Automated External Defibrillators in Sport and Recreation Settings: An Analysis of Immunity Provisions in State Legislation

DANIEL P. CONNAUGHTON,

&

JOHN O. SPENGLER,

University of Florida

I. INTRODUCTION

Approximately 25% of all Americans have some form of cardiovascular disease, the nation's deadliest type of disease causing more than 480,000 fatal heart attacks each year. It is estimated that 250,000 of these deaths result from sudden cardiac arrest. On average, sudden cardiac arrest strikes over 600 people each day. The potential for cardiac arrests to occur in sport and recreational settings has been well documented.

One study showed that sports stadiums and golf courses were among two of the top five public places with the highest incidence of cardiac arrests.

In the past, the "chain of survival" for cardiac arrest victims included a first-responder's activation of the emergency medical services (EMS) and cardiopulmonary resuscitation (CPR). Recently, the use of automated external defibrillators (AEDs) has been introduced as another

1. AMERICAN HEART ASSOCIATION: HEART-SAVER AED FOR THE LAY RESCUE AND FIRST RESPONDER (Tom Aufferheide et al. eds., 1998) (Hereinafter "AHA!").
2. Id.
4. John Cantwell, AEDs In The Sports Arena: The Right Place, The Right Time, 26 PHYSICIANS & SPORTSMEDICINE 35-44, 76 (1998). An average of 16 sudden cardiac deaths occur each year among United States high school and college athletes, although additional deaths may go unreported. Perhaps more importantly are the many other people who attend sports events that are at risk for cardiac arrest. For example, Major League Baseball umpire John McSherry suffered a fatal heart attack before a national television audience in 1996. J.J. Rosenberg, Opening Day: '96 A Win - And A Tragic Loss Sad Start: Umpire Dies Of On-Field Heart Attack, ATLANTA J & CONSTIT., Apr. 2, 1996, at A11. In 1997, Jim Knight who was officiating a collegiate football game suffered a cardiac arrest. However, with the prompt use of an AED that was available at the stadium, he fully recovered and resumed his 24-year career as an official. John Nagy, Referee Collapses At ACC Ballgame, GREENSBORO NEWS & REC., Sept. 28, 1997, at A1.
first-responder link that could potentially prevent 100,000 deaths each year. With EMS often more than five minutes away and the odds of a victim's survival decreasing by 7% to 10% with each passing minute, publicly accessible AEDs have been advocated by the American Heart Association (AHA) and the American Red Cross (ARC). Since the single most important determinant of survival for a victim of cardiac arrest is the time from collapse to defibrillation, the goal is to have AEDs become as commonplace as first aid kits and fire extinguishers.

Over the last several years the installation of AEDs in sport and recreational facilities has risen dramatically. This is not only an effort to protect athletes and other participants. It is also an effort to protect many other people at sport and recreational events, such as officials, coaches, and spectators who are at risk for cardiac arrest. At large programs and facilities such as stadiums and arenas, AEDs can supplement standby EMS services. At sporting or recreational events in small towns, or in large or hard to reach areas such as golf courses and ski resorts, the AED may be the only means available to accomplish early defibrillation.

AED Purpose and Function

An AED is a battery-driven device that administers an electric shock through the chest wall of a person who has suffered a cardiac arrest. An AED analyzes the heart's rhythm through electrodes and, if needed, signals the user to deliver a shock to the person. With both audio and visual prompts, an AED could walk the responder through the treatment process from diagnosis to delivery of a shock, and then prompt the responder to begin CPR if necessary. The shock, termed defibrillation, may assist the heart to reestablish an effective rhythm of its own. AEDs use a computer to analyze a person's heart rhythm and will not allow someone to be shocked if the conditions are not appropriate.

