risk of negligent use of an AED is reduced by recommended program components, such as approved training of designated or likely (anticipated) rescuers in CPR and use of the AED, course supervision, and skills review—a classic risk-management approach. A standard, broad-based Internet search and a search by legal search services for reported cases³⁷ and news stories about allegations of or awards for negligent use of AEDs did not reveal any such claims at the time this statement went to press. Although these search techniques have inherent limitations, we are unaware at this time of any claims alleging negligent use of AEDs. This information is not intended to provide legal advice or endorsements of any specific services. A lawyer should be consulted about the application of this information to particular situations.

Recommended: Good Samaritan Limited Immunity for AED Program Facilitators

Another impediment to development and implementation of AED programs has been the lack of limited immunity from legal action for several groups involved in AED programs. These groups include premises owners, AED acquirers, program directors, and trainers; these are referred to collectively as program facilitators.

Limited Immunity for Premises Owners and AED Acquirers. Major insurance carriers now routinely provide liability insurance without additional charge for sites or buildings where AEDs are placed. Some insurers offer discounts in liability insurance premiums when AED programs are established, and some insurance carriers have developed educational materials to support the establishment of community lay rescuer AED programs. Although premises owners may fear liability resulting from the use of an AED, such liability is likely to be very limited. We are aware of no lawsuits filed against lay rescuers or premises owners related to the attempted use of an AED in a Good Samaritan effort to save the life of a victim of prehospital cardiac arrest. The only lawsuits identified³⁷ cited failure to have AEDs on the premises. As

TABLE 3. Sample Wording of Legislation to Address Good Samaritan Limited Immunity for AED Owners/Acquirers

Example of Recommended Wording for Facilitating Legislation

Section 1. Article 1B of Chapter 90 of the General Statutes is amended by adding a new section to read:

§ 90-21.15. Emergency treatment using automated external defibrillator; immunity.

(a) It is the intent of the General Assembly that, when used in accordance with this section, an automated external defibrillator may be used during an emergency for the purpose of attempting to save the life of another person who is in or who appears to be in cardiac arrest. . . (d) . . . the person responsible for the site where the automated external defibrillator is located when the person has provided for a program of training. . . shall be immune from civil liability arising from the use of an automated external defibrillator.

Modified from Senate Bill 1269, North Carolina General Assembly, 2000.

noted above, CASA provides limited immunity for the AED acquirer if not already provided or specified under state legislation. The AED acquirer can be a tenant or property manager of a building owned by another entity. In such cases, although the manager may have limited immunity, the building owner may not. CASA limited immunity may not apply if harm to the victim arises from one of the following:

- Failure to establish a link with the local EMS system
- Failure to properly maintain the AED
- Failure to train expected responders in the use of the AED

Ideally, state legislation will extend Good Samaritan limited immunity to premises owners (see Table 3) and the AED owner/acquirer, even in the event of the failures listed above.

Limited Immunity for Physician Prescribers and Facilitators. In recent years, the price of malpractice coverage for AED program prescription and oversight has fallen. If this trend continues, it is anticipated that there will be no additional cost of medical malpractice insurance for physicians who prescribe AEDs. In addition, if the FDA clears more AEDs for use without a prescription, the prescription requirement may gradually be eliminated. As noted above, the AED program is most likely to improve survival from witnessed VF sudden cardiac arrest if the program includes a planned and practiced response, appropriate training and equipment, a link with the local EMS system, and a process of ongoing quality improvement. Whether or not a prescription is required, it is helpful if a healthcare provider or resuscitation expert oversees the planning and implementation of the program, including training, monitoring of quality

TABLE 4. Sample Wording of Legislation to Address Limited Immunity for Physician Facilitators and Program Directors

Example of Recommended Wording to Address Limited Immunity for Physician Facilitators and Program Directors

"Immunity from civil liability will be provided to:

(3) Any physician or other medical professional who authorizes, directs, or supervises the installation or provision of automated external defibrillator equipment in or on any premises or conveyance other than a medical facility."

Modified from Senate Bill 51, Georgia House of Representatives, 2001; GA Code 51-1-29.3.

TABLE 5. Sample Wording of Legislation to Address Limited Immunity for Trainers of Anticipated AED Rescuers

Example of Recommended Wording to Address Limited Immunity for Trainers

"No person or entity which teaches or provides a training program for cardiopulmonary resuscitation that includes training in the use of automated external defibrillators shall be held liable for any civil damages as a result of such training or use if such person or entity has provided such training in a manner consistent with the usual and customary standards for the providing of such training."

Modified from Senate Bill 132, Kansas State Legislature, 2003; K.S.A. 65-6149a.

improvement, device maintenance, and link to the EMS system. If limited immunity is provided to physician facilitators (eg, prescribers where applicable) or program directors, the wording may follow that in Table 4.

Limited Immunity for Trainers. Trainers of anticipated AED program rescuers have not been granted limited immunity in most states, and they are not mentioned in CASA. When state legislation provides Good Samaritan limited immunity for trainers, the immunity typically specifies that the trainer must deliver training in accordance with the guidelines and policies of an approved or national training organization and the trainer must be authorized to deliver that course or curriculum (see Table 5).

Key: CPR and AED Training for Anticipated Lay Rescuers

Although limited immunity for lay rescuers should not be contingent on training, the AHA strongly recommends that AED programs ensure the training of anticipated rescuers in CPR and use of AEDs. This training should include early recognition of signs of cardiac arrest; indications for phoning 9-1-1; and training in rescue breathing, chest compressions, and safe and efficient use of an AED. These rescuer actions are time critical and require not only initial training but frequent retraining to maintain effective responses. Many community lay rescuer AED programs have documented the link between prompt rescuer actions (recognition of the emergency, early CPR, and shock delivery within 3 to 5 minutes) and survival from VF sudden cardiac arrest.^{16,21,24,26,28,30,38}

Although AEDs are user friendly and the steps in their operation are often intuitively obvious, the effectiveness of an AED for cardiac arrest requires more than simple operation. The rescuer must know when to use an AED (ie, recognize cardiac arrest), how to operate it, how to troubleshoot it (eg, a hairy or sweaty chest may prevent good contact between the skin and electrode pads), and how to combine AED use with CPR.

