Funding of Automatic/Semi-Automatic External Defibrillators for Non-EMS Based Public and Private Entities

Report Prepared by the House Joint Memorial 51 Task Force

Convened by the New Mexico Department of Health

NEW MEXICO
DEPARTMENT OF
HEALTH

November 30, 2009

I. Executive Summary

The 2009 New Mexico State Legislature asked the Department of Health to investigate the possibility of designating a portion of the Emergency Medical Services (EMS) Fund specifically to support public and private automatic external defibrillator (AED) programs.

An AED is a computerized medical device that can automatically diagnose potentially life-threatening heart beat irregularities. It can treat the irregularities through the use of electric therapy that allows the heart to reestablish a more regular rhythm. AEDs are designed to be used by laymen, and are found in public facilities throughout the state.

The EMS Fund was created in 1994 to support the state's EMS and trauma system operations and development. Each year, the Legislature determines the appropriation to the Fund. The current EMS Fund Act distribution is $3,875,500.

Funds are distributed through an application process that takes into account area population and demand for EMS. While the fund has grown 32 percent since its inception, the number of EMS agencies seeking funding from it has grown 43 percent. Operational costs experienced by EMS agencies also continue to rise. Designating a portion of the EMS Fund specifically for an unknown number of public or private non-EMS AED programs will continue to weaken the Fund's ability to meet existing EMS needs.

The House Joint Memorial 51 Task Force recommends that no changes be made to the EMS Fund Act or rule to allow a portion of the EMS Fund to be used for non-EMS public or private entity AED programs. A non-EMS entity, however, may team with its local EMS agency or EMS regional office to apply for EMS Fund Local System Improvement monies. These funds are distributed to EMS agencies on a competitive basis to strengthen local EMS systems, and an AED program certainly would warrant consideration. Additionally, an AED program could consider accessing other potential funding sources such as federal grants, manufacturer subsidies and community support.

II. Introduction

The New Mexico State Legislature enacted House Memorial 51 (HJM51), requesting the New Mexico Department of Health to study the merits of expanding the permitted uses of the Emergency Medical Services Fund to allow qualified entities to receive funding for purchase and training in the use of an Automatic External Defibrillator (AED).

The Department of Health assigned this task to the Emergency Medical Systems Bureau (EMS Bureau). The EMS Bureau convened a task force that included medical experts in the field of emergency medical services. The task force was created to assure representation from rural, frontier and urban EMS systems, and included individuals who have educated the public in CPR and AED.

III. Cardiac Arrest and Automatic External Defibrillation

There are 294,851 emergency medical services-treated out-of-hospital cardiac arrests annually in the United States.[1] Most cardiac arrests are caused by an abnormal heart rhythm called ventricular fibrillation. Ventricular fibrillation occurs when the heart's electrical system malfunctions, causing a chaotic rhythm that prevents the heart from pumping oxygen to the victim's brain and body. Ventricular fibrillation is usually associated with heart attacks, but can also occur in many other medical and traumatic situations. Without prompt treatment, a patient suffering from ventricular fibrillation will die.

In addition to chest compressions, ventricular fibrillation must be treated with defibrillation in hopes of restoring the hearts normal rhythm.[2] Defibrillation can increase survival rates dramatically if administered within the first few minutes. To achieve the highest possibility of a successful resuscitation, defibrillation needs to be given quickly – ideally within the first one or two minutes after the cardiac arrest has occurred. This time frame almost always exceeds the time of arrival of emergency medical personnel. In an effort to reduce time-to-shock intervals and ultimately improve survival, public access defibrillation (PAD) has been encouraged and endorsed by virtually all health care and health education entities.

IV. Costs of AED Programs

AEDs are usually priced from $1,500 to $2,000 per unit. In addition to the cost of the initial purchase, other costs include initial and ongoing education and certification of the individuals trained to use the AED, and the ongoing costs of maintaining the AED's ancillary equipment, such as batteries and defibrillation pads. Additionally, an AED program that is registered through the Cardiac Arrest Act Program at the EMS Bureau must find funds for physician oversight of the program. While some physicians may indeed volunteer their time and expertise, this physician oversight is in many cases an additional cost borne by the AED program administrators.

The Task Force understands that budgeting for these programs, as with all aspects of any public or private operation, can present a challenge for that entity.

V. The Emergency Medical Services Fund Act

The EMS Fund Act (7.27.4 NMAC) was enacted in 1994. The initial legislative General Fund appropriation totaled $2.94 million. At the time, 316 EMS agencies were eligible for funding.

Today, the EMS Fund Act distribution is $3.875 million and 451 EMS agencies are eligible for the funding. Per the Fund Act, 4 percent of the fund is dedicated to trauma system development, and 3 percent is used for administrative costs.

Currently, the EMS Fund Act pays for only about a third of total requests. The majority (75 percent) of the EMS Fund, about $2.9 million, is distributed to the state's EMS agencies to fund their local EMS systems.

Each agency that requests EMS Fund Act funding must submit an application. These applications become available in November and are due in January of the following year. The fund is allocated based on a formula that considers the portion of a county's area an EMS agency covers in relation to the percentage of the state's total area, the portion of the county population the agency covers in relation to the state's population, and the number of EMS calls that EMS agency has responded to in the previous federal fiscal year.

