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The Ohio State University

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A SURVEY OF AED LOCATIONS AT THE COLUMBUS CAMPUS OF THE OHIO STATE UNIVERSITY

Disclaimer: This report reflects the opinions of the authors and does not reflect opinions or policy of Ohio State University's Department of Public Safety.

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Introduction

According to the American Heart Association, there were 382,800 people who suffered an out-of-hospital cardiac arrest in the US in 2012[1]. Early intervention with cardiopulmonary resuscitation (CPR) and defibrillation greatly increases chance of survival. However, for every minute of delay from collapse to intervention, death becomes 10% more likely (Valenzuela et al., 1997).

The American Heart Association recommends that an Automated External Defibrillator (AED) be installed such that the response time from collapse to intervention is no more than 3 minutes. To achieve this response time, it is imperative that The Ohio State University has a complete list of all AEDs present on the campus, as well as information on the maintenance (readiness) of these devices and the presence of staff, faculty, and student employees trained in response.

In the summer of 2013, we began to contact building coordinators in order to compile a comprehensive list of AEDs at OSU. This project was a continuation of the Master's Thesis, an AED awareness survey of OSU faculty, staff, and administrators, completed by Bryan Patrick Hennessey in 2012. In addition to Hennessey's work, this project was provided with invaluable information from Robert Armstrong, the Director of the Division of Emergency Management & Fire Prevention within the Department of Public Safety, and Chuck Scheerle, the Fire Safety Inspector for the Division of Emergency Management & Fire Prevention with OSU's Department of Public Safety who had been compiling a list of AED locations through building inspections.

Due to the fact that Ohio State does not have a comprehensive AED management program, the information we received indicated that even when an AED is present, the quality of maintenance and training are quite variable. In this paper we will present the information that was gathered in the summer of 2013, as well as recommendations for location, training and maintenance, and signage for AEDs installed now and in the future.

Background Information

An automated external defibrillator (AED) is a device that delivers an electric shock through the chest to the heart. They can be used in response to cases of sudden cardiac arrest, such as that resulting from ventricular fibrillation. The shock from an AED can stop an irregular rhythm and allow a normal rhythm to resume in a heart in sudden cardiac arrest. A built-in computer checks the victim's heart and calculates whether defibrillation is needed. If it is, the AED will instruct the user to press the shock button on the AED, which will stun the heart and momentarily stop all activity, giving the heart a chance to resume beating effectively (AHA, 2012).

AEDs allow more people to respond to a medical emergency requiring defibrillation. Although it is highly recommended that responders are trained in AED use as well as in CPR, non-medical people are able to operate an AED. This is important because the heart must be defibrillated quickly: a victim's chance of surviving drops by 7 to 10 percent for every minute a normal heartbeat is not restored (AHA, 2012).

[1] http://www.heart.org/HEARTORG/General/Cardiac-Arrest-Statistics_UCM_448311_Article.jsp

The law in Ohio regarding AEDs (HB 717, 1998) provides protection for those who use an AED in good faith ("Good Samaritan"), but also requires adherence to the following requirements for entities that possess an AED:

A person who possesses an AED shall do all of the following:

1. *Require expected users to complete successfully a course in automated external defibrillation and CPR that is offered or approved by the American Heart Association or another nationally recognized organization.*
2. *Maintain and test the defibrillator according to the manufacturer's guidelines.*
3. *Consult with a physician regarding compliance with the requirements previously mentioned.*

A person who possesses an AED may notify an emergency medical services organization of the location of the defibrillator.

State of the Program at the Ohio State University

Unlike other notable Big Ten schools such as Indiana University, Pennsylvania State University, and University of Michigan, the Ohio State University does not have a formalized AED management program (Hennessey, 2012). As a result, quality of AED placement, maintenance programs, signage, and staff awareness and training vary widely throughout campus. In an effort to improve these factors, through a series of activities we have investigated the status of AEDs on the Columbus Campus of The Ohio State University

How many are there?

As of October 2013, there were 59 buildings on The Ohio State University Columbus Campus identified as having an AED. The Ohio State University website indicates that the Columbus Campus has 451 buildings (OSU.edu, 2013), but our estimation of the number of buildings regularly occupied by Ohio State employees (i.e. not including parking garages, buildings rented to other entities, etc.) is 274, thus approximately 20% of these buildings house an AED. It is important to note that this number does not include AEDs located on the medical campus, which are tracked and maintained by a separate program which is overseen by the department of Clinical Engineering within the Wexner Medical Center.

In two of the 59 buildings equipped with an AED (Stillman and Cunz Halls) the departments in question were in possession of an unmounted AED at the time of inquiry, while two additional buildings (Gerlach Graduate Programs Building and Schoenbaum Hall) reported that the AEDs in their department's possession were being serviced and staff trained, and that they were not comfortable divulging information on their locations at that time.