CPR remains a critical component of a successful AED program for several reasons. First, the rescuer must recognize sudden cardiac arrest (ie, the victim is unresponsive and not breathing). Because immediate bystander CPR improves survival from VF sudden cardiac arrest,^{15,19,20,29,39} the rescuer also should be able to perform CPR until the AED is available and after a shock ends VF. In a prospective analysis of VF waveform during resuscitation of victims of VF cardiac

arrest, predicted survival from VF was increased when the interval between interruption of chest compressions and delivery of the shock was kept to ≤ 15 seconds.¹⁷ The efficient integration of CPR with AED use requires training and frequent practice. In addition, improvements in AED rhythm recognition and function are needed to minimize the time required for the AED to analyze the victim's rhythm, recommend shock delivery, charge, and deliver a shock. Such improvements will reduce interruptions in chest compressions. Additional improvements may also include the ability of AEDs to perform analysis with CPR in progress.

Recent studies have also shown that both prehospital⁴⁰ and in-hospital⁴¹ healthcare providers deliver compressions of insufficient depth and interrupt compressions too often during CPR. Such reports support the need for stringent CPR training and frequent practice to ensure that rescuers can deliver compressions of correct depth and can minimize interruptions of chest compressions during CPR.

It is important to note that few victims with VF cardiac arrest demonstrate an organized rhythm at 60 seconds after elimination of VF by shock.^{13,42} Many demonstrate pulseless electrical activity in the first minutes after successful defibrillation.^{14,42} The victim of VF cardiac arrest requires CPR until the heart is able to pump blood effectively.

For all of these reasons, anticipated rescuers should be trained in a course that integrates CPR and use of the AED. It is important to include the recommendation for training and frequent retraining of anticipated rescuers in community lay rescuer AED legislation.

Key: Link With EMS System

The director of a community lay rescuer AED program should inform the EMS system that an AED is on site. State EMS lead agencies request this notification, and it should be listed as an expectation: The owner "shall" notify rather than "is requested to" or "is encouraged to" in state AED legislation.

Notification of the EMS system is helpful for several reasons. The EMS agency can serve as the interface between the AED program and the public service answering agency. If the dispatcher knows the type and location of an AED at the site of the emergency, the dispatcher can direct the rescuer to get the AED and can coach the rescuer in both CPR and AED use. If the EMS agency wants to be more involved, the agency may help train expected AED users and may play an important role in the continuous quality improvement process of the program. Finally, EMS notification is important because EMS providers will need to obtain data from any AED used to treat cardiac arrest.

Some states have legislated the establishment of an AED "registry," requiring that AED programs be registered with the local EMS agency. The purpose of such registries is to ensure that EMS dispatchers know where AEDs are placed so that they can direct a 9-1-1 caller to get and use an AED that is on site. Some states, such as Utah (Senate Bill 95/2003) and New Hampshire (Senate Bill 386/2002), have established statewide registries for the collection and distribution of information on the location of commercially owned devices. If state EMS agencies support the term "registration," it can

be used. A formal registration system may be too costly and burdensome for small volunteer EMS programs, though, so for this reason, the term "notification" is recommended.

Recommended: Support of "Best Practice" Program Elements

The program director should evaluate any episode of sudden cardiac arrest at the program site and evaluate the performance of rescuers and the use of the AED. This is done to reduce time to CPR and time to delivery of a shock, helping the program achieve the goal of improving the rate of survival from sudden cardiac arrest. The continuous quality improvement process should include EMS personnel if possible.

The AED should be stored and maintained according to the manufacturer's recommendations and the recommendations provided in nationally accepted courses in CPR and use of AEDs.^{43,44} Newer AEDs conduct internal battery and circuitry checks continuously and visually indicate when service or a battery change is needed. This "design for dormancy" means that minimal maintenance is necessary, such as a "readiness-for-use" visual check for "service needed" or other status indicator, confirmation of the physical integrity of the device, and a check of the contents of the carrier case. A checklist from the AED manufacturer can be copied and posted near the AED and initialed and dated to confirm that the device is checked at appropriate intervals.

The AHA recommends that the AED be stored in a carrying case near a telephone so that the device can be retrieved when 9-1-1 is phoned.^{43,44} Placing the AED near a telephone shortens the time to EMS call and AED retrieval and simplifies teaching and EMS instructions. Consistent use of these common-sense recommendations will facilitate training and dispatcher instructions.

Related AHA Public Policy Initiatives

On any given day, up to 20% of the combined US adult and child population can be found in school. Although sudden cardiac arrest is much less common in children than in adults, it can occur in children and adolescents. Parents of children who have died suddenly have started a strong grassroots effort to create AED programs in schools. In response to questions about such programs and the increasing potential for medical emergencies in schools, the AHA issued a scientific statement that recommends that schools develop a medical emergency response plan⁴⁵ to deal with a variety of life-threatening conditions, including sudden cardiac arrest. The complete statement is available on the AHA Web site (<http://circ.ahajournals.org/cgi/content/full/109/2/278>).

The AHA recommends that school medical emergency response plans have the following components: an effective and efficient system of campus-wide communication, a coordinated and practiced response plan, risk reduction, training and equipment for first aid and CPR, and a lay rescuer AED program in schools with an established need.⁴⁵ After considering several factors, some schools may decide that a need exists for a lay rescuer AED program. For example, schools with a large number of adult employees, volunteers, and visitors or schools with large, sprawling campuses that are not quickly accessible to EMS systems may wish to establish a lay rescuer AED program.

