Introduction

Automated external defibrillators (AEDs) are portable medical devices used to restore a normal heart rhythm to patients suffering from sudden cardiac arrest. AEDs are Class III medical devices regulated by the United States Food and Drug Administration (FDA). This designation requires a physician’s prescription prior to the purchase or installation of an AED. As of April 2007, the FDA had approved 112 AED related devices.

Legislation mandating AEDs in educational settings has been enacted in five states, including Illinois. These mandates, coupled with the small body of relevant case law, raise a variety of legal questions. It is unknown how courts will interpret legislation mandating the acquisition of AEDs. Specifically, the liability that educational facilities may face as a result of these mandates remains to be determined.

Comparing AEDs with other public safety devices, such as fire extinguishers, allows for a general perspective on how courts may rule. The research below attempts to identify issues, and solutions, regarding areas of potential liability to entities with AEDs.

It is important to note lawsuits involving AEDs are often the result of the plaintiff’s death. As in any lawsuit involving a death, particularly the death of a child, emotions are very high. This may cause the defendants’ actions to be scrutinized more meticulously than normal.

Thus, it is in the best interest of educational facilities to adopt policies and procedures that provide injured parties with the maximum amount of care that can be reasonably given under the circumstances. If these policies are implemented and followed, juries most likely would conclude that the facility attempted to provide reasonable care to the victim. From a legal and public relations standpoint, this type of finding is obviously more desirable than a finding indicating that the facility could have or should have done more to aid the injured person.
Educational Facilities, Why Us?

Positioning AEDs in educational facilities is a wise public health policy decision. First, sudden cardiac arrest is the leading cause of death in young athletes.7 Combating this trend requires deploying AEDs where large populations of young athletes gather. Historically, educational facilities have provided this venue. Second, on any given day, educational institutions house more 20 percent of the United States population.8 This figure includes more than 60 million students, facility, and staff.9 Therefore, placing AEDs in educational facilities would provide both access and potential benefits to a substantial portion of the population. Third, educational facilities are often established in a central location, which provides for maximum access to the AED machines. In addition to being located in the heart of the community, educational facilities are frequently a venue for community events. This affords the AEDs an opportunity to benefit not only the educational facility itself, but also the public / community at large. Fourth, more than 47,000 nurses are already employed by educational facilities in the United States.10 Therefore, in some facilities, trained medical personnel are already at the school. Providing these trained professionals with AEDs, would essentially be adding another tool to their emergency medical response tool kit.

Facts / The Need for AEDs

Sudden out-of-hospital cardiac arrest is a leading cause of death and disability in the United States.11 Each year between 250,000 to 450,000 Americans die from sudden out-of-hospital cardiac arrest.12 In fact, 1 out of every 1,000 persons aged 35 and over will experience sudden cardiac arrest.13 This equates to seven hundred deaths per day, averaging one death every two minutes.14

Even though sudden cardiac arrest is a significant public health concern, it is often misunderstood.15 Sudden cardiac arrest is different from a heart attack.16 Unlike a heart attack, which occurs when a blocked blood vessel interrupts blood flow to the heart, sudden cardiac arrest occurs due to a malfunction of the heart’s electrical system.17
Normally, the cause of sudden cardiac arrest is due to an abnormal heart rhythm, called an arrhythmia.\(^{18}\) Studies have shown that approximately 40 percent of sudden cardiac arrest victims initially have an arrhythmia known as ventricular fibrillation.\(^{19}\) Ventricular fibrillation causes the heart's electrical impulses to suddenly become chaotic and unorganized.\(^{20}\) During this time, the heart quivers uselessly and ceases effectively pumping blood.\(^{21}\) If ventricular fibrillation is not treated, death will follow.\(^{22}\)

In order to stop ventricular fibrillation, an AED discharges an external electrical shock to the victim.\(^{23}\) The AED shock interrupts the electric activity inside the heart.\(^{24}\) As this occurs, the heart momentarily has an opportunity to ‘reset’ itself and resume a normal heart rhythm.\(^{25}\)

It is important to note that AEDs will not administer a shock every time it is placed on a victim. A microprocessor inside the AED is responsible for analyzing the victim’s heart rhythm and determines if a shock is appropriate.\(^{26}\) A shock will only be administered for victims suffering from ventricular fibrillation or ventricular tachycardia.\(^{27}\)

Analysis of 6 studies, which represented more than 17,590 sudden cardiac arrests, revealed that, in general, victims experience a shockable heart rhythm approximately 50 percent of the time.\(^{28}\) This finding is consistent with the 40 percent figure mentioned supra. When a shockable rhythm exists, AEDs are very reliable in detecting the rhythm. Several studies have demonstrated that AEDs have a 100 percent sensitivity and specificity for detection of ventricular fibrillation or ventricular tachycardia.\(^{29}\) This finding indicates that AEDs consistently only shock patients who truly require defibrillation.

**The Race Against Time**

Time is of the essence when a sudden cardiac arrest occurs. The time interval from the onset of sudden cardiac arrest to defibrillation is the single greatest factor in determining survivability.\(^{30}\) Survival rates are highest when victims receive defibrillation within three minutes of collapse.\(^{31}\) The likelihood of resuscitating a sudden cardiac arrest victim declines by 7-10 percent with each passing minute.\(^{32}\) After ten minutes, the survival rate is dismal.\(^{33}\)
Sudden cardiac arrest can be reversed when the victim is treated with cardio-pulmonary resuscitation (CPR) and an electric shock from a defibrillator within 10 minutes. Unfortunately, in the United States, the response time by emergency medical services (EMS) averages between 6 and 12 minutes. As such, many EMS systems fail to reach the patient during optimal resuscitation times. These realities have prompted efforts to make AEDs readily available to the general public.