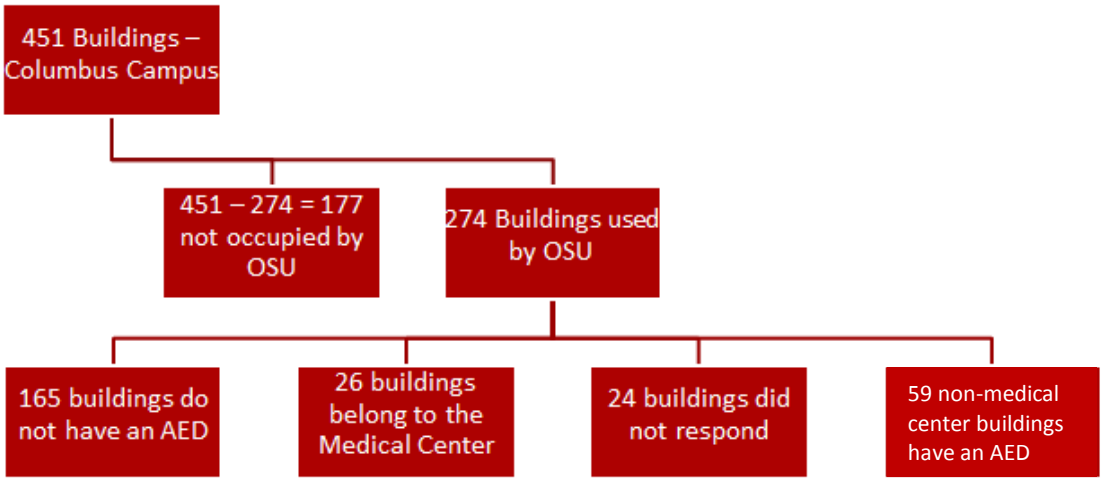


Figure 1: Breakdown of AED Status

The remaining buildings on the Columbus campus include 165 that have been confirmed by the building coordinator as not having an AED, 26 that are part of the medical campus, and an additional 24 buildings that did not reply to inquiries. These buildings are primarily not located on main campus. It is also important to note that The Ohio State University has many construction projects still underway, and that these numbers are likely to change in the future.

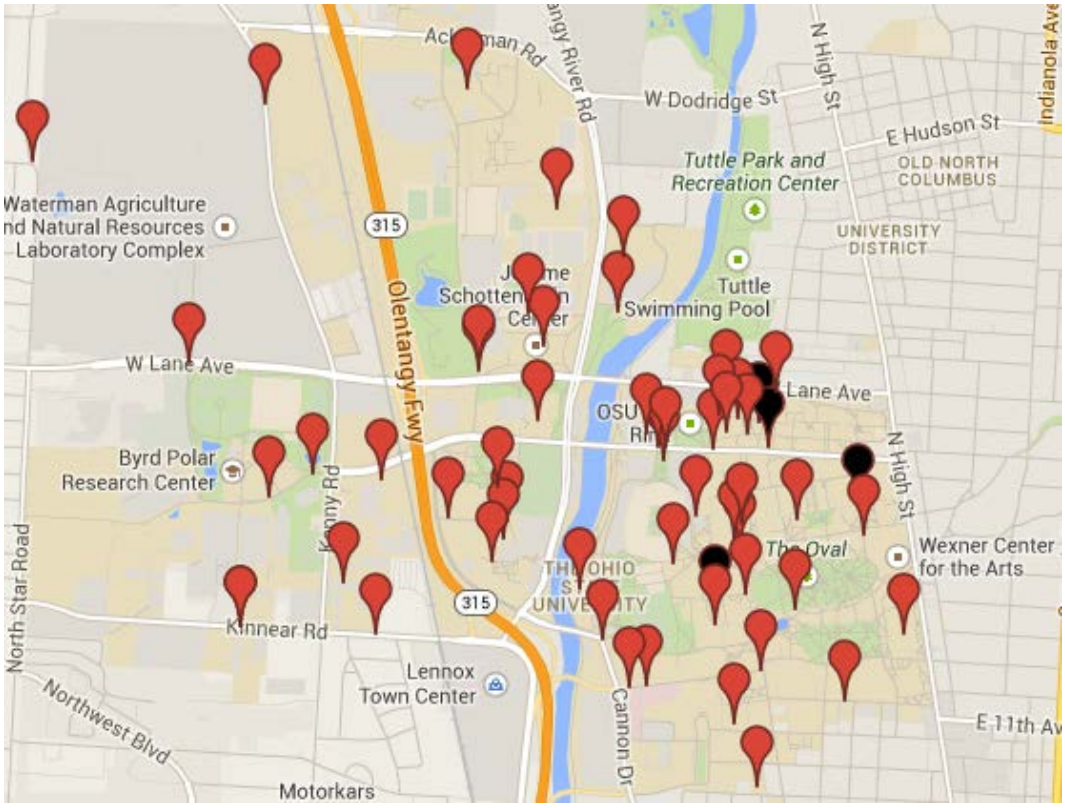


Figure 2: Google Map of AEDs on OSU's Columbus Campus. AEDs controlled by the Wexner Medical Center not shown.

Where are they?

In general, buildings which currently house an AED are spread fairly evenly throughout main campus (Figure 2). Newer buildings or those that have been recently updated, such as those on the business campus, seem to be more likely to contain an AED, whereas many older buildings do not.

Public and semi-public buildings such as the Jerome Schottenstein Center, Postle Hall, and RPAC tend to have multiple AEDs in place and generally do an excellent job of placing them in high traffic areas, as well as having on site staff trained to use them, and well documented maintenance records and schedules.

For a list of known AED locations including address and contact person information, please see Appendix A.

Opportunities for improvement

As mentioned previously, Ohio State does not have a formalized AED management program. If a department wishes to purchase an AED they are free to do so with their own funds and entirely without the university's involvement. They are responsible for deciding which model to purchase and where it should be placed, maintaining the device, and training staff. Fluctuations in the university community stand to complicate this issue. With employee turnover and reassignment, it would be possible to lose track of information such as which department purchased the AED, who is responsible for maintaining it, and who is trained to use it (Hennessey, 2012). Issues like this could be addressed by implementing a campus-wide AED management program, with a centralized database for location and maintenance information.

Mounting locations

According to the American Heart Association (2012) AEDs should be placed in visible, accessible locations, such as near elevators, cafeterias, main reception areas, and on walls in main corridors[2]. While many of the buildings at the Ohio State University comply with this recommendation, this is not true of all. For example, Baker Systems Engineering has an AED located on the 4th floor of the building across from the restrooms. Many people who work or take classes in Baker Systems would not be aware that there is an AED located in the building in the case of an emergency, as few have reason to travel to the fourth floor and there is no signage outside or inside the building indicating the presence of an AED.