TABLE 6. Key Program Components to Recommend in State AED Legislation**1. Limited immunity for rescuers (key) and facilitators (recommended):**

- Good Samaritan limited immunity for rescuers that is not dependent on training. The statute should confer limited immunity to lay rescuers who use AEDs. This limited immunity should not be conditional on nor require training for the good faith effort to be covered.
- Good Samaritan limited immunity for program facilitators, including premises owners, AED acquirers, trainers, and physician prescribers (where applicable).

2. Recommendation for training of anticipated/expected rescuers. Training should integrate both CPR and AED skills. Note that this does not affect serendipitous AED users/bystanders who happen upon the scene.

The statute should require training of *expected* rescuers in an approved course that integrates both CPR and AED skills. To maintain utmost flexibility with the training requirement, the statute should not prescribe a specific number of hours needed for a rescuer to be considered "trained."

3. Link with EMS systems: The statute should require that the local EMS system be notified about AEDs placed within its response area. Some EMS systems may wish to require registration, but not all EMS systems have the resources to establish a registry.

4. Support of elements that contribute to effective lay rescuer AED programs:

The statute should require a planned and practiced response. Typically this requires

- A planned and practiced response (can specify delegation of authority to a healthcare provider program director).
- Training of anticipated rescuers in CPR and AED use with a practice goal of immediate CPR and delivery of the first shock to victims of VF sudden cardiac arrest within 3 minutes of the victim's collapse.
- A link with the EMS system (see above).
- A process of ongoing quality improvement. The program director should evaluate each episode of sudden cardiac arrest and decide what steps are needed to improve response and minimize time to CPR and time to delivery of the first shock with an AED. The program director should implement a plan for on-site maintenance and readiness-for-use checks of the AED.

In 2002, the state of New York enacted a law requiring school districts, county vocational education and extension boards, and charter schools to provide and maintain at least 1 AED on site and in each instructional school facility. In addition, Assembly Bills 8779 and 10577 required that at least 1 staff member trained in CPR and the use of an AED be present at all school-sponsored activities.

In 2002, the AHA published an update to a 1998 statement recommending the development of AED programs in health clubs with >2500 members.⁴⁶ The statement encouraged the development of AED programs in facilities of sufficient size that an episode of sudden cardiac arrest might be predicted to occur there within a several-year period. The statement is available on the AHA Web site (<http://circ.ahajournals.org/cgi/content/full/105/9/1147>).

Some states have filed legislation requiring or encouraging the establishment of lay rescuer AED programs in health clubs. Illinois enacted a law (HB 4232) that requires physical fitness facilities to have at least 1 AED, a trained AED user, and a written plan for managing medical emergencies. New York State enacted a law (2004: S 6803/A.5084) requiring all health clubs, fitness centers, health spas, health studios, gyms, weight control studios, and martial arts/self-defense schools with a membership ≥ 500 to have at least 1 AED and at least 1 person (employee or volunteer) on the premises during the hours of operation who is trained in CPR and use of an AED. Other states, such as Michigan (2003: SB 50), New Jersey (2003: S. 1106/A. 453), and Rhode Island (2004: SB 2948) have acted on similar legislation in the past few years.

The PAD trial documented the lifesaving effect of well-organized lay rescuer AED programs in public places,³¹ but at least two thirds of all out-of-hospital episodes of sudden cardiac arrest occur in homes.^{47,48} A study is underway to determine the effectiveness of home AED programs. The results of this study may support further legislative efforts. At this time there is insufficient data for the AHA ECC Committee to make recommendations about home AED programs.

Summary

This statement describes the key program components to include in state legislation and regulations addressing community lay rescuer AED programs. The goal of the legislation should be to reduce deaths from sudden cardiac arrest by encouraging the development of programs that will increase the likelihood of immediate bystander CPR and defibrillation being provided within 3 to 5 minutes of the victim's collapse. Table 6 lists the key components recommended for community lay rescuer AED programs.

Additional Resources

The AHA has prepared additional support materials and guidelines for AED initiatives. The following materials may be helpful:

- Model AED legislation, AED Policy Toolkit: www.americanheart.org/statepolicy
- State-by-state policy analysis (review of state actions): www.ncsl.org/programs/health/aed.htm
- AED programs Q & A: <http://www.americanheart.org/presenter.jhtml?identifier=3011859#training>
- AED program implementation resources: <http://www.americanheart.org/presenter.jhtml?identifier=3027304>
- Medical Emergency Response Plan for Schools statement: <http://circ.ahajournals.org/cgi/content/full/109/2/278>

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*Modest conflict of interest.
 †Significant conflict of interest.

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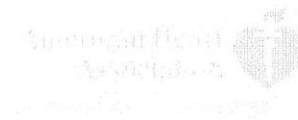
*Modest conflict of interest.

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Circulation

February 26, 2009

TO: House Committee on Health and Human Services

FROM: Jason Lutz or JJ

RE: Testimony on SB 102—AED

My name is JJ and I appreciate your time in listening to my story about an AED. My mom considers me a normal teenager with all the typical interests of a teenage boy. I like to listen to music, hang out with his friends, go driving, and girls. In junior high school years, I participated in some sports such as football, soccer, track, and wrestling. I took a break from that sports schedule as a sophomore and explored performing arts and foreign language. I studied French and enjoy addressing people with my new found language. I have been a good student and have always been an honor-roll student. I want to go to college and eventually be a lawyer and travel the world.

On January 31st of 2007, I got up for school just like any other school morning; got ready, ate breakfast and I usually tell my mom that I love her and was leaving to meet the bus. Mom would usually say, "I love you too, have a good day at school, and I will be at school when you get home so I will see you late tonight." But the day didn't happen that way.