Studies have shown that AED trained first responders can defibrillate a patient in 25 seconds. Another study found that sixth grade students, without any training, could administer a shock in 90 seconds. The same study also found that trained paramedics could deliver a shock in 67 seconds. These studies confirm that AEDs can be quickly and effectively used if available. These studies also highlight the ease by which modern day AEDs can be used by untrained persons.

Not surprisingly, implemented AED programs are achieving impressive outcomes. For example, the national survival rate of out-of-hospital sudden cardiac arrest victims is between 1 and 5 percent. However, locations with AED programs have reported survival rates as high as 70 percent. In 1999, Chicago’s O’Hare and Midway Airports installed 49 publicly accessible AEDs. After ten months, 14 sudden cardiac arrest episodes had occurred. Of the 14 victims, 9 were successfully resuscitated using an AED, resulting in a 64 percent survival rate.

Due to the proven success of AED programs, the American Heart Association has speculated that up to 50,000 deaths annually could be prevented by making AEDs publicly accessible.

Legislation

The success of public access AED programs has fostered a movement to expand these programs throughout the nation. Legislatively mandating entities to acquire AEDs has been one method to achieve this result. This type of legislation has been enacted at both the state and federal levels. Educational facilities, commercial airplanes, health clubs, and federal buildings
have all been mandated by legislation to obtain AEDs. Proposed legislation also exists to mandate AED placement in commuter trains.

So far, Maryland, Illinois, Florida, Nevada, and New York have all passed legislation mandating AEDs in educational facilities. For example, the Maryland legislature passed a bill mandating AEDs in high schools. This occurred after a 17-year-old high school student was successfully resuscitated with an AED following his collapse at the high school softball field. The language and requirements of the statutes vary from state to state. Some states, such as Florida, require that an AED merely be available, while others, such as Maryland and New York, require that a trained AED user be on hand at all school sponsored athletic events.

Other states, such as Colorado, have passed statutes strongly encouraging AEDs in public schools, but as of yet, have not mandated them. Similarly, Ohio did not statutorily require AEDs, but did vest every local school board the power to mandate AEDs in their respective school districts.

In addition to encouraging AEDs, states have also provided funding for the devices. In 2006, Michigan appropriated 100,000 dollars in matching funds for school districts to purchase AEDs. Likewise, Oregon established a grant program with the expressed goal of providing AEDs to at least two public school facilities per school district. In 2001, Pennsylvania utilized its collective bargaining power to allow school districts to join together and purchase AEDs from a private vendor at a reduced ‘state bid’ rate.

Even without legislation mandating AEDs, schools across the country are voluntarily acquiring the devices. In a 2003 survey, 91% of National Collegiate Athletic Association (NCAA) Division I institutions had at least one AED. The median was 4 AEDs per institution with a reported range from 1 to 30 AEDs.

Cost

The cost of AEDs vary but generally average around $2,300. The higher end AEDs, equipped with long lasting lithium batteries, sell for around $3,000 - $4,5000 dollars. Even
though the cost of AEDs has drastically decreased, price still remains an impediment to acquiring the devices.

In a 2005 study, 70 percent of the head athletic trainers at NCAA Division I universities cited financial reasons as the primary obstacle to obtaining AEDs. Similarly, 65 percent of high schools without AEDs, in the State of Washington, cited monetary issues as the main barrier to obtaining the devices. Likewise, in Boston, 93 percent of schools that were given one AED cited financial issues as the primary reason for not obtaining additional AEDs.

Moreover, the financial implications of AEDs involve more than just a one-time purchase price. Additional expenses include training, maintenance, and upgrade costs. Training costs include both initial staff training and refresher courses. The rates for these training courses vary by location, class size, and previous experience or training of class participants.

Furthermore, the self adhesive electrodes supplied with the AED need to be replaced occasionally because the glue may dry out, thereby rendering the electrodes useless. The cost of adhesive pads vary by manufacturer, but generally are around 50 dollars.

Also, costs associated with replacing the AED battery should be considered. Obviously, the frequency and cost of battery replacement varies upon the type of battery used by the specific AED. Generally, batteries for AEDs average around 250 dollars.

Additionally, AEDs require occasional software updates to their computer systems. When new protocols for treating sudden cardiac arrest are issued, the AED may require an upgrade. For example, the American Heart Association introduced new guidelines regarding the use of AEDs in 2005. The new guidelines changed the sequence of heart rhythm analysis and CPR when using an AED on a sudden cardiac arrest victim.

Previously, AED pads were applied to the sudden cardiac arrest victim’s chest, the AED then analyzed the victim’s heart rhythm and delivered a shock if necessary. After the initial shock, the AED then analyzed the heart rhythm a second time to determine whether the first shock was successful. During this time, no CPR was performed and rescuers were advised to
stand clear of the victim. This cycle of analysis, shock and re-analysis could be repeated up to three times before CPR was initiated, which delayed CPR for 37 seconds or more.

The new guidelines recommend that rescuers provide two minutes of CPR between the administration of AED shocks. This new procedure requires a software upgrade to the AED. Software upgrade prices vary by make and model, but average around 210 dollars. Additionally, many AEDs require computer cables to install the software into the AED.

As the above illustrates, mandating AEDs imposes a fairly significant financial burden on the mandated entities. To avoid creating an unfunded mandate, legislators should be aware of the hidden costs regarding AEDs. As discussed in the next section, entities will generally have a duty to maintain their AEDs. Therefore, entities should not allow themselves to be lulled into a false sense of financial security merely because the AED was initially donated. Rather, the entities should allocate funds for AED maintenance and training accordingly.

