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| CITY OF APPLETON POLICY | TITLE: Automatic External Defibrillator (AED) All City Facilities (except Police & Fire) | |
| ISSUE DATE: February 2007 | LAST UPDATE: August 2011 October 2012 June 2017 March 2021 | SECTION: Safety |
| POLICY SOURCE: Human Resources Department | AUDIENCE: All City Facilities except Police, Fire | TOTAL PAGES8 |
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I. PURPOSE

The purpose of this policy is to provide guidelines for the use of the Automatic External Defibrillators (AED) which are located in City buildings (except those in Police and Fire) as these departments have their own AED guidelines.

The purpose of this policy is to also follow the provisions of State Statute 895.48 (4)(am) which provides immunity "from civil liability for the acts or omissions of a person in rendering in good faith, emergency care by use of an automated external defibrillator to an individual who appears to be in cardiac arrest". This immunity is provided to the following: the person who renders the care, the owner of the automated external defibrillator, the person who provides the automated external defibrillator for use, if the person ensures that the automated external defibrillator is maintained and tested in accordance with any operational guidelines of the manufacturer and any person who provides training in the use of an automated external defibrillator to the person who renders care.

II. POLICY

The City of Appleton has placed AEDs in key locations of City buildings where people work or visit. A list of the City's AED locations is attached. The goal is to have AEDs readily available for use by City staff and bystanders should someone experience a Sudden Cardiac Arrest (SCA).

The AEDs are intended for use by City staff, members of the public, other first responders, physicians, or authorized emergency medical response personnel.

It is each department's responsibility to notify Human Resources of any new AED that is added to their facility.

~~To comply with Wisconsin Senate Bill 186 section 4, it is Human Resources responsibility to notify Gold Cross or the nearest emergency medical services program of any changes to the locations of the City's AEDs.~~

III. DEFINITIONS

Automatic External Defibrillator (AED) – electronic device used to apply electrical shocks to the heart via paddles or pads placed on the patient's chest.

Electrocardiogram (ECG) – shows a graphic recording of the electrical activity of the heart.

Emergency Medical System (EMS) – the pre-hospital medical system that includes the request for and dispatch of emergency medical response personnel, the field medical treatment of ill/injured patients, and the transport of the ill/injured patients to a hospital for definitive care.

Emergency Medical Responders (EMR) – person trained in emergency medical care (i.e. Police & Fire personnel).

Emergency Medical Technician (EMT) – person specially trained in pre-hospital care of a sick or injured patient.

Medical Director – medical person who oversees the City’s AED program. The Medical Director for the City of Appleton is the Medical Director for Gold Cross Ambulance Service.

Sudden Cardiac Arrest (SCA) – sudden cessation of cardiac output and blood circulation.

Ventricular Fibrillation (VF) – a serious disturbance in a cardiac rhythm.

IV. DISCUSSION

Sudden Cardiac Arrest can happen anywhere to people of all ages and at any time. SCA is usually caused by an electrical malfunction that makes the heart quiver ineffectively in an abnormal rhythm called Ventricular Fibrillation (VF). It sometimes is triggered by a heart attack but can also happen even without any blockage of blood flow to the heart. A lifesaving pulse of electricity must be delivered quickly to restore the heart’s normal rhythm and pump blood throughout the body.

Defibrillation is the only effective treatment for SCA caused by VF. Research has shown that shortening the time between the onset of VF and defibrillation increases the survival rate of victims.

Cardiac Chain of Survival: A person in cardiac arrest will have the greatest chance of survival if the following steps occur:

- Early recognition and early access – The sooner someone recognizes that a person is in cardiac arrest and calls 9-1-1, the sooner advanced medical care arrives.
- Early CPR – This helps circulate oxygen-containing blood that provides oxygen to vital organs until an AED becomes available.
- Early defibrillation – Defibrillation (delivery of an electrical shock using an AED) may restore an effective heart rhythm significantly increasing the person’s chance of survival. According to the American Red Cross and the American Heart Association, each minute that defibrillation is delayed reduces the chance of survival by about 10 percent.
- Early advanced medical care – Trained medical personnel such as EMS personnel and EMTs provide further care and transportation to hospital facilities.
- Integrated post-cardiac arrest care – After the person is resuscitated, an interdisciplinary team of medical professionals work to stabilize the person’s medical condition, minimize complications, and diagnose and treat the underlying cause of the cardiac arrest to improve survival outcomes.

State Statute 895.48 provides immunity “from civil liability for the acts or omissions of a person in rendering in good faith, emergency care by use of an automated external defibrillator to an individual who appears to be in cardiac arrest”.

V. PROCEDURES

This procedure provides guidelines for the use of the AEDs located in City buildings on adults, children and infants. According to the American Red Cross, it is safe to use adult AED pads and

adult levels of energy on a child or infant, or adolescents 12 years or older. If a child is under age 12, provide rescue breathing and/or CPR until emergency personnel arrive.