By Barbara Hollingsworth, The Capital-Journal
Published Thursday, March 08, 2007

JJ Lutz was on his way to see a teacher — not that he remembers any of that now. What he remembers is an angel telling him to wake up and opening his eyes to find himself in the hospital. For the Seaman High School sophomore, Jan. 31 is a day gone from his memory.



JJ Lutz, Seaman High School sophomore, thanks Maurice Koch, security officer, as Garrie Oppitz, school nurse, looks on during a meeting Wednesday honoring the two faculty members who saved the teen's life when he had heart problems Jan. 31.

Mike Burley / The Capital-Journal

For his parents, it is the day they began learning far more about the human heart than they ever planned, a day when the lives of two people they didn't know became forever tied to theirs and a day when a machine they had never thought a thing about gave their 15-year-old son a shot at life.

"You guys are heroes to me," JJ's father, Jason Lutz, told school nurse Garrie Oppitz. "You were there. You saved my son's life." They hugged Wednesday afternoon after school staff members and JJ's family watched Oppitz and security officer Maurice Koch receive recognition for coming to JJ's aid from Cardiac Science, the producer of automated external defibrillators. "I'm just doing what I trained to do," Oppitz said.

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HEALTH AND HUMAN SERVICES
DATE: 02/26/09
ATTACHMENT: 3

After all, Oppitz has been a registered nurse for 23 years. She has given cardiopulmonary resuscitation in the past but always in settings with doctors and nurses rushing around. This was different.

At about 10:30 a.m. Jan. 31, students rushed to her office to say a student had passed out in the hall. Both Koch and Oppitz had seen JJ around school, but they didn't know much about the teenager, who had played sports but was becoming more interested in drama.

Soon after reaching JJ's side, Oppitz knew it was a life-or-death situation. JJ wasn't breathing and had no pulse. As she and JJ's family would learn later, a serious arrhythmia had caused the previously healthy teenager's heart to malfunction. They began CPR — 30 compressions to two breaths.

Then Oppitz called for the AED, a device that delivers a shock that can restore normal heart rhythm. It had sat unused in the school for about five years. Now that they needed it most, it was about 15 feet away from where JJ had fallen on his way to see a teacher. JJ's mom, Tammy Crouse, didn't know schools had defibrillators.

"I knew the hospitals had them and the old folks' homes had them, but not schools," said the mother of five. "I never thought one would be used on a 15-year-old — not my 15-year-old."

JJ spent 16 days in the hospital. He said he is feeling good and would love to be back at school, but his parents are keeping a tight rein on his activities for now.

His parents want to share with others what they learned Jan. 31. JJ's father, Jason Lutz, and his stepfather, Joshua Crouse, talked at length Wednesday about how they believe AEDs should be required in schools throughout the nation, with two or more spread out in larger buildings. Thousands of lives could be saved each year using the devices that cost \$1,500 to \$2,000 each, they said.

"Seconds count when you have to choose to use one of these things," Crouse said.

Seaman Unified School District 345 will have AEDs in all of its schools this fall and is training staff members to use them, as well as administer CPR and first aid. Other area districts also have made the AEDs a priority. Shawnee Heights USD 450 and Auburn-Washburn USD 437 have at least one in each school and central office. Topeka USD 501 has the devices in its middle and high schools, its central office and a couple at Hummer Sports Park.

After all these weeks, Oppitz feels a connection to Lutz's family — one that is difficult to describe. Maybe it has to do with seeing JJ up and around again or the way his mom hugs her knowing that the words "thank you" just don't seem to cover it.

Then JJ's dad calls Oppitz and Koch "heroes," and it doesn't sound right to the nurse. She doesn't feel like a hero. Over and over, she told the teen's family she was just doing her job. But they know what they see. "All I can say is thank you because you gave me and his mom back a gift we could never repay," Jason Lutz said.

By passing SB 102, it will help save lives. I encourage you to give a gift to the Kansans. Merci beaucoup pour votre ecoutant. (Thank you a lot for listening.) Au revoir (goodbye).



Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH
AND ENVIRONMENT

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**Testimony on Senate Bill 102
AED Legislation**

**Presented to
House Health and Human Services Committee**

**By
Richard Morrissey, Interim Director of Health
Kansas Department of Health and Environment**

**Presentation Date
February 26, 2009**

Chairwoman Landwehr and members of the Committee, I am Richard Morrissey, Interim Director of Health at the Kansas Department of Health and Environment. I am pleased to present testimony today in support of SB102, which amends current legislation to provide immunity to any person who renders emergency care or treatment using an automated external defibrillator or AED. The current statute (65-6149a) provides immunity only for those deemed "qualified persons". Therefore, the purpose of this bill is to extend the protection to lay responders.

In the first minutes after collapse, many victims of cardiac arrest demonstrate an abnormal heart rhythm called ventricular fibrillation (VF), which causes the heart to quiver so that it does not pump blood effectively. Treatment of VF requires delivery of a shock with a defibrillator allowing the victim's normal heart rhythm to resume.

According to the American Heart Association, approximately 250,000 deaths are caused by coronary artery disease in the out-of-hospital setting annually in the United States and that at least 20,000 lives could be saved annually by use of AEDs. We know that the key to survival is timely initiation of a "chain of survival", which includes activating of 9-1-1; initiating CPR; early defibrillation using an AED and early access to medical care. Because of recent technological

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HEALTH AND HUMAN SERVICES
DATE: 02/26/09
ATTACHMENT: 4

advances, an AED has recently become an important medical tool and has been designed so that non-medical personnel can use one very easily.