**Maintenance Issues**

Some commentators have opined that in the future AEDs will become as common as other public safety/life saving devices, such as fire extinguishers and smoke detectors. Other commentators have dismissed the idea by noting that AEDs are more costly and require more frequent maintenance than fire extinguishers and smoke detectors. In an interesting comparison, one commentator notes that approximately 16 million homes contain smoke detectors that are inoperable because of dead or missing batteries. This raises the question, if AEDs become common place, such as smoke detectors, will they suffer the same fate?

Legally, this question should be answered in the negative. Courts have historically held that once a fire extinguisher is provided, the owner is then under an obligation to maintain the extinguisher. Accordingly, it would seem that courts would apply the same standard to AEDs. Indiana has statutorily addressed this issue, and has mandated an affirmative duty on the AED owner to both maintain and test the device in accordance with the manufacture’s guidelines. A New York court has also found a duty to maintain defibrillators in a 2004 case brought against the Fire Department of New York.
In the New York case, a woman experienced sudden cardiac arrest while in her vehicle. Her daughter called 911 and the fire department responded. When the emergency medical technicians applied a defibrillator to the woman, it advised that a shock was needed. Unfortunately, the batteries in the defibrillator were out of date which prevented the defibrillator from administering a shock. Unfortunately, the woman did not survive from this incident.

Factual findings conducted at the trial indicated that the batteries were six and ten years old. It was also discovered that the batteries were not manufactured by the defibrillator company, as recommended by the defibrillators operating manual. After the incident, the recommended batteries were installed and the defibrillator functioned properly.

Addressing issues of municipal immunity, the court stated that because a special relationship was formed with the patient, the City thereby owed her a duty to undertake due care when rendering aid. This barred the application of governmental immunity and the case was allowed to proceed to trial.

Comparatively, in a Missouri case, a gas station attendant was burned after he attempted to extinguish a fire with a fire extinguisher that was non-workable. The court stated that the owner of the gas station had a duty to provide fire extinguishers and that duty was not fulfilled when the fire extinguishers were non-workable or defective.

The court further stated that the owner had a duty to keep the fire extinguishers in usable and workable condition so that they would operate properly when called upon to perform the very function they were provided for, (i.e. to extinguish a fire). An Illinois court reached the same result in a similar situation. In a suit involving a fire, which spread to an adjacent property, the court concluded that when a landowner furnishes equipment to extinguish a fire, there is a duty to maintain that equipment so that it may be used for its intended purpose.

In another fire extinguisher case, fire extinguishers were removed from a building, for a short duration, to undergo service and maintenance. As luck would have it, the day the fire extinguishers were being serviced, a fire occurred in the building. The Supreme Court of
Kansas court held that removing the extinguishers for maintenance, without providing a temporary replacement did not amount to a breach of duty on behalf of the owner. In an AED setting, it is possible that this type of suit may never arise because many AED manufacturers provide loaner AEDs or offer on site service plans. Loaner AEDs have also been distributed by manufacturers when a recall affecting AED performance is issued.

In addition to the maintenance issues discussed **supra**, recalls affecting AEDs have proven to be a recurrent maintenance concern. The Risk and Safety Management Alert System (RASMAS), a not for profit organization, has compiled a list of nearly 110,000 AED recalls. AED recalls are considered Class I recalls by the FDA. The FDA defines Class I recalls as the most serious type of recall. A Class I recall involves situations where there is a reasonable probability that, if the particular malfunction occurred, the use of the affected product could cause serious injury or death.

In November of 2004, Access Cardio Systems discontinued manufacturing and marketing all of its AED models. The company also decided that they would stop supporting their AEDs that were currently in the field. Access Cardio Systems advised their clients that they were no longer accepting orders for disposable parts and that customers should immediately discontinue use of all Access Cardio System’s AEDs.

This decision occurred after Access Cardio Systems became aware of two defects with their AEDs. The first defect was one in which the AED could experience a catastrophic failure of the shock delivery circuit. The investigation into this flaw was launched after Access Cardio received 11 complaints of this nature. The failure of the circuitry would prohibit the AED from delivering defibrillation shocks. The second reported problem regarded the On/Off switch. Access Cardio Systems received 33 complaints stating that the AED would turn on unexpectedly and that the On/Off switch would then become inoperable.

As a solution, Access Cardio Systems advised customers to immediately discontinue use of the AED devices affected by the recall. It is not clear if any relief, or compensation, customers received from Access Cardio Systems.
On February 17, 2007, Defibtech, issued a worldwide recall of 42,000 automated external defibrillators after a software problem, which caused the AED to erase low battery warning messages, was discovered. In order to fix the problem, the AED had to undergo a software update. Defibtech stated that the software upgrade would be distributed within ten weeks.

As discussed above, AEDs have a plethora of maintenance issues. Thanks to technology, maintenance is requiring less human intervention. Inventions such as non-rechargeable lithium-based batteries, which have a shelf life of up to five years, have certainly made maintenance less frequent. However, even the AED devices that automatically perform self diagnostic tests still require occasional human intervention.

This underscores the need for appointing a responsible party to ensure that the AED is kept in a constant state of readiness. Organizations may find that affixing a tag to the AED, much like a tag on a fire extinguisher, would be useful to ensure that periodic checks are performed.

**Contractual Concerns and the Public as Third Party Beneficiaries**

Many different funding sources are available for to subsidize the purchase of AEDs. Funding may be provided through a public grant program, such as in Michigan and Oregon. Or funding may be provided by a private entity. Regardless of the type of funding entity, the acceptance of a grant may give rise to contractual duties between the giving entity, the receiving entity, and, perhaps, even the public.