AEDs are about the size of a laptop computer and weigh between 4 and 7 pounds. Currently, they sell for approximately $3,500.00 per unit. AEDs are designed to assist first-responders such as police, firefighters, security guards, flight attendants, lifeguards, and other designated lay responders. According to the AHA, an AED is safe to use by anyone who has been trained to operate them. AED training requirements vary from state to state. Many states name both the AHA and the ARC as providers of courses that satisfy their state's requirements. Both organizations

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7. AHA1, supra note 1.
have developed several AED training courses for the non-medical responder. Basic courses are 3½ to 4 hours in length and incorporate adult-CPR training. AED certification must be renewed every year (ARC) or every two years (AHA).

The AED in Use

One of the initial studies to assess the efficacy of this new device was conducted on Australia’s Quantas Airways. During the first 65 months of the study there were 27 instances of cardiac arrest in the air and another 19 in the airport terminals. Of the 27 in-air cardiac arrests, six involved a victim with a potentially treatable arrhythmia, and five of those six were stabilized by the use of an AED. Of the 19 on-ground cardiac arrests, 17 had a treatable arrhythmia, and 16 were successfully stabilized with an AED. Several airways, including American, Continental, Delta, and others have also placed AEDs aboard their aircraft.

Additional studies included one conducted in Seattle, which found that the public places with the highest incidence of cardiac arrests were airports, county jails, sports stadiums, shopping malls, and golf courses. According to the researchers who conducted the study, placing 276 AEDs in these sites would have provided treatment for 134 cardiac arrest victims over a five year period.

Another setting in which defibrillators have been studied is in police patrol cars. Researchers collected data from seven suburban communities where police typically arrived at the scene of medical emergencies before EMS personnel. When police arrived prior to EMS personnel, police use of AEDs improved cardiac arrest survival from 3% (shock delivered upon EMS arrival) to 26% (shock delivered by first-responder police).

Several other organizations have installed AEDs with similar positive results. For example, within the first three months of June 1999 after AEDs were installed in Chicago’s O’Hare International Airport, they were used on 10 cardiac arrest victims. Eight of the ten victims sur-

10. Becker, supra note 5.
11. Id.
AEDs in Sports, Recreation, and Fitness Programs

While no efficacy studies have addressed sports or recreation-related AED use, AEDs are being increasingly placed in a wide variety of sports, recreation, and fitness settings. Not only have high school, college, and professional athletic teams and organizations recently purchased AEDs, but aquatic facilities, sport stadiums, arenas, golf courses, ski areas, and health/fitness clubs have also installed these lifesaving devices.

As Ron Courson, director of sports medicine at the University of Georgia, pointed out, permanently installed AEDs may be even more important than having them available only on game days. Most often during games, EMS are on standby for emergency medical assistance. However, it is during daily practice when EMS personnel are not at the field that an event is most likely to happen.

Although cardiac arrest is most frequently associated with cardiovascular disease, it may also occur due to trauma or drowning. Since aquatic professionals often reach the scene of an emergency before EMS, supervisors of aquatic facilities are being encouraged to include AEDs in their facilities. Jeff Ellis & Associates Inc., the international aquatic safety consultants whose clients include 95% of United States water theme parks and many municipal aquatic parks, requires their clients to equip and train personnel in the use of AEDs. While Ellis & Associates, Inc. has developed a mandatory AED implementation schedule based upon their clients’ classification, they strongly encourage all of their clients to voluntarily achieve AED implementation at the

18. Id.; See also, as a case example, Kleinheider v. Gettysburg College, 99 F.3d 1360 (3rd Cir. 1995) (where a college lacrosse player died of cardiac arrest during practice).
earliest opportunity.20 With the addition of early defibrillation to the existing “chain of survival,” it has been speculated that in the aquatics field, “AEDs may someday become as common as fire extinguishers – or shepherds’ crooks.”21