People using Enarson Classrooms Building are also unlikely to be aware of and able to locate the AED in this building due to the complex pathway and closed doors between it and the main entrance. When contacted about a possible AED in this building, the building coordinator thought they had an AED but was unsure of the location other than somewhere on the first floor or basement level. She believed that it had been purchased by the Office of the Chief Information Officer and provided the name of a contact person she believed could help. This person did in fact know where the AED was and was very helpful – they sent a map! (See Fig. 3 and 4.)

[2] The American Heart Association also recommends that an AED be placed in secured or restricted access areas. It is this author's assumption that this is so that an AED does not have to be retrieved from outside secured areas and brought through security for use.

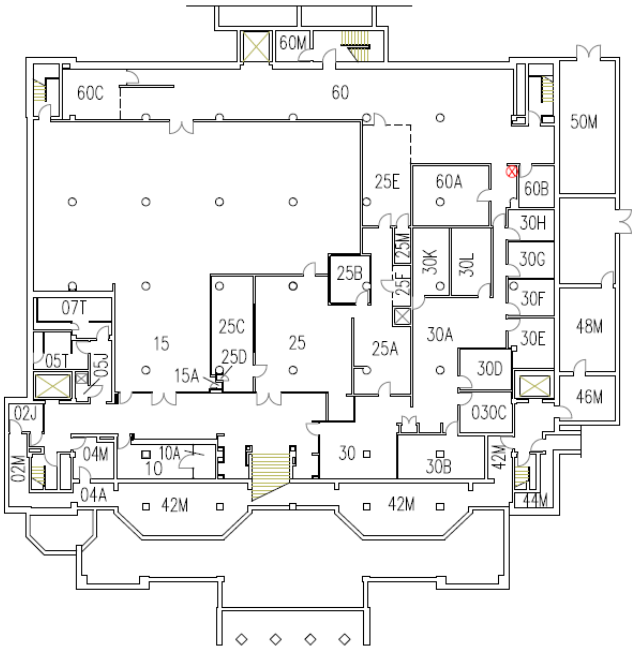


Figure 3: Basement Floor Plan in Enarson Classroom Building

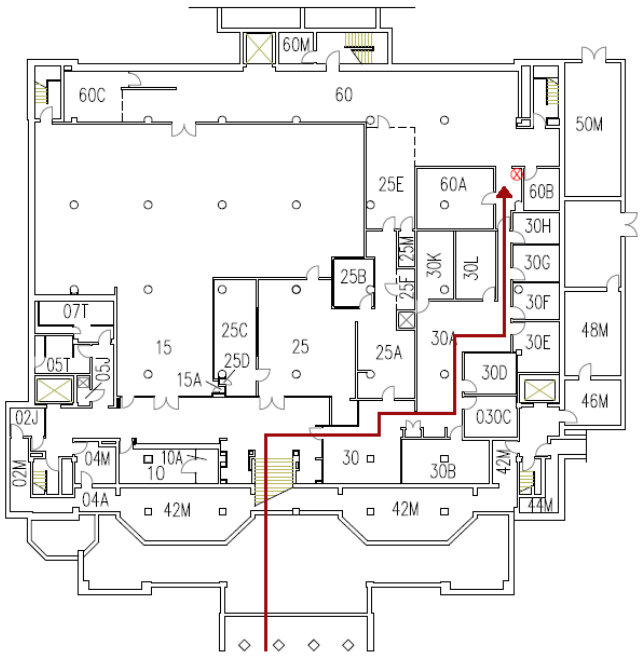


Figure 4: Path to AED

The fact that the Enarson Classrooms building has an AED places it in a group of 20% of buildings at Ohio State, but as you can see, even with a building floor plan this AED would be difficult to find. This is one possible result of the lack of a formalized program, as departments who purchase an AED for their own personal use with their own funds may locate the device in an area that is central to their department, rather than central to the building. Further, if these departments were to move to a new building, the AED would likely move with them.

Variability in quality of maintenance programs

Turfgrass Research Facility

The Turfgrass Research Facility recently allocated some donated funds to purchase an AED for their facility. The building coordinator wrote that they had placed the AED in the main hallway outside of their conference room, which is a good, accessible, high traffic location. However, the seller of the AED had informed them that the only maintenance it required was a new battery every three years (Personal communication, Turfgrass Research Facility, July 1, 2013). Since the status of the battery was visible on the front of the AED when the storage case was closed, this would be easy to monitor. Unfortunately, the seller apparently failed to inform them that the pads expire as well. Most pads are printed with an expiration date, typically two years from date of manufacture.

Longaberger Alumni House

The situation at the Turfgrass Research Facility contrasts greatly with the Automated External Defibrillators located at the Longaberger Alumni House. This location has two AEDs, one located on the first floor near the west doors and the other on the 3rd floor to the left of the elevator. The building coordinator at this location provided information that they replace the electrodes every two years, no matter what, and perform yearly

checks on the battery. The batteries are then replaced as needed, or every 5 years even if it does not indicate that this is necessary. Log sheets are kept with each of the units in this building to monitor maintenance replacements (Personal communication, Jacky Bennett, June 18, 2013).

The inconsistency between these two examples does not come from a lack of concern on the part of the staff at the Turfgrass Research Facility, but rather from a lack of centralized knowledge that could be addressed with a campus- or university-wide management program.

Signage

The new Ohio Union, which was completed in 2010, has 4 AEDs. One AED is located on each of the three floors near the restroom, with an additional AED in a first floor hallway on the East wall in the north east area of the building. The architect clearly took great care to ensure that AEDs in this building were not visually disruptive. They are set back in the wall and are very easy to see, as long as the viewer is perpendicular to their location. However, if the viewer is down a hallway on the same side of the building the recessed location of the AED box combined with the fact that the AED signs do not project out from the wall means that they are nearly invisible from this angle. This is common in other buildings as well.