A contract between two parties can sometimes vest rights in a third party who is not an actual party to that contract, but never-the-less derives some benefit from the contract between the two parties. Under this situation, the third party is known as a third party beneficiary. In some cases, this third party beneficiary has a right to sue if the contract between the two parties is breached. Currently no documented AED litigation has used this line of legal / contractual theory. However, because the funding mechanism for many AED programs is provided for by grants and/or partnerships, litigation involving third party beneficiary claims may some day arise in the AED arena.
Generally, the law distinguishes between two types of third-party beneficiaries, intended and incidental.\textsuperscript{123} Intended beneficiaries are allowed to sue for breach, even though they are not a party to the contract.\textsuperscript{124} Incidental beneficiaries are not allowed to sue for breach of a contract.\textsuperscript{125} Many lawsuits involving a contract where the public would be a third party beneficiary fail, because the public is deemed an incidental rather than intended beneficiary.\textsuperscript{126} This is generally true in both contracts that would benefit the public as a whole, as well as contracts that would benefit a specific segment of the public.

The Restatement Second of Contracts provides a test for determining when a third party is an intended beneficiary.\textsuperscript{127} Under the test, a third party is an “intended” beneficiary if the performance of the promise made in the contract is appropriate in order to effectuate the intention of the two parties entering into the contract and the surrounding circumstances indicate that the person to whom the promise is made intends to give the third party beneficiary the benefit of the promised performance.

Applying the Restatement Second of Contracts’ test to the AED setting, private or public entities that accept grants (or accept AEDs given to them) are entering into a contract with the organization giving the grant or AED. Essentially, the argument would be that by accepting the AED, the public or private entity is promising to make the AED available for use to members of the public. This may be especially true where the grant requires the AED to be publicly accessible. In effect, the entity receiving the grant is promising the granting agency to make the AED accessible to members of the public.

Logically, it would seem obvious that the organization donating the funds or AED clearly intended the AED to be used on third party beneficiaries. For example, if the government provided a grant, it would seem clear that the intended beneficiary of the AED grant was not the government itself, but rather a third party, namely the public. Likewise, it would seem the second required criteria would be easily met since the intended beneficiary of this contract would be the third party.
Courts have generally been more willing to designate members of the public intended third party beneficiaries if they are part of a well defined group that would specifically benefit by the performance of the contract. Applying this to the AED arena, a school would have a smaller intended beneficiary group, consisting of teachers, staff members, students, and visitors. By defining the intended group in this manner, a court may be more apt to recognize the intended beneficiary status, rather than a scenario where an AED was placed in a police car in an attempt to benefit all citizens within the police department’s jurisdiction.

It is also worth noting that if an AED case was brought merely on contractual grounds, in some jurisdictions, liability defenses, such as governmental and Good Samaritan immunity, would not apply.

As a practical matter, it is advisable for organizations seeking AED grants to thoroughly research all of the grant requirements. Some grants may impose conditions on grant recipients. Conditions could mandate staff training, staff certification, staffing levels, and dictate AED placement. Grants may also require the grant recipient to perform timely upgrades and routine maintenance to the AED. In these cases, there is a potential that the grantee might be exposed to liability on a third-party beneficiary theory.

If an entity is legislatively mandated to acquire an AED, could it be sued for not having an AED?

Due to the cost of AEDs, some educational facilities may struggle to finance the purchase of the device. Some states, such as Illinois, have taken this into account and provided for staggered implementation dates. A situation may occur where the facility is mandated to have an AED but has not yet complied with the regulation. Depending on the state, this may expose the facility to a civil suit. However, this may not be true in all states.

In a 1992 Illinois case, a customer at a restaurant died after choking on a piece of food. His estate brought suit against the restaurant for, among other things, failure to post a
legislatively mandated sign containing first aid procedures, including the Heimlich Maneuver.\textsuperscript{132} The court denied a private cause of action based upon the violation of the statute.\textsuperscript{133}

The court defined the purpose of the statute as encouraging voluntary aid by removing potential rescuers’ fear of liability.\textsuperscript{134} The court reasoned that it would therefore undermine the statute’s purpose if it imposed civil liability.\textsuperscript{135} The court also stated that a monetary penalty imposed on the restaurant, by a state agency, would better accomplish the purpose of the statute as opposed to allowing a civil suit.\textsuperscript{136}

If courts follow this line of reasoning, entities that fail to acquire mandated AEDs, could face a fine, but may be able to escape civil liability. Comparatively, a court could find that the intent of the Legislature was to induce citizens to voluntarily use AEDs. This could be deducted from statutes that both mandate AED placement and statutes that provide immunity for AED users. Similarly, allowing a plaintiff to sue would seemingly undermine the purpose of the statute. This argument may be more persuasive in the AED setting due to the cost disparity of acquiring an AED versus acquiring a sign.

Other jurisdictions may reach the opposite result. For example, a California court found that a breach of a regulatory duty to provide fire extinguishers was enough to allow civil liability.\textsuperscript{137}

As a general matter, educational facilities that are mandated to acquire AEDs should comply with the law in a timely manner. Facilities that are facing financial difficulties should investigate alternative funding sources, such as public and private grants.

\textbf{If an AED is Legislatively Mandated, is there also a mandated duty to use it?}

Historically, courts have been reluctant to impose a duty to aid a person in peril. Generally, a bystander who sees another in peril, but does not act, incurs no liability, provided that the bystander is in no way responsible for the perilous situation.\textsuperscript{138} Courts distinguish between misfeasance, which is an affirmative act which harms or endangers a person, and nonfeasance, which is a failure to take action. Misfeasance can create liability, where as nonfeasance usually does not create liability.
When some special relationship exists between the parties, or the bystander is under a legal obligation to attempt to rescue the person in peril, then social policy may justify the imposition of a duty to assist or rescue the person in peril. Under this scenario nonfeasance would lead to liability. Therefore, a threshold question to determine whether a duty exists is whether or not a special relationship exists.