The fastest-growing segment of health club members is people age 34 and older, an age when the risk of heart disease begins to rise.22 In response, many health/fitness facilities have also started to install AEDs. In 1999, the International Health, Racquet, and Sportsclub Association (IHRSA) surveyed its members regarding AED installation. Of the 273 clubs who responded, 16% already had at least one AED installed, 26% were planning to purchase one, and 58% had no plans to obtain one.23 The respondents indicated that some of the reasons for having AEDs were: (a) the high number of older and/or de-conditioned members; (b) local EMS response time is too long; (c) response to previous medical emergency at club; (d) state’s “Good Samaritan” law covers AED use; and (e) concern that AEDs are becoming an industry standard.24 The reasons given by the respondents for not having AEDs in these clubs were: (a) concerns about liability in the event of improper use or not used at all; (b) close proximity of EMS; (c) difficulty training all staff and ensuring that trained personnel are on duty at all times; (d) high cost; and (e) certification is too involved and time-consuming.25

The AHA and the American College of Sports Medicine (ACSM) have developed recommendations that include AED placement at fitness facilities that recruit members with known cardiovascular disease.26 While the AHA/ACSM does not encourage all health/fitness facilities to install AEDs, the AHA supports the placement of AEDs wherever the public gathers: places such as sports arenas, gated communities, office complexes, malls, etc.27 However, as IHRSA’s position statement points out, the AED has not yet been established as a standard of care at any

24. Id.
25. Id.
27. AHA, supra note 1.
site, therefore, IHRSA neither encourages nor discourages health club operators from installing AEDs.28

Since cardiac arrest is the number one cause of death on golf courses, the AHA and Golf Digest began a public education and awareness program titled “Links for Life.”29 This initiative will encourage golf courses to acquire AEDs and to train staff in CPR and AED use. Other organizations participating in this project include the National Safety Council, the National Golf Course Owners Association, Club Managers Association, and the Golf Course Superintendents Association.30 Despite the growing use of AEDs in sport and recreation settings, many practitioners, administrators, and owners are concerned about possible liability issues.

II. METHODS

Given concern among practitioners about using AEDs in sport and recreational settings, the purpose of this study was to provide an analysis of immunity provisions in state laws. Research was conducted utilizing several sources. First, a LEXIS/NEXIS database of state codes was searched by keyword to find AED immunity provisions in Good Samaritan statutes. The keywords AED, automated, external, defibrillator, and Good Samaritan were used. Additionally, the Public Access Defibrillation League’s website was referenced.31 The statutes found were cross referenced using LEXIS/NEXIS to find the most current AED code provisions and citations to the relevant code sections. Code sections were then analyzed where immunity provisions covered either the AED user, trainer, site operator, supervisor, purchaser, or those involved in AED site placement.

28. IHRSA, supra note 21.
III. RESULTS

Statutory Immunity Provisions

48 states provide statutory immunity or limitations on liability for those involved in some manner with an AED. Only two states at the time of this writing did not have specific AED immunity provisions in their state law. These states were Iowa and Maine. Jurisdictions with legislation relevant to AEDs provide limitations on liability for the user of the AED, the person or entity providing AED and related training, the person responsible for the site placement of the AED, the one responsible for the site where the AED is located, the one providing supervision, and the purchaser of the AED. The results provide a description of legislation relevant to those who might use AEDs or otherwise be responsible for their use.

The person who uses an AED in an emergency situation is often protected from liability where their conduct does not amount to gross negligence or willful misconduct. In the sport setting, potential AED users may include lifeguards, fitness instructors, golf course attendants, ski patrol members, stadium personnel, outdoor guides, or coaches and athletic trainers. 48 states have statutory immunity provisions for AED
users, however, these provisions vary greatly as to the person or entity listed.\textsuperscript{33} Some states provide broad immunity to AED users.\textsuperscript{34} Other states, however, restrict immunity to persons unless they meet certain requirements. For example, several states provide limited liability to persons who act in good faith and without compensation.\textsuperscript{35} Florida and Missouri require that an AED be used in good faith and without objection from the victim.\textsuperscript{36} Furthermore, for the AED user to have limited liability, some states require that the user receive training and/or be authorized or certified in the use of an AED.\textsuperscript{37} Kansas provides immunity to the

\textsuperscript{33} Id. (see statutes in note 32).