Lack of knowledge

Community awareness

During the course of this project, many people around campus were contacted both formally and informally about their knowledge of AEDs. Unfortunately, many people were not aware of what an AED was let alone the location of the nearest one. This lack of location knowledge is consistent with the findings of a survey of faculty, administrators, and staff at The Ohio State University conducted in 2012 (Hennessey, 2012). Qualitatively, this lack of knowledge appeared to be true regardless of demographics. Older individuals seemed to be just as unlikely to know what an AED was as younger individuals. If an AED management program is implemented, it should include outreach and education activities aimed at informing the university community of the value of these devices, as well as education on use.

Is there an AED in this building?

The survey carried out by Bryan Hennessey (2012) indicated that only about 12% of faculty and staff at the Ohio State University were aware of an AED in their own building, and less than 5% were aware of an AED in another nearby building. This is consistent with our 2013 efforts to locate AEDs on campus; many people were unable to report whether or not a building had an AED or where it might be located within a building.

Wexner Center for the Arts

One particularly salient example is that of the Wexner Center for the Arts. The Wexner Center contains galleries which are open to the public and is a popular campus destination. The building coordinator provided information that the Wexner Center had an AED in room 159 maintained by the Department of Public Safety. This building was later part of a convenience sample inquiry in which some buildings on the main campus reported to contain an AED were visited in person to confirm the accuracy of this information. The staff members working at the visitors' desk at the time of the visit were unaware that there was an AED in the building and did not know where room 159 was or how to provide directions to this location.

Ohio Union

The Ohio Union is another public building with workers who are not informed about AEDs located in the building in which they work. It was previously known that the Union contained AEDs, but the location had not been reported. As such, it was necessary to visit the building. Due to its location on the ground floor near the east entrance of the Union, the D-Tix counter was a logical first stop. The students working at the desk were not sure what an AED was, and could not help to locate them within the building. They provided directions to an upstairs office, where another student worker at another desk was also unaware that the building contained AEDs, or where they might be located.

Trained responders

As can be imagined from the general lack of awareness, even if a building is equipped with an AED it is often the case that there is no one on site (employed personnel) that has been trained to use it in the case of an emergency. Some AEDs may have warnings which indicate that the unit is meant to be operated by trained responders only, which may dissuade untrained people from attempting to help (Culley et al. 2004).

The library system

Although many buildings are lacking in this regard, Thompson Library will be used as an example. Thompson Library has an AED behind the west security desk on the ground floor. The desk is generally staffed by a student, and we asked if they were trained to use the AED. One of the student workers stated that they [the AED] had step by step directions on screen and were actually really easy to use, so she didn't need to be trained.

Since the American Heart Association addresses the very question "If AEDs are so easy to use, why do people need formal training in how to use them?" in their Q&A section, their answer to this has been provided.

> *An AED operator must know how to recognize the signs of a sudden cardiac arrest, when to activate the EMS system, and how to do CPR. It's also important for operators to receive formal training on the AED model they will use so that they become familiar with the device and are able to successfully operate it in an emergency. Training also teaches the operator how to avoid potentially hazardous situation.* (AHA, 2013)

It is important to note that in the case of the Ohio Union and Thompson Library, the people who were spoken to were student employees. This does necessarily not mean that there are no trained responders on site, but rather that the people who were spoken to at the time were not trained and that they were not aware of any other personnel who were trained.

Honorable Mentions

The Department of Recreational Sports provides a salient example of a well-run AED management program at The Ohio State University. Every Recreational Sports Facility contains at least one well-marked AED. The multi-building complex made up of the Recreation & Physical Activity Center (RPAC), McCorkle Aquatic Pavilion, and Physical Activities & Education Service (PAES) contains 8 AEDs, each marked with a protruding sign so that they can be seen regardless of viewing angle. In addition to their high visibility, there is an AED located on each floor of the complex to ensure that access is always fast and efficient.

While not all staff at these facilities are trained to use the Automated External Defibrillators that have been installed, a student working at the Sports Shop desk did provide the information that all managers are trained in AED use, and that at least one manager is on site at any given time. The fact that trained responders are on site is good, but it would be ideal if all staff who interface with the public were trained so that they could act independently in the case of an emergency rather than having to locate a trained person.

Recreational Sports provides an example of how a well-run AED management program can address many of the issues outlined in the previous section. It is however worth noting that even at RPAC and other buildings with well managed AED management programs, there is no indication either on the outdoor building sign or posted in windows indicating that there is an AED inside the building.

Best practices

Number and Location

People who are interested in starting an AED management program may want to know how many AEDs they need in their building. The truth is that *where* may be just as important as *how many*. The American Heart Association recommends using a three minute response time (from onset of cardiac arrest to defibrillation) as a guideline to help determine how many AEDs are needed and where to place them (AHA, 2012). Important considerations may include time to ascend and descend stairs, whether an elevator is required, how navigable the layout of the building is, and how spread out it is. If a building is many stories high, very spread out, and staircases are located at opposite ends of the corridor, it may be best to locate an AED on every floor. If the building is only a few stories and not very spread out, a single AED in the lobby may suffice.

In addition to the three minute rule, the American Heart Association stresses that AEDs should be placed in visible and accessible locations such as near elevators, cafeterias, reception areas, and main hallways (AHA, 2012).

Signage

Another step that should be taken to increase visibility and awareness of the AED is to ensure that a proper sign is in place. Indoor signs should be located directly above the AED, and should protrude from the wall such that they can be seen head on as well as from a location down the hallway (Figure 4). Each outdoor building sign should have a visible "AED on-site" decal located on it. Signs should follow cognitive engineering principles for legibility.

Figure 5: Three-dimensional indoor AED marker.

Training and awareness

The American Heart Association recommends that all AED users should be trained in CPR as well as AED use. Ohio law, in fact, requires both types of training for expected AED users (HB 717, 1998). It is recommended that companies who wish to institute an AED policy recruit and train employees as responders. Responders should be trained in both CPR and AED use so that a trained person is always available in the case of an emergency. Training should be tailored to the particular brand of AED that is present at the particular facility/place of work/school, because there are important differences in the way different models operate.