For example, common law has held that no special relationship exists between a restaurateur and a customer. Therefore, a restaurateur has no duty under common law to rescue a customer who is choking on food. However, courts have found special relationships in some settings. For example, an owner of a lakeside resort could be held liable for nonfeasance if action is not taken to prevent the resort’s guests from drowning. Similarly, ship owners have a duty to rescue passengers that fall overboard.

In May of 2007, the Sixth District Court of Appeal in California decided a case regarding a teenage hockey player who suffered a cardiac arrest at a facility which owned an AED, however failed to use or make patrons aware of the AED’s existence. In applying California law, the Court noted that the legislature had laid out detailed requirements concerning the acquisition of the devices, however the legislature did not require any notice to patrons regarding the availability of the AED.

It should be noted that the California law did not require the premises to acquire an AED, but did provide immunity protection to entities that did, voluntarily, acquire them. Based upon the statute, the Court found that the only duty the hockey rink owner/manager had was to timely summon emergency services. The court also declined an offer to rule based upon the public policy of expanding a duty to include a duty to use an affirmative duty of a landlord or business owner to use AED during an emergency. In declining the offer, the Court encouraged the litigants to take the matter up with the legislature.

Does a special relationship exist between student and teacher?

A special relationship has been recognized between students and teachers in a variety of circumstances. For example, courts have recognized that teachers have a duty to report
suspected abuse or neglect of students. Additionally, courts have held that school districts have an affirmative duty to take reasonable steps to protect their students from harm. Courts have also recognized that school districts have a duty to provide students adequate supervision, especially when the students are in the control or custody of the district.

In addition, courts have generally held that schools have a duty, to everyone, to maintain safe conditions on their property. Courts have also held that a principal or vice principal has the same special relationship with a student as a teacher does. Courts have also recognized a special relationship between a university and a student.

Courts have failed to recognize a special relationship, between students and teachers, when it relates to the private affairs of a student. Furthermore, courts have consistently held that compulsory school attendance laws alone do not create a special relationship.

Even if a special relationship exists, the duty to render aid is defined as a duty to use reasonable care under the circumstances. Normally, this requires the non-injured party provide such first aid as they reasonably can, and take reasonable steps to see that medical assistance is obtained.

Disputes have arisen regarding what is reasonable in regards to first aid. Most of the litigation regarding AEDs was decided before legislation mandated the devices was passed. These mandates could lead to a change in the way courts view reasonable care under the circumstances. This would seem especially true if an AED is on the premises and it is not used during an emergency.

Such a situation arose in a Michigan high school in 2002. During school hours, a 15-year-old collapsed on the cafeteria floor. The student was unresponsive and unconscious. Several school staff members responded to the incident, many of whom were trained in CPR and AED procedures. Even though the school had an AED on-site, the device was never used or even retrieved.

Testimony from the cafeteria workers indicated that the student was not breathing and actually began turning blue during the incident. Even so, CPR, rescue breathing, and the AED
were never used.\textsuperscript{162} Testimony also indicated that during the incident, several staff members, cafeteria workers, and students attempted to call 911 but were sternly discouraged from doing so.\textsuperscript{163} After 14 minutes, the school finally called 911 to summon help.\textsuperscript{164}

According to the 911 transcripts, the school staff was very nonchalant and unprofessional during the emergency call.\textsuperscript{165} In fact, at several points during the call, school employees were heard laughing in the background.\textsuperscript{166} This laughter interfered with the ability of the 911 operator to obtain information and convey instructions to the school staff.\textsuperscript{167} Unfortunately, the student was never successfully resuscitated.\textsuperscript{168}

The parents subsequently filed a wrongful death action, in a Michigan court, against the school, the high school principal, four assistant principals, two hall monitors, a teacher who served as a coach, and a paraprofessional.\textsuperscript{169} The defendants all claimed governmental immunity as a defense to the lawsuit.\textsuperscript{170}

Immunity is a defense that can be raised to limit or abolish a persons, or entities, tort liability. At one time, governmental bodies had absolute immunity against suits. This absolute immunity stemmed from both Roman and English doctrine under which ‘a King could do no wrong’. The idea that a King could be dragged into court was inconsistent with the King’s absolute sovereignty, and therefore not allowed. The United States initially recognized absolute immunity. Starting in the 1940’s, both federal and state governments began abolishing absolute immunity by legislation. Court decisions also helped in the abolishment of absolute immunity.

Unfortunately, there is a tremendous amount of misunderstanding regarding immunity. This confusion may lull AED users into a false sense of security. Incorrect information regarding Good Samaritan immunity has even been printed in nationally syndicated magazines.\textsuperscript{171} Today’s immunity protections are afforded through legislation and administrative rules.

Immunity is provided for school officials at the state level. In some states, many different statutes play a role in determining what liability exposure, if any, the school and staff members would face. For example, in Illinois, at least four different statutes are relevant in determining
what liability protection is afforded to school personnel using an AED. The relationship between the statutes is often not clear and is decided based upon the courts interpretation.

It is important to note the limits of immunity. For example, Colorado, Indiana, New Jersey, Michigan, and Washington explicitly waive immunity for acts or omissions that amount to gross negligence or willful misconduct. Comparatively, Illinois and Minnesota, deny immunity for willful and wanton misconduct, but do not mention gross negligence in their statutes.

To illustrate how many state legislatures provide immunity, Section 3.150 of Illinois EMS Act (210 ILCS 50), is reproduced below.

Sec. 3.150. Immunity from civil liability.

(a) Any person, agency or governmental body certified, licensed or authorized pursuant to this Act or rules thereunder, who in good faith provides emergency or non emergency medical services during a Department approved training course, in the normal course of conducting their duties, or in an emergency, shall not be civilly liable as a result of their acts or omissions in providing such services unless such acts or omissions, including the bypassing of nearby hospitals or medical facilities in accordance with the protocols developed pursuant to this Act, constitute willful and wanton misconduct.