\textsuperscript{34} New York, Ohio and Washington, for example, provide broad immunity, making reference to the person or entity involved in the use of an AED. N.Y. PUB. HEALTH LAW § 3000-a; OHIO REV. CODE ANN. § 2305-235; WASH. REV. CODE § 70.34.310. Additionally, New York provides additional language to include a partnership, corporation, firm or society. N.Y. PUB. HEALTH LAW § 3000-a.

\textsuperscript{35} The majority of states require that an automatic external defibrillator be used in good faith during an emergency situation. Additionally, some states (Alabama, Arkansas, California, Colorado, Florida, Hawaii, Illinois, Kansas, Kentucky, Massachusetts, Minnesota, Missouri, Nevada, New Hampshire, New York, North Dakota, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, West Virginia and Wyoming) require that the user act gratuitously or without compensation. ALA. CODE §§ 6-5-332; ARK. CODE ANN. § 17-95-605; CAL. CIV. CODE § 1714.21; COLO. REV. STAT. ANN. § 13-21-108.1; FLA. STAT. ANN. § 768.13; HAW. REV. STAT. ANN. §§ 663-1.5, 745 ILL. COMP. STAT. ANN. § 4912; KAN. STAT. ANN. § 65-41496; KY. REV. STAT. ANN. § 49; MASS. ANN. LAWS CH. 112, § 12V; MINN. ANN. § 604A.01; NEV. REV. STAT. ANN. § 41.500; N.J.; REV. STAT. ANN. § 67; N.Y. PUB. HEALTH LAW § 3000-a; N.D. CENT. CODE § 32-03.1-02; ORLA. STAT. ANN. tit. 76, § 5A; OH. REV. STAT. § 3313; R.I. GEN. LAWS § 9-1-34; S.C. CODE ANN. § 782; UTAH CODE ANN. § 36-8-11; VA. CODE ANN. § 8.01-225; W. VA. CODE § 18-4D-4; WYO. STAT. ANN. § 35-26-103. Minnesota includes "volunteers" in their immunity provision as those who act with out compensation. Minn. ANN. § 604A.01. Conversely, Minnesota's Good Samaritan statutory immunity includes even those who use an AED for compensation when acting in good faith. MISS. CODE ANN. § 73-25-37.

\textsuperscript{36} FLA. STAT. ANN. § 768.13 & MO. REV. STAT. § 190.092.

\textsuperscript{37} ALASKA, ARIZONA, CALIFORNIA, CONNECTICUT, HAWAI'I, ILLINOIS, INDIANA, KANSAS, LOUISIANA, MARYLAND, MASSACHUSETTS, MISSOURI, NEBRASKA, NEW MEXICO, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, UTAH, VIRGINIA, WEST VIRGINIA AND WYOMING all require that the user of an AED be trained. ALASKA STAT. § 09.65.090; ARIZ. REV. STAT. ANN. § 36-2263; CAL. CIV. CODE §§ 1714.21; CONN. GEN. STAT. ANN. § 52-557B; HAW. REV. STAT. ANN. §§ 663-1.5, 745 ILL. COMP. STAT. ANN. § 4912; IND. CODE ANN. § 34-30-12-1; KAN. STAT. ANN. § 65-41496; LA. REV. STAT. ANN. § 40.1236; MD. CODE ANN. § 13-517; MASS. ANN. LAWS CH. 112, § 12V; MO. REV. STAT. ANN. § 190.092; NEB. REV. STAT. ANN. § 71-51, 102; NEV. REV. STAT. ANN. § 41.500; N.M. STAT. ANN. § 24-10C-7; PENN. STAT. ANN. tit. 42, § 8331.2; R.I. GEN. LAWS § 9-1-34; S.C. CODE ANN. § 782; UTAH CODE ANN. § 36-8-11; VA. CODE ANN. § 8.01-225; W. VA. CODE § 18-4D-4; WYO. STAT. ANN. § 35-26-103. A trained AED user is required to have successfully completed an automated external defibrillator training course conducted in accordance with the standards of the American Heart Association, the American Red Cross, or other approved course. Additionally, some states require that the AED user also be trained in CPR and first aid. Conversely, Ohio and Georgia do not require training, providing immunity
“qualified user” that it defines as “a person who has completed a course in cardiopulmonary resuscitation or a basic first aid course that includes cardiopulmonary resuscitation training, and completed a course in the use of automated external defibrillators, and has demonstrated proficiency in the use of an automated external defibrillator.”