After an AED management program is in place, it is important to raise awareness by providing all employees (or students) information about the program. Promotion of the program as well as information on where the devices are located may be dispersed through internal newsletters, posters, magnets, signage or other means (AHA, 2012).

Maintenance

A written checklist should be developed to assess the readiness of AED and supplies, and either the program coordinator or another designated person should perform weekly or monthly visual inspections as a supplement to more detailed regularly scheduled inspections recommended by the manufacturer (AHA, 2012).

Maintenance differs from one model/brand to another, so it is important to determine the maintenance schedule for the individual model that has been purchased before proceeding with a plan. It is common knowledge that an AED will need its battery replaced at some point, but less well known that electrode pads will need to be replaced and software may need to be update. While most pads expire in just two years, installed battery life ranges from 4 to 5 years. Some models may even contain the battery and pads in a single cartridge, such as the Samaritan® PAD 350P Defibrillator (HeartSine, 2013). A log should be kept of all maintenance. Additionally most manufacturers have had some type of recall within the last 5 years; monitoring and taking action in response to relevant recalls is another important maintenance activity.

A university-wide AED management program would help to alleviate the issue of variability in maintenance schedules by providing a recommended (or even required) vendor. The PhysioControl LIFEPAK 1000 is one potential candidate that would be appropriate as this is the standard model for the Wexner Medical Center (Personal communication, 2013). However, the decision to purchase escalating defibrillators (such as the PhysioControl LIFPAK 1000) or non-escalating defibrillators for the non-medical parts of campus should be a topic of discussion.

Implementation at Ohio State

Training

Once the program has been implemented, the first step will be to ensure that there are employees available in all areas of campus who are trained in CPR as well as AED use and can respond to an emergency. Ideally, these employees would be located close enough to the AED in question that locating the employee would not add to the response time. High traffic areas such as the Ohio Union should have multiple responders on site during all operational hours.

Optional training should be well publicized and offered to all students, faculty, and staff who regularly work in or near a building with an AED. Although they may not be targeted, this training should be offered to students, faculty, and staff located in other buildings as well. Ideally, training should be free or low cost.

Getting the word out

Interactive map on OSU.edu

A Google map has been developed which marks the locations of all known AEDs on the Ohio State University Columbus campus, excluding the Medical Center (Figure 2). This map could be easily integrated into the current map located at osu.edu/map. This map already uses check boxes to display different layers on a Google map, such as parking garages and CABS stops. This would be a concise way to present information on AED locations for those who are searching preemptively. The zoom feature of this style of map may allow quick access to certain areas of campus in case of an emergency.

Mobile app

In addition to the interactive Google map, a mobile application could be developed to allow users to locate the closest AED in case of an emergency. The app would use GPS to locate the user in space, and then display the closest three AEDs in order of distance. Information on accessibility would also be provided, such as business hours of the building in which the AED is located. Once an AED is selected, the app will display exact information on the location as well as provide GPS style map directions and voice instructions. This is somewhat similar, though on a smaller scale, to a commercial app, PulsePoint[3], that is available in some communities. The app notifies people who are trained in CPR that EMS is responding to an emergency call, in a location nearby (within walking distance). The app provides the victim's location and the location of the nearest AED(s).

Keeping track

As part of this project, a spreadsheet and corresponding map has been developed to track the location of all know AEDs on the Columbus Campus (excluding Medical Center). From this, an online database can be created. In addition, a survey could easily be developed that will allow the program coordinator to request maintenance information for each AED on an annual or semi-annual basis, from building coordinators or other designated contact person. Non-respondents would be 'red-flagged', in order to ensure annual or semi-annual updates are collected. This type of survey could be implemented using online survey software (such as Qualtrics, for which the College of Engineering has a license). Responses should be collected in spreadsheet format so that they can be easily used to update the database. A second survey should also be sent to all department heads at the university to identify new AEDs on an annual basis.

Conclusion

The population of the US is about 317,000,000[4]. With about 380,000 out-of-hospital cardiac arrests occurring annually in the US, this equates to about 0.11% of the population. If we relate this to the population of the Ohio State University, which includes nearly 30,000 non-student employees and over 60,000 students (OSU, 2013), we could expect between 34 and 100 cardiac arrests each year in this population. This estimate does not include the tens of thousands of people that visit the university in a year.

Given the large number of faculty, staff, and students present on The Ohio State University's Columbus Campus at any given time, a campus- or university-wide AED management program has the very real potential to save

[3] http://pulsepoint.org/app/
[4] http://www.census.gov/popclock/

lives. With 89 AEDs spread through 59 buildings on the Columbus Campus of the university, along with a number of mobile AEDs in campus safety vehicles that patrol the campus, we are off to a good start. However, a campus-wide or better yet a university-wide AED management program such as those implemented by other universities, including some Big Ten schools, would improve the quality of important success factors, such as signage, maintenance, training, and AED placement. The University of Chicago provides a good example of a university program with centralized direction and oversight combined with distributed responsibilities (http://safety.uchicago.edu/pp/emergency/aed.shtml). Importantly, the existence of an effective AED management program would ensure the University was in compliance with existing state law regarding AEDs.