Notice that immunity is provided unless the acts in question constitute willful and wanton misconduct. What exactly is willful and wanton misconduct? Courts have struggled to articulate a concrete definition. This is largely because a finding of willful and wanton misconduct is normally fact specific. As one federal court put it, “whether willful and wanton conduct has been committed in any given case requires close scrutiny of the facts as disclosed by the evidence”. That is, the facts and situations of each case determine whether or not willful and wanton misconduct has occurred.

A few court cases give guidance on the general principles on what constitutes willful and wanton behavior. In Burk Royalty Co. v. Walls, 616 S.W. 2d 911 (Tex.1981), the Supreme Court of Texas defined willful and wanton behavior as “that entire want of care which would raise the belief that the act or omission complained of was the result of a conscious indifference to the right or welfare of the person or persons to be affected by it.”
Similarly, the Supreme Court of Illinois has defined willful and wanton conduct as "a course of action which shows actual or deliberate intent to harm or which, if the course of action is not intentional, shows an utter indifference to or conscious disregard for a person’s own safety or the safety or property of others."

As seen above, Courts vary on their application of what the specific words mean. It is widely accepted that the conduct needed to nullify immunity must be intentional and purposeful. Normally the conduct must also display a complete disregard or indifference for the safety of the other person. Some courts have also stated that the conduct must be of such magnitude that it would shock fair-minded persons. If this type of conduct occurs, then immunity protection is generally not afforded to the defendant.

In the case of the Michigan lawsuit, the court stated that a reasonable jury could conclude that the school displayed a willful disregard for the student’s health and safety. The court also held that a jury could reasonably conclude the defendants, through their actions and inactions, simply did not care about the safety or welfare of this student. The opinion also stated that the court was “at pains to comprehend how [the defendants] could have honestly believed that, after several minutes of unresponsiveness and increasing blue coloration, [the student] was merely “resting comfortably” following a seizure.” Given the above findings, the court denied the application of governmental immunity to all of the individual defendants. This allowed the case to be remanded back to the trial court so that a trial could be held.

Obviously, this is an exceptional case, which is based upon outrageous circumstances and conduct. However, it does raise the question of whether a failure to utilize an AED will bar immunity as a defense. Clearly, a person who does not utilize a readily available AED is making a conscious, intentional, decision.

Further, because of the proven success rates of AEDs, the failure to use an AED that is readily available could be interpreted as having a disregard for the safety and welfare of the person in peril. This argument would be especially forceful if trained AED users were present at the incident but did not attempt to utilize the AED. Therefore, entities with AEDs should use the
devices during emergency situations. Otherwise, the entity may have to defend itself and explain why the device was not used.

**Implementation of an AED Program – A Guide**

This section is offered as a guide for public administrators who are establishing AED programs. The guide is broken down into four areas: Medical direction, Purchasing the AED, Selecting a Location for the AED, and Personnel Issues.

**Step One: Medical Direction is Needed**

The first step in implementing an AED program is to designate a physician as the medical director of the program. This step is necessary because a doctor's prescription is required before an AED can be purchased. States that have mandated AEDs usually have designated physicians who serve as AED medical directors. In order to locate one of these physicians, public administrators should contact the state public health department or the state agency charged with regulating emergency medical services. These agencies often have a vast knowledge of how to implement AED programs, and a list of contact information for physicians who serve as medical directors.

In the event that the state agency does not possess the necessary information, a public administrator may also consider contacting a local fire department or ambulance service. For example, in Illinois, all paramedics must work under the direction of a regional medical director. The region medical director is normally a physician that serves as a director of an emergency department located within the region. Many of these regional directors are also involved with AED programs. For example, in Kankakee County, Illinois the region director also serves as the medical director for the various AED programs that operate throughout the county.

**Step Two: Select the AED make and model**

Once a medical director has been identified, decision regarding which model of AED to purchase must be made. Public administrators are encouraged to work with local emergency medical service providers in determining which AED is most appropriate for the community.
Involving local emergency response personnel, such as paramedics, can actually improve the efficiency of an emergency response and reduce costs.

Ensuring that the AED is compatible with the advanced life support heart monitors that the local paramedics use will increase efficiency. If the two units are compatible, it will allow paramedics to utilize the same electrodes that the AED uses. This will eliminate the time and expense of applying a new set of electrodes to the patient.

In addition, if the purchase is coordinated with emergency responders, availability and access to replacement electrodes and other parts can be assured. If the hospitals or pre-hospital providers know which brand of AED and electrodes your program is using ahead of time, they will be able to supply you with replacement parts. This will ensure that the AED is back in service in a timely manner, as opposed to being out of service while waiting on new electrodes to be shipped.

Other factors to consider when selecting your AED include: price, warranty, is on-site service available, are loaner AEDs available if your machine needs service, whether or not the AED software can be updated, and the shelf life of the AED and batteries. Once the proper AED has been selected, the medical director should be notified so that a prescription can be obtained.

**Step Three: Decide Where to Locate the AED**

As discussed above, timely access is of paramount importance when determining survivability. Two important factors when deciding where to locate an AED are accessibility and visibility.

Ideally, the AED should be located in an area that would allow for a 3 minute response time. In order to meet this benchmark more than one AED may be needed. This response time may be attained by mounting the AED in a central location within the building.

Further, it is also a prudent idea to place the AED where large numbers of people gather. Locating the AED in places such as cafeterias, elevators, and commonly used corridors would provide maximum accessibility and visibility.

As noted above, the AED is of no use if no one is aware that the device is available. Therefore, visibility is also an important factor when locating the devices. Public administrators
should consider purchasing and installing commercially manufactured signs to inform the public of the presence of an AED. Office communications, such as emails or company newsletters, can also be used to increase awareness of the AEDs presence and location.