The machine is highly accurate and user-friendly with voice and audio prompts that guide the user through the steps of operation. The rescuer turns the AED on and attaches it to the victim using adhesive electrode pads which then record and analyze the victim's cardiac rhythm. If a shock is indicated, the AED charges to the appropriate energy level and "tells" the rescuer to deliver a shock. If the device does not detect VF no shock will be delivered. If the device is fully automated and a shock is indicated, the AED can deliver a shock without further action by the rescuer. AEDs require little maintenance and are relatively inexpensive costing below \$2000.00.

This legislation would potentially reduce deaths from sudden cardiac arrest by increasing the likelihood that immediate CPR and defibrillation will be provided within 3 to 5 minutes of the victim's collapse. The protection from liability provided by this bill is expected to result in more AEDs being placed in public places, including workplaces where lay rescuers would be more inclined to use them, knowing they have immunity from liability. Because of the automated nature of operation, use by lay responders is considered quite safe.

Thank you for your consideration of this important public health issue. A vote for SB102 is your chance at saving a life in your district. I will be pleased to stand for questions.



League of Kansas Municipalities



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To: House Health and Human Services Committee

From: Moji Fanimokun, Staff Attorney

Date: February 25, 2009

Re: Proponent for SB 102

First, I would like to thank the committee for allowing the League of Kansas Municipalities to appear today in support of SB 102. For a little over a year, the League has encouraged its member cities to install automated external defibrillators. The League published an article in the Kansas Government Journal highlighting the benefits of automated external defibrillators and also conducted a round-table discussion advocating for their usage at its annual conference this past year.

Currently, for a city to fall under the immunity provisions of the law, a qualified individual who has attended a special training session must be the person to use the automated external defibrillators. Much of the feedback the League has received regarding automated external defibrillators has centered on the lack of training programs available in many of the smaller and rural communities around the state. Therefore, many cities have chosen not to install the automated external defibrillators because of the current provisions requiring a trained qualified individual to use the system due to the liability they may be subjected to by not having the opportunity to have a trained qualified individual in place. There are user-friendly instructions accompanied with each automated external defibrillator that would allow almost anyone successful usage of the machine.

Training is offered through the Red Cross and the American Heart Association. Unfortunately, the American Heart Association only has chapters in Topeka, Wichita, and Overland Park. The Red Cross chapters around the state are in 10 counties only; leaving the rest of the state without local access to the opportunity for training.

Because SB 102 would remove the barrier limiting automated external defibrillators to be used only by a trained qualified individual and allows the opportunity for our member cities to better protect their staff and constituents, the League would like to offer its support for SB 102. I will be happy to answer any questions the committee may have.

**Testimony on Senate Bill 102
AED Legislation**

**Presented to
Committee on Health and Human Services
By
Richard Sigle Jr, Paramedic**

Chairwoman Landwehr and members of the committee, I am Richard Sigle Jr. I am a Paramedic and a volunteer for the Kansas Heart Disease and Stroke Prevention Program. I am pleased to present testimony today in support of SB102.

My testimony today comes from several stand points- first as a professional rescuer and second as an educator. The primary thought I want to leave with you is that this bill will be another step forward in saving more lives in this great state of Kansas. It also will be an example to the rest of the nation of what we can accomplish when we do the right thing.

When sudden cardiac arrest occurs, any delay in that person receiving CPR and early defibrillation is literally measured in seconds. In 30 seconds 3.5 to 5.0% of their chance of survival is lost. For every minute an individual loses between 7-10 percent of their chance of survival.

Under the previous language the only people who could administer the life saving defibrillation were those who were qualified. While protection under the Good Samaritan provision is afforded to the qualified rescuer the lay person who may have access to an AED is not afforded such protection. As the presence and awareness of AED's have increased, we have not yet expanded the protection to good Samaritans. As a professional rescuer I have been present when someone has been saved by an AED and while rejoicing in the fact that a life was saved, I more frequently find myself saddened at the cases where I wonder if only someone had been there with the AED would the outcome have changed.

As an educator I know how simple the AED is to use. When training someone who has never used the AED, I start off simply by telling them if you can turn the machine on and follow the voice prompts it will tell you what to do. I cannot recall in all the classes and students that I have taught, of an instance where someone has not been able to figure out how to use it with little or no assistance. While older models of AED's were more cumbersome and had a higher degree of difficulty in use, the newer AED's are virtually fool proof. One brand that I will not name is even available over the counter. The newer AED's take further advantage of technology by advising the user to ensure that they have called 911 and can even coach them in the other needed part CPR. When the AED is demonstrated most people are in awe of how easy it really is. The usual response is "is that it?"

HEALTH AND HUMAN SERVICES
DATE: 02/26/09
ATTACHMENT: 10

House Committee on Health and Human Services
February 26, 2009
Page Two

In conclusion, I want to reinforce that the need for the passage of this bill is measured in lives. The dollar cost is no more than our time here today and consideration of this legislation today. It is in my professional opinion that the passage of this law will only further promote the use and

placement of AED's in more places. The motto of my business is "saving a life is everyone's business." Today it is your business. By your consideration today you may just save the life of someone you love.

I thank you for the opportunity to appear before the committee today. I have a demonstration of the unit available that will take no more 2 minutes of your time to see the simplicity of the AED. I will stand for any questions.



KANSAS

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KATHLEEN SEBELIUS, GOVERNOR

BOARD OF EMERGENCY MEDICAL SERVICES

Testimony

Date: February 26, 2009
To: House Health and Human Services Committee
From: Robert Waller, Deputy Director
RE: 2009 Senate Bill 102 **Status:** Proponent

Madam Chairman Landwehr and members of the House Health and Human Services Committee, thank you for the opportunity to provide testimony on the 2009 Senate Bill 102, my name is Robert Waller and I am the Executive Director for the Kansas Board of Emergency Medical Services (KBEMS).