Appendix A: Known AED Locations

Main Campus

Building #	Building Name	Number of AEDs	Location	Address	Contact Person
5	18th Avenue Library (SEL)	1	Circulation Desk	175 W 18th Ave Columbus, OH 43210	Lewis, Brent
280	Baker Systems Engineering	1	4th Floor across from 415 T	1971 Neil Ave Columbus, OH 43210	Watkins, Joe
254	Blackwell Inn at Fisher College	1	front desk	2110 Tuttle Park Pl Columbus, OH 43210	Primmer, Paul
56	Converse Hall	1	Room 353, AFROTC Program	2121 Tuttle Park Pl Columbus, OH 43210	Gooden, Robert
293	Cunz Hall	-	Out of service AED - not mounted	1841 Neil Ave Columbus, OH 43210	Watts, Renee
113	Davis Heart and Lung Research Institute	1	Basement outside 001M - med center	473 W 12th Ave Columbus, OH 43210	DHLRI
296	Drake Performance and Event Center	1	1002 maintained by Business Advancement	1849 Cannon Dr Columbus, OH 43210	Mayhugh, Michael
72	Enarson Classrooms Building	1	Basement between 60A and 60B	2009 Millikin Rd Columbus, OH 43210	Bell, Thomas
28	Faculty Club	1	Ground Level, to right, near guest elevator	181 S Oval Dr Columbus, OH 43210	White, Jeff
249	Fisher Hall	2	2nd and 6th floors	2100 Neil Ave Columbus, OH 43210	Moore, Steve
86	French Field House	1	outside weight room	460 Woody Hayes Dr Columbus, OH 43210	Warren, Shelaine
250	Gerlach Graduate Programs Bldg	-	location not listed: AED being serviced	2108 Neil Ave Columbus, OH 43210	Moore, Steve
229	Ice Rink	1	Room 150 East Wall	390 Woody Hayes Dr Columbus, OH 43210	Johnson, Duke
347	Jesse Owens Recreation Center North	1	on wall immediately to left once entered	2151 Neil Ave Columbus, OH 43210	Talstein, Zachary
348	Jesse Owens Recreation Center South	1	South-East Wall	175 W 11th Ave Columbus, OH 43210	Talstein, Zachary

252	Mason Hall	1	To right when facing east doors, outside room 111	250 W Woodruff Ave Columbus, OH 43210	Moore, Steve
247	McCorkle Aquatic Pavilion	2	Pool Control Office (C76), Leisure Pool (C800T)	1847 Neil Ave Columbus, OH 43210	Talstein, Zachary
82	Ohio Stadium	2	break room, club, additional for events	411 Woody Hayes Dr Columbus, OH 43210	Oman, Janine
161	Ohio Union	4	in hallways next to rooms 1100, 1065T, 2065T, 3065T	1739 N High St Columbus, OH 43210	Armstrong, Robert
253	Pfahl Executive Education Building	2	2nd Floor; 3rd Floor , southwest hall	280 W Woodruff Ave Columbus, OH 43210	Primmer, Paul
245	Physical Activities & Education Services (PAES)	2	A200, A022	305 W 17th Ave, Columbus, OH 43210	Westfall, Jae
24	Postle Hall	6	Across from Rooms 0002, and 3034, by rooms 1039E, 2039E, 2110H, and 4015	305 W 12th Ave Columbus, OH 43210	McGinnis, Blair
266	Riffe Building	1	Pharmacy Library, Front Desk	496 W 12th Ave Columbus, OH 43210	Lewis, Brent
246	RPAC - Recreation & Physical Activity Center	4	B07, B40M, B106D, B226M	337 W 17th Ave Columbus, OH 43210	Talstein, Zachary
251	Schoenbaum Hall	-	location not listed: AED being serviced	210 W Woodruff Ave Columbus, OH 43210	Moore, Steve
76	St John Arena	1	next to room 18	410 Woody Hayes Dr Columbus, OH 43210	Warren, Shelaine
84	Stillman Hall	-	Purchased but not installed	1947 College Rd Columbus, OH 43210	Marritt, Deb
160	Student Academic Services Building	2	1st Floor; 4th Floor	281 W Lane Ave Columbus, OH 43210	Miner, Jack
50	Thompson Library	1	West Security Desk	1858 Neil Ave Columbus, OH 43210	Lewis, Brent
386	Wexner Center for the Arts	1	Room 159	1850 College Rd Columbus, OH 43210	Williams, Jayne
294	Wilce Student Health Center	2	crash carts for staff use	1875 Millikin Rd Columbus, OH 43210	Ford, John
29	Women's Field House	2	behind guest service desk, upper space by front door	1790 Cannon Dr Columbus, OH 43210	Talstein, Zachary

Agricultural Campus

Building #	Building Name	Number of AEDs	Location	Address	Contact Person
298	Agricultural Engineering Building	2	By rooms 202&135	590 Woody Hayes Dr Columbus, OH 43210	McGuire, Kent
282	Galbreath Equine Center	1	Room 1401	685 Vernon Tharp St Columbus, OH 43210	Miller, Craig
180	Goss Laboratory	1	2nd floor across from 203	1925 Coffey Rd Columbus, OH 43210	Armstrong, Robert
340	Kottman Hall	1	second floor across from elevators	2021 Coffey Rd Columbus, OH 43210	McGuire, Kent
80	Sisson Hall	1	By room A100	1920 Coffey Rd Columbus, OH 43210	Armstrong, Robert
299	Veterinary Medical Center	2	Room 1000; Room 0004	601 Vernon Tharp St Columbus, OH 43210	Miller, Craig

West Campus

Building #	Building Name	Number of AEDs	Location	Address	Contact Person
227	930 Kinnear Rd	1	Room 180	930 Kinnear Rd Columbus, OH 43212	Olemacher, Frank
211	Adventure Recreation Center	1	Right of entrance near restroom	855 Woody Hayes Dr Columbus, OH 43210	Talstein, Zachary
349	Jesse Owens West Tennis Center	1	Located on wall immediately to left once entered	1031 Carmack Rd Columbus, OH 43210	Talstein, Zachary
366	Kinnear Road Center Building C	1	401 North Wall	1121 Kinnear Rd Columbus, OH 43212	Lambert, Jamie
368	Kinnear Road Center Building E	1	601 West Wall	1121 Kinnear Rd Columbus, OH 43212	Lambert, Jamie
350	Library Book Depository	1	Front Hallway	2700 Kenny Rd Columbus, OH 43210	Lewis, Brent
217	Recreation Field Support/Utility Building	1	behind main desk	1048 Carmack Rd Columbus, OH 43210	Talstein, Zachary
218	Recreation Service Building	1	behind main desk	2200 Carmack Rd Columbus, OH 43210	Talstein, Zachary
200	Research Administration Building	2	Room 120A; Room 300	1960 Kenny Rd Columbus, OH 43210	Brkljacic, Bojan