Additionally, cabinets which house AEDs are commercially available. Some of these cabinets are equipped with visual and audio alerts, which indicate if the AED cabinet is opened. Public administrators should consider purchasing AED cabinets as opposed to leaving the AEDs locked in an office. After all, the goal of an AED program is to have an AED available in an emergency.

**Step Four: Personnel Issues**

Public administrators must make two important decisions regarding personnel and AEDs, who will use the device and who will maintain the device. Ideally, all personnel should be trained in AED use. Realistically, budget constraints and employee turn-over may make this goal unattainable.

Currently, both the American Red Cross and the American Heart Association offer AED training classes. Public administrators should offer training prior to the AEDs being installed in the facility. Additionally, an 'educational in-service' attended by all personnel is a good idea. Remember, even if a person is not trained in AED use, that person is still able to retrieve the device and bring it to the scene of the emergency. Incorporating AED training into the currently existing safety training is also a wise decision.

Furthermore, public administrators should encourage multiple people to receive training. Having multiple personnel trained also reduces the probability that employee absenteeism will affect whether or not the AED is used. Public administrators must be mindful of the fact that benefits from AEDs are only realized when the device is actually used. Therefore, it is not a good idea to appoint a single person to be the ‘designated AED user’. This may make some personnel reluctant to use the AED because ‘it is not my job’. Rather, all staff should be encouraged to become familiar and trained in AED use.
Additionally, the AED could potentially sit unused for long durations of time. In order to prevent personnel from forgetting about the AED, emergency drills could periodically be utilized. Also, AED training should be a part of orientation training for new staff members.

As discussed above, today’s AEDs are relatively low maintenance. However, like any other piece of emergency equipment, AEDs need to be periodically checked. Assigning a reliable person to perform bi-weekly or monthly checks on the AED is essential. Public administrators should consider installing a tag on the AED so that the checks are documented and not forgotten.

**Additional Policy Issues**

Although outside the scope of this paper, this section identifies some of the remaining policy issues that need to be addressed regarding AEDs.

First, when implementing AEDs should administrators follow an emergency medical, public safety, public health, or fire suppression/prevention model? Many public officials seek to integrate AEDs through a public health model. In large part, this is due to the requirement that a doctors prescription be obtained before an AED can be purchased. Additionally, most States assign AEDs to their public health agency.

While it is true that AEDs do greatly benefit public health, the public health model may not be the most efficient means to implement this program. An argument can be made that AEDs should be treated just like fire extinguishers, and thus integrated in facilities by following a fire suppression/prevention model. Public administrators should thoroughly examine all existing models within their organization to determine which model would most fit the needs and purpose of the AED.

Congressional reform to AED legislation is also needed. To ease the minds of AED users, federal Good Samaritan protection should be available. This immunity
should protect all users of an AED, except for willful or wanton behavior, regardless of whether or not they have had formal training. Federal legislation would prevent the confusion and overlapping of state statutes that currently exist to provide immunity protection. In addition a federal standard for the maintenance and training of AEDs should be adopted.

Congress should also re-examine whether or not prescriptions should be required to purchase an AED. It is certainly advisable to have input and insight from a medical doctor when establishing an AED program, however a successful AED program could be started even in the absence of a doctors assistance. In reality, private companies are currently bypassing this requirement by offering to provide prescriptions to entities who wish to purchase an AED. Removing the prescription requirement would remove one barrier that entities currently have to navigate before obtaining an AED. Advances in technology, have made AED use possible by lay people, therefore the prescription requirement is antiquated.

**Conclusion**

The availability of an AED provides substantial benefits to the general public. However, a lot more is required of an entity with an AED than just purchasing the unit and hanging it up on the wall. Educational facilities are well advised to develop emergency response plans that specifically address AED use. Additionally, maintenance responsibilities must be addressed and, ideally, assigned to a responsible individual. Furthermore, certification and refresher AED classes should be conducted regularly. This training should also be conducted in a manner that assures the majority of the staff receive training.

The intent of this article was not to scare people or encourage litigation, but rather to raise awareness of the legal implications of having an AED. Legislators everywhere should be
encouraged to propose legislation that provides immunity for both trained and untrained AED users. Laws need to be in place that encourage AED use and protect AED users from liability. After all, it would defeat the purpose of locating AEDs in public settings if the general public itself was afraid of using the devices because of liability concerns.

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4 Id.


9 Id.

10 Id.


13 Drezner et al., supra note 6, at 147.


16 Id.

17 Id.


Id.


Id.

Quickmedical.com AED FAQ – Questions regarding defibrillation, supra note 20.


John Marenco, Improving Survival from Sudden Cardiac Arrest, the role of the automated external defibrillator, 285 JAMA 1193, 1193 (2001).

Drezner et al., supra note 6, at 147.


Am. Heart Ass’n, About Sudden Death and Cardiac Arrest, supra note 31. See also Marenco, supra note 28, at 1193.

AED Grant Questions & Answers, supra note 30.

Marenco, supra note 28, at 1193.

Id.

AED Grant Questions & Answers, supra note 30.

Id.


Id.

Id.

Am. Heart Ass’n, About Sudden Death and Cardiac Arrest, supra note 31.


Id.

Id.


Drezner et al., supra note 6, at 151.
Am. Red Cross – Health and Safety Services: AED, supra note 13. See also Marenco, supra note 28, at 1193. (Stating that high end AEDs are around 3,000 – 4,500 dollars). See also Jeremy Brown, The Shocking Truth About Automated External Defibrillators, 284 JAMA 1438, 1439 (2000). (Stating that a typical AED costs between 3,500 – 5,000 dollars). See also Yancie, supra note 31, at 72. (Stating that an AED can be purchased for around 1,000 dollars).