In an effort to sustain life, and create a "chain of survival", the link between early activation of the EMS system, early bystander CPR, early delivery of a shock from an AED, and early advanced life support has been recognized as having a significant impact on patient survival. The bill provides a lawful "certainty" that those citizens with no training and a heart to serve and assist are held harmless from any legal ramifications when such care is provided with no malicious or ill intent. Although, as Kansans, we come to the aid of our neighbor with no forethought or burden in believing a lawsuit is pending due to the assistance provided out of concern for the loss of life. However, as a recent case in California demonstrates, that does not always hold true. The case involves an injured patient in car, who was removed by bystanders who believed she was in danger of being killed after an accident. Once removed, and evaluated at the hospital, the patient was determined to be paralyzed and subsequently sued her rescuers believing that if "trained" personnel had removed her, she would not be in her current physical state. KBEMS would hope to never have a lawsuit of this nature cast a shadow over the saving of a life. But, 2009 SB 102 ensures that with proper execution those who would attempt to save a life with no malicious or gross intent can do so free of legal intrusion.

The Kansas Board of Emergency Medical Services, in concert with the American Heart Association (AHA) and Kansas Department of Health and Environment (KDHE) fully supports the passage of 2009 SB 102 in its current form. AED's save lives, and their presence and use should not be restricted by the possibility of lawsuits outside of willfully and knowingly damaging the AED for any other purpose than its function.

Your passage of 2009 SB 109 provides and continues the line of "continuity of care" and provides many who would be stricken with a heart attack, another heart beat, and thus a chance to live.

Conclusion

Thank you for allowing me to testify in support of Senate Bill 102 and I will stand for any questions you may have.

3

PHIL NUSSER

209 N. BROADWAY, ST. JOHN, KS

Testimony presented to the House Committee on Health and Human Services
SB 102— AED's
February 26 , 2009

Madam Chairwoman and members of the Committee:

I am Phil Nusser. I live in St. John, Kansas. One of my life's enjoyments is to referee basketball games. I stand before you today because an AED was used to save my life on Tuesday, January 6, 2009. Thank you for allowing me to share my story:

Great Bend Tribune...Fast action and the presence of an automated external defibrillator saved the life of a referee during a basketball game at Ellinwood High School on Tuesday.

"If it had to happen, he was in the right place at the right time," said Janice Nusser, wife of referee Phil Nusser of St. John. Nusser, who is also the Stafford County Roads and Bridge supervisor, has refereed about eight years, Janice Nusser said. On Tuesday, he went down during the third quarter of the girls' game.

EHS Girls' Basketball Coach Bill Maddy heard and saw referee Dick Smith blow his whistle and point at Nusser. Halfway across the court from Nusser, Maddy said he realized from the way Nusser was lying it was not a normal injury. He turned around and ran to get the AED, which is located in the Commons Area between the two gyms.

A police officer and school nurse Shannon Heape called 911. By then, Jane Billinger, a 2007 EHS graduate and emergency medical technician who was at the game, had done a quick assessment and determined Nusser was not breathing and did not have a pulse. Jim Elsen, an Ellinwood firefighter, and Lana Brown started cardiopulmonary resuscitation. Billinger used the AED once to restart Nusser's heart before the ambulance crew arrived. "She kept her cool and did what she needed to do before the crew got there," said Debbie Glenn, Ellinwood Emergency Medical Service director and proud teacher. "It's pretty awesome."

Billinger graduated from Glenn's EMT high school class in May, passing her state tests and working for Ellinwood EMS when she is home from college.

The AEDs were placed in the schools two years ago, Glenn said, after the city received a Department of Justice grant to purchase two units. The school purchased an additional unit. The city and school district have an agreement for placement of the two units at the school. Glenn provides CPR and AED training for school personnel every two years.

"It really makes us feel good about the program," said Ellinwood City Administrator Robert Peter of the high school EMT training and AEDs.

After seeing Nusser was in good hands, Maddy, EHS Principal Brian Rowley and EHS Athletic Director Monte Doll, had everyone in the stands who was not helping move into the Commons Area. The players were sent to their locker rooms. Everyone cooperated, Maddy said. Several people commented on the cooperation and help offered by those present. Seven to 10 young men formed a protective shield between the audience and Nusser to give them privacy.

By the time the ambulance left, Nusser was conscious, Maddy said. After talking it over, the decision was made to resume the game, since Nusser was conscious, he said. "If he had still been unconscious, we were done for the night," he said.

Nusser was transported to Ellinwood District Hospital and Life watched to Promise Regional Medical Center in Hutchinson, Glenn said. Janice Nusser said doctors found some blockage and a blood clot. The clot was removed and a stent inserted. After a rough night, he was resting comfortably, she said, and was expected to be transferred out of the intensive care unit Wednesday afternoon.

"Thank God for all of it," Janice Nusser said, referring to the fact EMTs were on hand and the AED. "I think every school should have a defibrillator. We're very, very thankful they had one. It made the difference between life and death." She said her husband's prognosis was pretty good and his goal is to return to refereeing.

The AED was helpful in saving my life and passing SB 102 will be helpful in saving additional lives. Thank you. **Phil Nusser**

HEALTH AND HUMAN SERVICES
DATE: 02/26/09
ATTACHMENT: 8



Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH
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Division of Health

**Testimony on Senate Bill 82
Repeal of the sunset provision in the
Kansas residential childhood lead poisoning prevention act.**

**Presented to the
House Health and Human Services Committee**

**By
Richard Morrissey, Interim Director
Division of Health
Kansas Department of Health and Environment**

February 26, 2009

Chairwoman Landwehr and Members of the Committee, my name is Richard Morrissey, I am the Interim Director of the Division of Health at the Kansas Department of Health and Environment. I am here today to discuss the benefits of continuing our agency's lead poisoning prevention program.