North West Athletics Facilities

Building #	Building Name	Number of AEDs	Location	Address	Contact Person
108	Buckeye Field	1	no information on location	2410 Fred Taylor Dr Columbus, OH	Oman, Janine
228	Davis Baseball Stadium	1	no information on location	650 Borror Dr Columbus, OH 43210	Oman, Janine
92	Jesse Owens Memorial Stadium	1	Visitor Hall	2450 Fred Taylor Dr Columbus, OH 43210	Oman, Janine
81	Schottenstein Center	8	see map	555 Borror Dr Columbus, OH 43210	Dickson, Scott
270	Woody Hayes Athletic Center	2	Rooms 145 and 185	535 Irving Schottenstein Dr Columbus, OH 43210	Armstrong, Robert

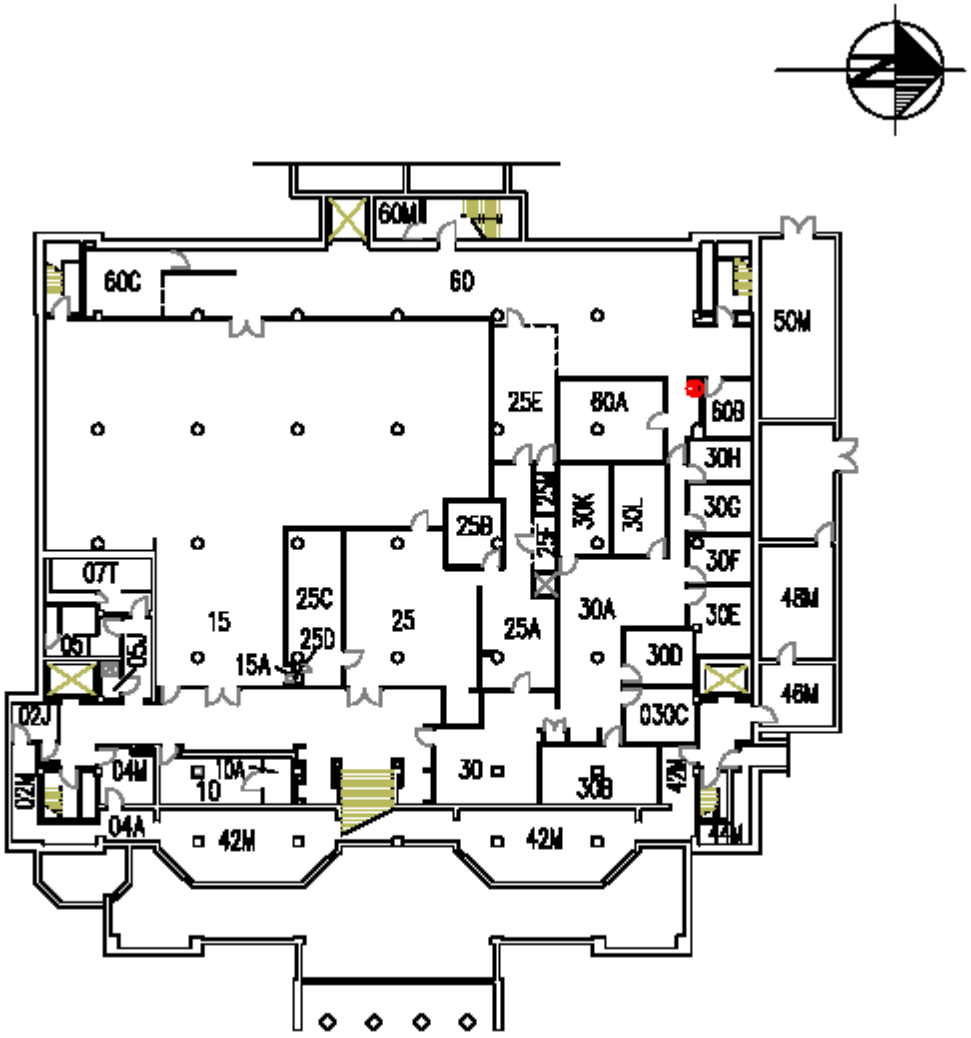
Other

Building #	Building Name	Number of AEDs	Location	Address	Contact Person
385	Child Care Center	1	Meeting Room (#2)	725 Ackerman Rd Columbus, OH 43202	Brandon, Amy
284	Fawcett Center	1	front desk	2400 Olentangy River Rd Columbus, OH 43210	Primmer, Paul
59	Fry Hall	1	Room 119 behind patient reception desk	338 W 10th Ave Columbus, OH 43210	Johnson, Mat
22	Longaberger Alumni House	2	1st Floor, West doors; 3rd Floor, left of elevator	2200 Olentangy River Rd Columbus, OH 43210	Bennett, Jackie
379	TNC	2	1st floor, near 107M; Ground floor in kitchen area	320 W 8th Ave Columbus, OH 43201	Bell, Daniel
983	Turfgrass Foundation Research & Education Facility	1	Main Hallway by Conference Room	2710 North Star Rd Columbus, OH 43221	Williams, Matt

Appendix B: Buildings with no information on AED (positive or negative)