In addition to the user of the AED, those who train persons in CPR and the use of an AED are afforded protection from liability in some states. Some Good Samaritan and AED statutes protect the person or entity that trains persons who might be called upon to use an AED in an emergency situation. 21 states provide immunity for those who provide training in the use of an AED or provide training in both CPR and AED use. These provisions provide limitations on liability for organizations likely to provide the required training such as the AHA, the National Safety Council, and the ARC.

Immunity provisions in AED and Good Samaritan legislation also provide protection for the person or entity responsible for the site where the AED is located. Twenty-two states provide immunity for those in charge of the site. For example, the Arizona statute provides immunity to “the owner of the property or the facility where the AED is lo-
11 states provide immunity to the person that provides supervisory services in the use of an AED. A description of supervisory services is provided in the Arizona legislation, as follows:

B. The physician shall:
1. Establish quality assurance guidelines that include a review of each use of the automated external defibrillator to evaluate performance.
2. Be proficient in emergency medical services protocols, cardiopulmonary resuscitation and the use of automated external defibrillators.
3. Ensure that each trained responder receives training in cardiopulmonary resuscitation and in the use of an automated external defibrillator by completing the heart saver automated external defibrillator course for the lay rescuer and first responder, in effect as of December 31, 1998, adopted by the American heart association or an equivalent course that meets the same objectives.
4. Ensure that the automated external defibrillator is maintained and tested according to the manufacturer's guidelines.

Other persons protected by statute in some jurisdictions are those involved in AED site placement. 10 states provide provisions of this kind. Seven states provide immunity for licensed physicians or a medi-
cal authority involved in site placement. Additionally, Nevada lists a business or organization as immune from ordinary negligence where responsible for site placement.

The final individual receiving limited liability is the purchaser of the AED. 16 states provide immunity for those who purchase AEDs. There is little continuity among jurisdictions in statutory language. Some jurisdictions have general language which covers the “person or entity” who purchases the AED, while others are more specific as to who is granted immunity from suit.

IV. DISCUSSION

Liability concerns might act as a deterrent for sport practitioners to have an AED on site. Conversely, knowledge of immunity provisions in state laws might encourage the use of AEDs in sport settings. Limitations on liability where an AED is at issue is available in nearly all jurisdictions. Therefore, knowledge of these provisions might encourage sport practitioners to implement the use of AEDs in their programs and


Other protected parties listed by various statutes are individuals, businesses, organizations, partnerships, corporations, firms or societies. Finally, Oklahoma makes reference to the entity to whom an AED is registered, and New Jersey refers to any user who in good faith acquires or provides an AED. N.J. Stat. Ann. § 2A:52A-27; Okla. Stat. Ann. tit. 76, § 5a.

50. BHRSA, supra note 21.
facilities. In fact, depending upon the jurisdiction and its statutory provisions, having an AED might provide less exposure to liability than not having one. Further research is needed regarding sport managers' knowledge of immunity provisions specific to their jurisdiction and their perceptions of exposure to liability.

As a result of the recent addition of AED provisions to state legislation, there is currently no case law challenging these statues and providing judicial interpretations of the relevant statutory language. And clearly, the language used in the AED provisions varies greatly in specificity. However, after analyzing the legislation in all of the states, a list of terms was derived that might be useful to those who draft future AED legislative provisions.

