Automatic External Defibrillators: Should Your Facility Have One?

Richard G. Stefanacci, DO, MGH, MBA, AGSF, CMD

The American Heart Association estimates that 900 Americans die each day from sudden cardiac arrest. Automatic external defibrillators (AEDs) have helped increase the survival rate of cardiac arrest from 14% to 23%.[1] An AED is a device about the size of a laptop computer that analyzes the heart's rhythm for any abnormalities and, if necessary, directs the rescuer to deliver an electric shock to the victim. This shock, called defibrillation, may help the heart reestablish an effective rhythm of its own. Because AEDs can be used by laypersons to restore a normal heart rhythm, some states and the federal government now require them in some public buildings and certain healthcare facilities.

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An AED consists of a small computer (microprocessor), electrodes, and electrical circuitry. The electrodes collect information about the heart's rhythm. The microprocessor interprets the rhythm. If the heart is in ventricular fibrillation, the microprocessor recommends a defibrillating shock. The shock is delivered by adhesive electrode pads, through the victim's chest wall and into the heart. It uses voice prompts to instruct the rescuer. Once the machine is turned on, the rescuer will be prompted to apply two electrodes provided with the AED to the victim's chest. Then the AED will begin to monitor the victim's heart rhythm. If a "shockable" rhythm is detected, the machine will charge itself and instruct the rescuer to stand clear of the victim and to press the shock button.

The big question for leaders of assisted living (AL) facilities is whether to install AEDs. Of course

no one would disagree that AEDs are life savers, but before paying several thousand dollars to purchase this high-tech device, ALF leaders should ask themselves several questions, including: What should the basis be for adding an expensive piece of equipment to one's AL facility? How do you determine the return on investment (ROI) for this clinical instrument? How many does my facility need—if any? Who will operate the device?

Some Answers

For some, the question of whether or not to purchase an AED is answered by state regulators. Increasingly, states are requiring AL facilities and other long-term care facilities to make these devices available for their residents and to have staff trained to utilize them. New Jersey currently is one of the few states to require AEDs in both special needs facilities and AL facilities, but other states are developing similar regulations.

The New Jersey Department of Health has attempted to minimize the staffing costs by requiring that a facility have only one trained staff member per shift. The requirements that a defibrillator be obtained and properly maintained, that training be provided for employees of AL facilities, and that the defibrillator be used by trained employees are mandated by statute. The National Center for Early Defibrillation estimates that accessories and consumables for an AED will total $75 and maintenance costs will average $100 annually.

For other facilities, the question of installing an AED is being answered by their legal advisors. Malpractice attorneys are increasingly focusing on AL facilities and pressing them to provide added levels of clinical care, which in some cases means including access to an AED. Imagine the field day a malpractice attorney would have if an AL resident suffered a cardiac arrest in a facility that marketed itself as providing "individualized clinical support" but had no AED.

AEDs might also provide seemingly concrete proof of a facility's commitment to high-tech devices. Think of the marketing opportunity when potential residents tour a facility and see an AED readily available for life-saving treatment of their hearts.

The Downside of AEDs

Of course there are arguments against the implementation of AEDs in AL facilities. Some AL residents oppose their use because they would rather pass away from an acute cardiac event than risk the prolonged hospitalization that probably would result prior to an eventual death. The reality of the situation bears this scenario out.

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In addition, some health policy experts argue that the price of AEDs for AL facilities would be better spent elsewhere. In fact, when evaluating the likelihood of a successful use and outcome of an AED, they say casinos are the number one location for such a device, not AL facilities, which, in fact, are ranked fairly low. This is not surprising considering the large number of seniors in compromised states of health likely to suffer a cardiac event by the less-than-healthy environment in most casinos. Perhaps if the cost of dispensing devices such as AEDs was borne by one centralized organization, efficient distribution could be better argued. But in today's fragmented environment, where payers of services are separated from beneficiaries, the argument for efficient and effective distribution is lost.

After the Decision is Made

If the decision is made to purchase an AED, several steps are needed in order to take full advantage of the device. First, although some AEDs can be purchased over the counter, most require a physician's prescription for purchase. This means that the medical director of a facility or a physician used by the facility must prescribe and oversee the AED program there. The cost of an AED varies by manufacturer and model, but the average price for a single AED unit is about $2,300.

After an AED is purchased, additional work is required to establish a clinical process, to market the device, and to ensure general follow-up maintenance so the device works when needed. The fact that one in five AEDs are recalled because of potential malfunction underscores the importance of maintaining these devices properly.

In the end, having an AED within one's AL facility may prove to be life saving not only for the residents but for over-stressed staff members as well. This makes an even stronger case for seeing that the devices are available and working, and that the staff knows how to utilize them to restart a malfunctioning heart. ALC

Richard G. Stefanacci, DO, MGH, MBA, AGSF, CMD is Founding Executive Director of the Health Policy Institute of the University of the Sciences in Philadelphia, and Editor-in-Chief of *Assisted Living Consult*.

References

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