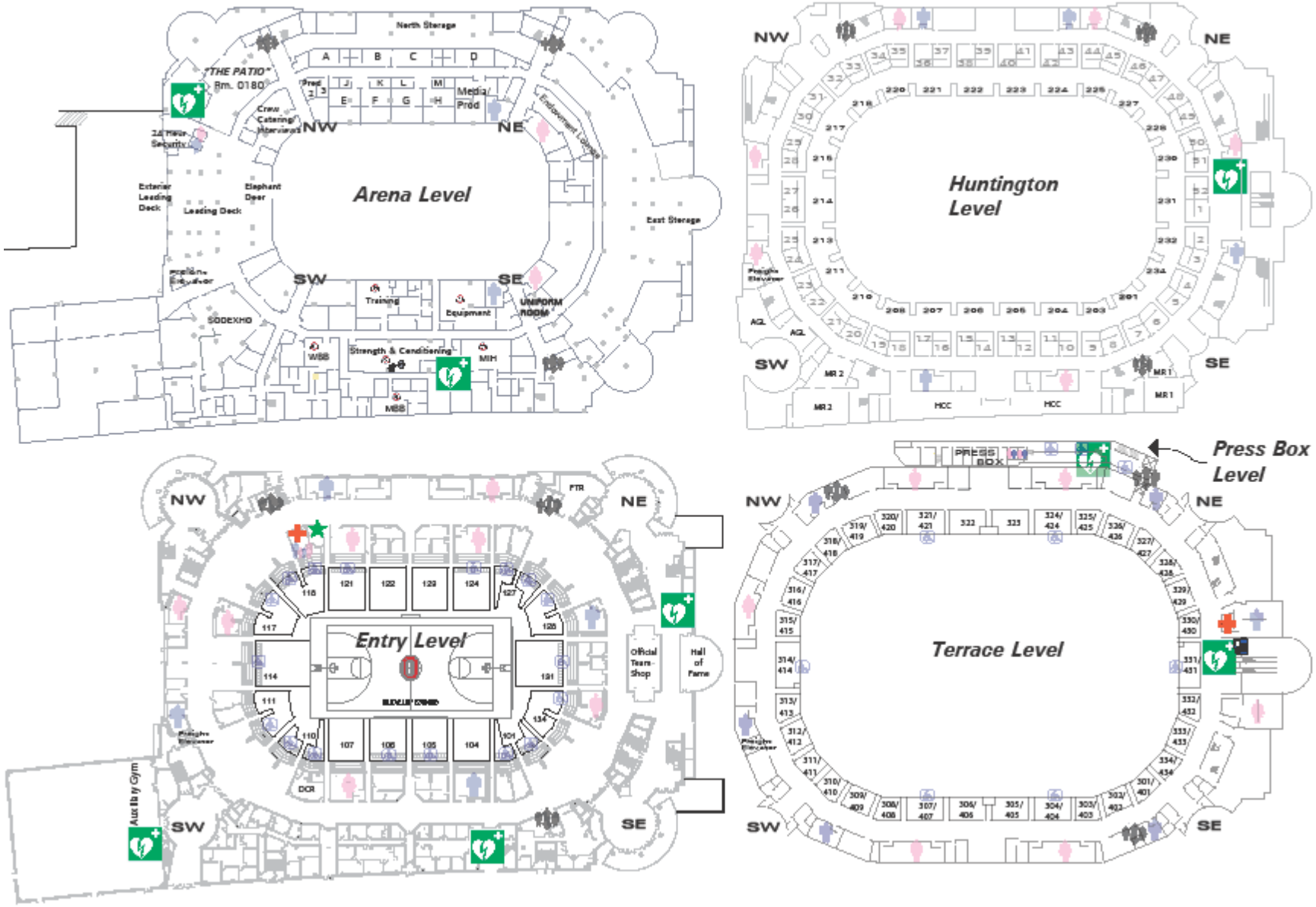
Building #	Building Name	Address	Contact Person
951	1315 Kinnear Rd	1315 Kinnear Rd Columbus, OH 43212	Nelson, Angelika
943	1929 Kenny Rd.	1929 Kenny Rd Columbus, OH 43210	
94	2470 North Star Rd	2470 North Star Rd Columbus, OH 43221	
964	45 W 11th Ave	45 W 11th Ave Columbus, OH 43201	Service2Facilities
902	53 W. 11th Ave	53 W 11th Ave Columbus, OH 43201	
931	960 Kinnear Rd	960 Kinnear Rd Columbus, OH 43212	
952	Agronomy Field Greenhouse	551 Carmack Rd Columbus, OH 43210	
992	Agronomy Turf Research Building	2551 Carmack Rd Columbus, OH 43210	
156	Animal Science Building	2029 Fyffe Rd Columbus, OH 43210	Bentley, Sandy
987	Campus Shop Building	2469 Wood Ave Columbus, OH 43221	
985	Dodridge St. (250 W)	250 W Dodridge St Columbus, OH 43202	
863	Gateway Building C	1590 N High St Columbus, OH 43201	
132	Herrick Dr, 393	1791 Neil Ave Columbus, OH 43210	
338	Independence Hall	1923 Neil Ave Mall Columbus, OH 43210	Service2Facilities
289	Laundry Building	2560 Kenny Rd Columbus, OH 43210	
78	Maintenance Building	2000 Tuttle Park Pl Columbus, OH 43210	Service2Facilities
311	Mount Hall	1050 Carmack Rd Columbus, OH 43210	Tyndell, Terricka
91	Nicklaus Museum	2355 Olentangy River Rd Columbus, OH 43210	
12	Ornamental Plant Germplasm Center	670 Tharp St Columbus, OH 43210	Eckley, Russell
290	Printing Facility	2500 Kenny Rd Columbus, OH 43210	
308	Rightmire Hall	1060 Carmack Rd Columbus, OH 43210	Hines, Scott
932	Surplus	1165 Kinnear Rd Columbus, OH 43212	
898	University Development	1480 W Lane Ave Columbus, OH 43221	
136	Veterinary Medicine Academic Building	1900 Coffey Rd Columbus, OH 43210	Fout, Birdell

Appendix C: Enarson Classrooms Building Floor Plan



BASEMENT FLOOR PLAN
072/ENARSON CLASSROOM BLDG.

Appendix D: Shottenstein AED Locations



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