Marenco, supra note 19, at 1193.

Drezner et al., supra note 6, at 151.

Id.

See also Brown, supra note 57, at 1440.


See AED Superstore Medtronic Lifepack, supra note 64. (Cost was 279.95 for Medtronic replacement lithium battery). See also Heartsine AED, http://www.ernetwork.com/products/batteries.htm (last visited April 18, 2007). (Contains many different styles and types of batteries).


Marenco, supra note 28, at 1194.

Jeremy Brown, supra note 57, at 1440.

Id. at 1439.

Ind. Code § 16-31-6.5-4 (West 2007).


Id. at *1.

Id. at *2.

Id.

Id.

Id.

Id.

Id. at *7.

Id. at *8.

Whitehead v. Schrick, 328 S.W.2d 170, 176 (1959).
92 Id.
93 Id.
95 Id. at 350
97 Id. at 934
98 Id. at 934-935
103 Id.
104 Id.
106 Id.
107 Id.
108 Id.
109 Id.
110 Id.
111 Id.
112 Id.
113 Id.
114 Id.
115 See id. (Line in the recall notice stated that “It is your [meaning the customer’s] responsibility to equip yourself with AEDs that meet your medical needs.”)
116 Fire Engineering, supra note 101.
117 Id.
118 Id.
119 Mareno, supra note 28, at 1193.
120 Id. See also Yancie, supra note 31, at 72.
121 See AED Grant.com http://www.aedgrant.com (last visited April 24, 2007).
123 Restatement (Second) of Contracts §302 (1981).
124 Id. at §304
125 Id.
126 See generally Moch v. Rensselaer Water Company, 247 N.Y. 160 (1928). (Stating that where a water company contracts with a municipality, and a home within that municipality burns down due to lower water pressure, no duty was owed to the homeowner from the water company.)
127 Restatement (Second) of Contracts § 302 (1981).
128 See generally Shell v. Schmidt, 126 Cal. App. 2d 279 (1954). (Holding that 12 veterans who purchased homes that were built by a contractor who breached a contract with the government could sue as intended beneficiaries.) See also Zigas v. Superior Court, 120 Cal. App. 3d 827 (1981). (Holding that tenants of an apartment building could sue a developer, as intended beneficiaries, that breached his contract with the government to charge a fixed amount of rent per month).
See McDonough v. City of Rosemount, 503 N.W.2d 493, 497 (Minn. App. 1993). (Holding that generally sovereign immunity does not apply to contractual obligations). See also Eugene McQuillan, The Law of Municipal Organizations, 29.119 (3d ed. Rev. vol. 1990). (Stating that governmental immunity does not apply to contract actions.) But see Servs. Comm’n v. Little-Tex Insulation Co., 39 S.W.3d 591, 594 (Tex. 2001). (Holding that Governmental immunity protects the State and political subdivisions of the State from suit, unless immunity has been waived.) See also Reata Constr. Corp. v. City of Dallas, 197 S.W.3d 371, 374 (Tex. 2006). (Holding that governmental immunity encompasses both immunity from liability and immunity from suit.)


Id. at 1189.

Id. at 1190.

Id.

Id.

Id.


Id. See also Restatement (Second) of Torts §56 at 373-377 (5th Ed. 1984) See also Garrett v. Grant School District No. 124, 487 N.E.2d 699 (1985).


Decatur Amusement Park Co. v. Porter, 137 Ill.App. 488 (1907).


Id. at 316.


Id.

Wilson ex rel. Wilson v. Detroit School of Industrial Arts, No. 265508, 2006 WL 1237033 at *5 (Mich.App. 2006). See also Gaincott v. Davis, 275 N.W. 229 (1937). (Stating that "at least in a limited sense the relation of a teacher to a pupil is that of one in loco parentis.")


Restatement (Second) of Torts § 314A, Comment f, at 120 (1965).

See Salte v. YMCA of Metropolitan Chicago Foundation, 814 N.E.2d 610 (2004). (Dissent arguing that because the defendant had a paramedic on staff, a question of what was reasonable first aid, including the use of a defibrillator was a question for the jury to decide). See also Lundy v. Adamar of New Jersey Inc., 34 F.3d 1173 (3rd Cir. 1994). (Dispute involving a customer in a casino who suffered a heart attack where the nurse on duty did not bring an intubation kit when she aided the customer.) See also Baker v. Fenneman & Brown Properties, LLC, 793 N.E.2d 1023 (Ind.App. 2003). (Where a customer in restaurant fainted, causing injury to his head and neck, sued arguing that restaurant’s employees failed to assist him.)


Id. at *1.
See Yancie, supra note 31, at 73. (Stating that all 50 states have passed Good Samaritan laws that provide immunity to lay people who use an AED).


See Rabalais v. Nash, No. 2006-C-0999, 2007 WL 724806 at *3 (Sup. Ct. La. 2007). (Supreme Court of Louisiana holding that “[t]here is often no clear distinction between such willful, wanton, or reckless conduct and gross negligence, and the two have tended to merge and take on the same meaning.”)

See S.C. Nestle v. Future Construction Inc., 836 N.E.2d 445, 451 (Ind. App. 2005). (According to an Indiana appellate court, “[a] willful and wanton act is an intentional act done with the reckless disregard of the natural and probable consequence of injury to a known person under the circumstances known to the actor at the time.”)

See Cowan v. Hospice Support Care, 603 S.E.2d 916, 918 (Sup. Ct. Va. 2004). (Supreme Court of Virginia defined gross negligence as, “a degree of negligence showing indifference to another and an utter disregard of prudence that amounts to a complete neglect of the safety of such other person; it requires a degree of negligence that would shock fair-minded persons, although demonstrating something less than willful recklessness.”).