History:

The negative health effects of lead poisoning are well documented. The passage of the Kansas childhood lead poisoning prevention act in 1999 authorized the KDHE to begin lead poisoning prevention activities at a program level within the division of health. Children in our state continue to be at risk for lead poisoning due to the prevalence of lead based-paint on Kansas homes.

Health Concerns:

Homes built prior to 1978 share a common denominator: the probability of having been painted with lead-based paint, the older the home the greater the probability and the hazard. Census information indicates that nearly 70% of the homes in Kansas were constructed prior to 1978. In some Kansas communities over 90% of the homes were built prior to 1978. The threat of lead poisoning extends to every county, every community and every family in Kansas.

During the past nine years program activities have included public outreach and education, testing of children and adults, compiling data, training a professional lead

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DATE: 02/26/09

ATTACHMENT: 9



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abatement work force and enforcing regulations so that Kansas is a safer place to live and raise a family.

During the lead program's existence we have directly assisted hundreds of Kansas families with lead-poisoned children. Over 250,000 blood lead tests on children have been performed and monitored in our state. The testing has identified over 16,000 Kansas children with dangerously high blood lead levels. The program has aided over 1,900 lead poisoned children in our state. Program efforts are having a positive effect on lowering blood lead levels in our state, yet many Kansas children have never been screened for lead poisoning.

Work Force Development:

Our program has assisted over 800 workers who have obtained training and are now skilled in lead abatement techniques and certified by our program. We have helped over 300 firms statewide become licensed to perform regulated lead activities, and we continually monitor the work practices of more than 9,000 construction, remodeling, and painting firms statewide that work on Kansas homes built prior to 1978.

Funding:

All program activities are funded through grants, cooperative agreements, contracts, and fees for service. No state dollars have been expended on this program. Program efforts have delivered nearly 6 million dollars in grant funding to Kansas that has been used to repair and remediate lead in homes in Wyandotte County. Economic models indicate total economic impact to our state for these activities is over 11 million dollars. The program continues to apply for this type of funding and is seeking to expand HUD-funded work to communities statewide.

Challenges Ahead:

New EPA regulations were published in 2008 that will require all contractors in the remodeling, renovation and painting trades to be certified in lead safe work practices by April 2010, so that they can safely maintain older homes. Our program is working to assist Kansas contractors meet the requirements of the new regulations in a manner significantly less costly than the EPA program alternative.

Recommendations:

The KDHE lead poisoning prevention program has contributed positively to improving public health and has created economic opportunity for business and workers in Kansas. With your affirmation we will continue this work. We ask that you report Senate Bill 82

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*Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary*

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favorably for passage. I thank you for the opportunity to appear before the committee today, and will now stand for questions.



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House Health and Human Services Committee,
Senate Bill 82

Testimony of Jennifer A. Lowry, MD
Thursday, February 26, 2009

Hello. My name is Dr. Jennifer Lowry. I am here to provide testimony as a supporter of the Kansas Department of Health and Environment's Childhood Lead Poisoning and Prevention Program. Currently, I am a pediatrician, toxicologist and clinical pharmacologist at Children's Mercy Hospitals and Clinics in Kansas City, MO. In addition to caring for the children of Kansas at that institution, I also serve Kansas in two additional roles. First, I am the Medical Director to the University of Kansas Hospital Poison Control Center. As you may be aware, the Poison Control Center helps the public and health care professionals in the management of exposures to poisons, whether drugs or environmental exposures. Second, I am the Director to the Pediatric Environmental Health Specialty Unit for EPA Region 7 which is located at Children's Mercy Hospital but serves the states of Iowa, Nebraska, Missouri and Kansas in the diagnosis and treatment of environmental exposures that occur in children. In all three of these capacities, I have developed a strong relationship with the KDHE's Childhood Lead Poisoning and Prevention Team.

There are three objectives of the Healthy People 2010 Program that I have worked with KDHE on to improve the health of Kansas' children. These are stated below:

(Obj. 8-11): The proportion of children aged 1 to 5 years who had elevated blood-lead levels decreased from 4.4 percent in 1991-1994 to 1.6 percent in 1999-2004. Among non-Hispanic black children in that age range, the decrease was from 11.2 percent in 1991-1994 to 3.1 percent in 1999-2004. The target is zero percent.

(Obj. 8-13): The number of visits to a healthcare facility that results from exposure to pesticides decreased from 22,933 in 1997 to 19,168 in 2004. The target is 11,398.

(Obj. 8-25): Within the context of the umbrella objective to reduce exposure to pesticides, heavy metals, and certain environmental chemicals, the progress of several subobjectives was a featured topic of the data presentation. The blood-level concentration of cadmium in the total population aged 1 year and older was 1.30 micrograms per liter ($\mu\text{g/L}$) in 2000-2002 (1.3 $\mu\text{g/L}$ in 1999-2000). The target is 0.9 $\mu\text{g/L}$. The blood-level concentration of lead in the total population aged 1 year and older decreased from 4.9 $\mu\text{g/L}$ in 1999 to 4.40 $\mu\text{g/L}$ in 2001-2002. The target is 3.4 $\mu\text{g/L}$. The blood-level concentration of mercury in children aged 1 to 5 years decreased from 2.3 $\mu\text{g/L}$ in 1999-2000 to 1.90 $\mu\text{g/L}$ in 2000-2001. The target is 1.6 $\mu\text{g/L}$. In females aged 16 to 49 years (i.e., of childbearing age), the blood-level concentration of mercury decreased from 7.1 $\mu\text{g/L}$ in 1999-2000 to 4.60 $\mu\text{g/L}$ in 2000-2001, surpassing the target of 5.0 $\mu\text{g/L}$. The serum concentration of lindane (beta-HCH) in persons aged 12 years and older decreased from 68.9 nanograms per gram lipid (ng/g lipid) in 1999-2000 to 43.3 ng/g lipid in 2001-2002, which betters the target of 48.2 ng/g lipid.