Minimum and maximum award amounts are set in the EMS Fund Act to assure the monies are distributed as equitably as possible. The average amount of funding provided is approximately $9,000 per service. These monies may be spent on virtually any EMS operational costs except for employee salaries or medical care costs, per the Fund Act.

Approximately $697,000, or 18 percent of the fund, is used to fund special projects. These projects fall into three categories. The first category is local system improvement projects, such as the purchase of radio and dispatch equipment or educational programs. The second category, statewide improvement projects, entails large-scale educational programs or video education improvement projects that benefit caregivers all over New Mexico. The third category is vehicle purchase, which allows for EMS agencies to apply for funds for assistance in the purchase of ambulances or other EMS vehicles. Agencies apply for these funds beginning every August, and the applications are due by November of that year. The applications are reviewed and ranked by representatives of each of the three EMS regions, the Statewide EMS Advisory Board, and the Emergency Medical Systems Bureau. The Department of Health then grants available funds based on the reviewers recommendations and the application's documentation of need and benefit. Currently, six or seven awards for each category are granted.

V. STATUS OF THE FUND

The number of EMS agencies that receive distributions of EMS Fund Act monies has increased from 316 services in 1994 to 451 in 2007. This is an increase of 43%, while the fund has increased by 32%.

In 2007, the Governor's Task Force for House Memorial 20 found that the operational costs of representative EMS agencies increased by 71% from 1997 to 2007. During that same time period, the average percentage of these EMS budgets covered by the EMS Fund Act dropped from 64% to 40%.[2] These monies are used primarily for operational and educational purposes. Without adequate levels of financial support, the operation, education, and staffing of the volunteer and career services is jeopardized.

The Governor's Task Force found that the current EMS Fund Act is significantly underfunded, and recommended an increase of $5,310,500. Unfortunately, with the current economic environment, this increase looks unlikely. The EMS Fund remains underfunded, and the services to which it provides assistance are struggling to continue EMS operations. [3]

VI. HJM 51 Task Force Recommendations

House Joint Memorial 51 raises the possibility of setting aside a portion of the EMS Fund for public and private entities to create AED programs. While not without merit, this proposal has challenges of its own. As described previously, the EMS Fund Act has not been able to keep up with funding requests created by increasing operational costs and expanded services. Adding additional funding requirements to the fund would only serve to weaken an already at-risk system. While defibrillators are potentially effective life-saving tools, the fact is that continued care provided by EMS caregivers to victims of cardiac arrest is critical to survival.

A non-EMS entity could partner with a local EMS agency or one of the EMS regional offices to submit a Local System Improvement application, and attempt to access Fund Act monies on a competitive grant basis. The entity's local EMS agency or EMS regional office can assist it with the application process and assure that the entity is meeting the provisions of the Cardiac Arrest Act. This allows for the potential use of Fund Act monies to support AED programs, without having to change the specific allocations as defined in the EMS Fund Act rule. The EMS Bureau and the EMS regions are important resources for this process, and can assist interested parties in finding educational and other information and opportunities.

Additionally, the Task Force encourages entities to look into the following resources that may be able to assist them in pursuing sources of funding:

- Grants that are available nationally for the funding of AED Programs. AEDGrant.com is an excellent online resource and clearinghouse for AED grant funding.
- Local American Heart Association, American Red Cross, hospitals, and other similar community based CPR education and preparedness entities.
- Manufacturers of AEDs. They will often offer financial incentives and support for AED programs. The interested party should contact multiple manufacturers to ascertain the availability of financial assistance programs.

The Task Force thanks those members of the New Mexico community who have already instituted AED programs, as well as the citizens who have taken the steps to be trained in CPR and AED usage. These programs are essential in the care of our fellow residents. The Task

Force encourages further strengthening of the cardiac arrest survival chain throughout New Mexico through:

- Education of the general public regarding the risk factors associated with, signs and symptoms of, and treatment for sudden cardiac arrest;
- Implementation of programs that offer the best hope of survival for victims of sudden cardiac arrest, to include early recognition of signs and symptoms, early notification of trained emergency providers, rapid CPR, timely defibrillation, including the use of AEDs, and early advanced care by Emergency Medical Services personnel; and
- Continued training of the general public in the skills of CPR and use of AEDs.

The House Joint Memorial 51 Task Force would like to thank Representative Thomas Anderson and the 2009 New Mexico Legislature for the opportunity to examine this issue.

REFERENCES

1. American Heart Association; www.AmericanHeart.Org ; CPR Facts and Statistics; Accessed November 12, 2009
2. The Merck Manual Online; www.merck.com ; Ventricular Fibrillation; Accessed November 12, 2009
3. Governor's House Memorial 20 (2007) Task Force Final Report; Pages 13 and 14

House Joint Memorial 51 Task Force Members

Peggy Hesch, Chair	New Mexico DOH EMS Bureau
Don McNutt	Statewide EMS Advisory Committee Chair
John Bridges	Fire Chief; Portales, New Mexico
Tim Zagorski	EMS Region II Executive Director
Jim Stover	EMS Region III Board Member
Carl Gilmore	ALS/BoundTree EMS Equipment
Kyle Henson	EMS Aspects, LLC; AED & CPR Education; Albuquerque Fire Department Paramedic
Ken Hoffman	McKinley County EMS; EMS Region I
Steve Grulke	Cloudcroft EMS
Donnie Roberts	EMS Region III Education Coordinator