The following terms were used to describe the person who would use the AED in an emergency situation. The terms were: (a) first responder; (b) trained person; (c) trained user; (d) trained responder; (e) trained targeted responder; (f) expected user; (g) qualified person; and (h) licensed, certified, registered or authorized user. Additionally, the categories of user who would be provided immunity were: (a) person, or person acting in official capacity; (b) entity; (c) partnership; (d) corporation; (e) firm; (f) society; (g) association; (h) volunteer; and (i) licensed physician. Further, the terms reflecting the manner in which the AED is provided were: (a) with or without compensation; (b) with or without expectation of compensation; and (c) in good faith.

Specific terms were also used to designate those responsible for the site, those involved in supervision, and those who purchased the AED. The terms used to represent the person or entity responsible for the site were: (a) individual; (b) business; (c) organization; (d) partnership; (e) firm; (f) society; (g) owner; (h) occupier of premises; (i) manager of premises; (j) exercises control or makes available; and (k) provides the AED for use. For those who provide supervision, the following persons were listed: (a) licensed physician; (b) medical authority; (c) business; (d) person; and (e) organization. Finally, the terms used to represent the purchaser of the AED were: (a) business; (b) organization; (c) Advanced Practice Registered Nurse (APRN); (d) licensed physician who authorizes purchase; (e) corporation; (f) any user; (g) firm; and (h) society.

The terms used to describe the person or entity granted immunity are important to sport practitioners given their potential for interpretation in the event of litigation. For example, the user would need to meet certain requirements to be interpreted as one protected by statute. A coach, stadium or golf course manager, lifeguard, ski patrol member, fit-
ness instructor, or volunteer would be wise to understand the protection afforded by statute and the necessary certification, licensure and training required to meet the immunity provisions. In the future, legislation should be drafted to afford the necessary protection to those who work in sport settings.

Florida and Missouri represent jurisdictions with statutory language which should be of particular interest to sport practitioners. Both states require that an AED be used in good faith and without objection of the victim(s). This language raises the issue of consent. Sport practitioners in these jurisdictions should seek legal advice as the documentation of consent by persons who might require an AED in the event of an emergency. Pre-participation consent forms might also be necessary given the fact that the victim is often unconscious and is literally unable to grant actual consent when the AED is administered.

V. CONCLUSION

The use of AEDs has extended into sport and recreation settings and it appears this use will continue to grow. AEDs have improved the chances of surviving cardiac arrest but their use has raised questions of liability in the minds of users and providers. AED legislative provisions provide a degree of protection for many sport and recreation practitioners. However, these provisions vary by state in breadth and scope. Information relevant to the person or entity protected by statute is necessary to reduce the fear of litigation and encourage the use of AEDs in sport and recreation. Additionally, this information will encourage the practitioner to acquire the necessary training to be afforded protection by statute. This study represents an initial effort to provide a better understanding of the statutory protection provided to those who would use, acquire, provide supervision of, and train users of AEDs.

ABOUT THE AUTHORS

Daniel P. Connaughton is currently an Assistant Professor in the Department of Exercise and Sport Sciences at the University of Florida. He received a B.S. in Exercise and Sport Sciences (Pedagogy) and his M.S. in Recreation Studies from the University of Florida, a M.S. in Physical Education (Administration) from Bridgewater State College, and his Ed.D. in Sport Administration from the Florida State University. He has held management positions in campus and public recreation depart-

ments, aquatic facilities, and health/fitness programs. At the University of Florida, Connaughton teaches classes in the areas of sport law and sport management.

John O. Spengler is currently an Assistant Professor in the Department of Recreation, Parks and Tourism at the University of Florida. He received a B.A. in Exercise Science from Wake Forest University, a Masters Degree in Recreation, Parks and Tourism from Clemson University, a law degree (J.D.) from the University of Toledo, and a Ph.D. from Indiana University in Human Performance. He has managed recreational sport programs and coached various recreational sports. At the University of Florida, Dr. Spengler teaches classes in the areas of programming and leadership, and sport and recreation law.

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