Division of Clinical Pharmacology and Medical Toxicology

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As you can read in Obj. 8-11, while we have made progress in regard to childhood lead poisoning over the past 20 years, we have failed to remove the risk to children and do not plan to meet the 2010 objectives listed. Lead is a neurotoxin that is more commonly found in paint and soil. Lead was placed in paint in the early 1900's as a preservative and, thus, allowed the paint to last for years. The manufacture of leaded paint ceased in the late 1970's, but the effects continue to be seen due to the large number of older homes that still contain this hazard. Young children are at higher risk for the development of lead poisoning due to their curious nature and high hand to mouth activity. Peeling paint from window sills, doors, walls, and porch railings are readily available to the curious child. In addition, the paint is sweet and attractive to children.

The maximum brain growth for a person occurs from birth to 3 years of age when the brain reaches its adult size. However, the brain is not fully formed and connected until the early 20's. As I previously mentioned, lead is a neurotoxin that has no role in the human body. It disrupts cellular mechanisms that can have long standing effects that may become permanent. Unfortunately, the early effects are subtle and may not be known until the lead levels is high and the child's body burden is large. Over time and as the levels increase, the child can develop anemia (levels of 25), kidney problems, IQ deficits (levels of 15), convulsions (levels of 100), encephalopathy (levels of 70) and death. In addition, newer studies suggest that disease such as ADHD, behavioral problems and learning deficits can be seen with levels as low as 5 mcg/dl. And, while the the average lead concentrations across the nation are decreasing, I continue to see children present with elevated blood lead levels above the reportable level of 10 mcg/dl. In fact, the PEHSU was notified of over 100 children in Kansas over the past 5 years with lead levels above 15. Approximately one-third required chelation therapy. All of these children were referred by or involved with the KDHE Lead Program.

As I mentioned, I collaborate with the programs in the 4 state region. I can tell you that Iowa, Nebraska, nor Missouri can meet the gold standard that the State of Kansas provides to the children and their families. The staff of your Childhood Lead Poisoning Program is the most knowledgeable in regard to lead poisoning that have met at the state level. Their nurse case managers are an incredible asset to me, my staff and the families that need their help. While I can aid them in the management of their lead poisoning, I rely on the staff at KDHE to help with the assessment of the home and ensuring that proper management, remediation, and treatment are provided to these families. Without them, I would not be able to ensure the safety of the families of Kansas that are exposed to this poison. Children who require treatment for their elevated blood lead levels cannot be treated in a home that is contaminated, as the treatment can increase the absorption of lead if it continues to be ingested on the medicine. KDHE's Program ensures that home is "clean" and safe for the child to be treated. This saves us time and money as without the "clean" home, the child would require the 19 day treatment occur in a hospital. If a child does require hospitalization for chelation therapy, KDHE can ensure the home is safe the child to be discharged to.

Local health departments are not equipped or as knowledgeable as the program that is currently in place. Often times, I have had to teach the local health departments on what the treatment levels are and what the consequences may be if a home is not properly assessed. In addition, my experience with other State Programs that rely solely on the local health departments is that

many children have "fallen through the cracks" and have not had proper follow up to ensure they are not further exposed to lead. Physicians have called me because they don't know what to do with a child with an elevated lead level and not had guidance from their local health department. In addition, I have had cases in which children have been inappropriately chelated and put at risk for an adverse event.

As you may be aware, Medicaid mandates that all children at ages 1 and 2 receive a blood draw for a lead level. This currently is not done within the state of Kansas to the degree that it should. In addition, the Centers for Disease Control and Prevention (CDC) has mandated for universal testing in high risk areas and universal screening in lower risk areas. In the high risk areas of the State of Kansas, universal testing is not done, including on those children on Medicaid. The Staff of KDHE's Lead Poisoning and Prevention Program help me in this regard by providing education to physicians in Kansas on the need for testing. While the numbers of children that are poisoned by lead is decreased, children remain at risk and are found to have elevated levels. Your staff helps to educate the health care communities.

In addition, the KDHE staff has made a great effort in the prevention of lead poisoning. Their staff works with local and regional do-it-yourself stores in the education of the proper way of remodeling homes. It is because of this effort that I had a family come in for testing. They had started to remodel their home and was offered the booklet by a store employee. Once they read it, they asked their pediatrician for a lead test. It came back mildly elevated on their child and the family moved out of the home temporarily for the home to be cleaned. The lead levels are down and the child is healthy. However, without the education provided to them, this child would have been at higher risk.

While I can provide you with many more examples of the families who have received help from the Program provided by KDHE and the State of Kansas or the families in which lead poisoning was prevented because of the efforts, the end statement will be the same. Lead poisoning will not be eradicated by the year 2010. There continues to be much to do in regard to the education and the management provided to those at highest risk for lead poisoning...our children. The efforts to plan the objectives for Healthy People 2020 are underway. Those that have participated in the progress review of 2010 have agreed that environmental health, community and public health, and individual health are interdependent. It is their, and my, belief that we should reinforce primary prevention with greater efforts to control or eliminate sources of lead in children's environment before they are poisoned. In conjunction with those efforts, we agree that we should seek to overcome some physicians' apparent lack of concern about secondary prevention and resistance to recommended screening, which often develops as the prevalence of lead poisoning in children declines. I cannot do this on my own. I need your help to do this. I need your help to care for the children of Kansas. And, I feel that their best hopes in the prevention, education, and management of lead poisoning and the home environment lies in the continuation of the KDHE Childhood Lead Poisoning and Prevention Program.

Thank you.