If you find yourself in an emergency situation, put on your gloves (if available) and follow these recommended steps: the following emergency steps should be taken:

- Check the scene for safety. Check for hazards that could jeopardize your safety or the safety of bystanders. Don't move a person unless there is immediate danger.
- Check the person:
 - If the injured or ill person is a child or infant and their parent or legal guardian is present, get their consent before giving any care beyond calling 911.
 - If the person is responsive and is breathing normally, obtain consent before providing further care and then begin to gather additional information about the nature of the person's injury or illness. Be prepared to provide CPR, first aid and/or call 911.
 - If the person appears to be unresponsive, shout, using the person's name if you know it. If there is no response, tap the person's shoulder (if the person is an adult or child) or the bottom of the person's foot (if the person is an infant) and shout again while checking for normal breathing (steady rising and falling of the person's chest). Check for responsiveness and breathing for no more than 5 to 10 seconds. If the person does not respond and is not breathing or only gasping, carefully roll the person onto his or her back if the person is face-down. If necessary, move the person to a firm, flat surface.
- ~~➤ Check for consciousness by tapping their chest and/or gently shaking their shoulders and asking if they are ok. If the person does not respond and is not breathing or only gasping...~~
 - ~~○ Put the person on his or her back on a firm surface~~
- Call – Have a co-worker or bystander call 911. If you are the only person at the scene, shout for help. If no one arrives, call 9-1-1. You should always call first (before providing any care) if there is an unconscious adult or adolescent 12 years or older as these emergency conditions are often attributed to cardiac arrest. If it is an adolescent under age 12 and they are not breathing and/or have no pulse provide rescue breathing and/or CPR chest compressions for 2 minutes, then go call 9-1-1.
- ~~➤ Check – For signs of life (movement or breathing) in an adult~~
 - ~~1. Airway – open the airway using the head-tilt/chin lift technique. If a neck injury is suspected, pull only the jaw (using the jaw thrust technique) to open airway.~~
 - ~~2. Breathing – Look for signs of breathing for no more than 10 seconds, watching to see if the chest rises and falls. If there are no signs of breathing you must assume the problem is a cardiac emergency and begin CPR immediately.~~
- Care – Full CPR or cardiopulmonary resuscitation is a skill that is used when a person is in cardiac arrest to keep oxygenated blood moving to the brain and other vital organs until advanced medical (EMS) help arrives. CPR involves giving 5 sets of 30 compressions (in about 15 seconds) by compressing the center of the chest at least 2 inches deep for adults and children / 1 ½ inches for infants and then followed by sets of 2 rescue breaths (while maintaining an open airway). If you are unable or unwilling for any reason to give full CPR, you can give compression-only CPR instead. In compression-only CPR, you give continuous chest compressions (2 inches deep for adults and children / 1 ½ inches for infants) with no rescue breaths. Full CPR (30 compressions and then 2 breaths) or compression-only CPR should be continued until an AED becomes available, another responder takes over or more advanced medical personnel takes over.

Hands-only CPR should be done if no pocket mask is available. Start CPR by giving 30 compressions (in about 15 seconds) by compressing sternum at least 2 inches deep for adults and children / 1 ½ inches for infants, then two rescue breaths. CPR SHOULD BE CONTINUED UNTIL AN AED BECOMES AVAILABLE OR MORE ADVANCED MEDICAL PERSONNEL ARRIVES AT THE SCENE.

A. Defibrillation – Prepare to operate the AED when it becomes available

DO NOT use the AED when a patient person shows has any of the following:

- Consciousness
- Normal breathing
- A pulse or other obvious signs of life.

B. Using the AED

1. For safety remember the following:

- DO NOT use near or in puddles of water.
- DO NOT use near flammable agents, such as gasoline (remove clothing that may be contaminated with flammable agents).
- ALWAYS stay clear of the person when delivering the AED shock. Do not touch and do not allow others to touch any part of the person while the AED is analyzing the person's heart rhythm or when delivering the AED's shock.
- It is safe to use an AED when the person is lying on a metal surface, as long as appropriate precautions are taken. Do not allow the AED pads to contact the metal surface and ensure that no one is touching the person when the shock is delivered.
- It is safe to use an AED on a woman who is pregnant.
- Avoid placing AED pads directly over a person's pacemaker or metallic jewelry/body piercings. Instead, adjust AED placement as needed.
- DO NOT touch the electrode surfaces, the person or any conductive material near the person during the ECG analysis or shock

2. Turn on the AED.

3. Follow the prompts as directed by the AED Unit.

4. Dry the person's chest skin if necessary and shave the person's chest hair ONLY if it is so could interfere with proper AED pad-to-skin contact. excessive it prevents a good seal between electrodes AED pads and the skin. Apply electrodes pads according to the diagram on electrode the AED pads package to the victim's bare chest. Press pads firmly to their skin.

5. Stand clear of patient the person while the AED machine analyzes their heart rhythm. Advise others to stand clear of the person as well.

6. If treatment (SHOCK ADVISED) is indicated, make sure no one is touching the person patient (Say "EVERYONE CLEAR") and then press the lighted "Heart" on the AED unit. in center of unit.

7. If no shock is advised, perform full CPR (for two minutes) or compression-only CPR for two minutes.

8. After two minutes of CPR, the AED unit will automatically re-analyze the person's heart rhythm. If "No Shock" is indicated, continue full CPR or compression-only CPR until another responder or professional help arrives and takes over.

9. When the EMS personnel arrive, follow their instructions.

- C. Transferring the patient to the EMS personnel upon arrival
 - 1. Give a summary of the event including:
 - a. Time of event
 - b. Total number of shocks
 - c. Any additional pertinent information about the patient.
 - 2. EMS personnel will take over the resuscitation efforts
 - a. EMS personnel will have their own equipment and may transfer the patient over to their own monitors or continue the use of the attached AED depending on the step of the process.
 - b. EMS personnel will direct ongoing CPR efforts and you may be asked to continue with CPR or to step aside.
- D. Report the event
 - 1. After the event, complete the AED Incident Report (Exhibit 1) and forward to Human Resources Department.
 - 2. The Human Resources Department will notify the City's Medical Director and verify the AED will be available for future use.

VI. NOTIFICATION OF USE

Human Resources will notify the City's Medical Director immediately after each AED use.

A. Incident Review

- 1. The Medical Director ~~should~~ may review a detailed download from the AED.
- ~~2. A review and report of the incident should be provided to the Human Resources Department.~~
- 3. The Medical Director may discuss the incident with the local EMS personnel to obtain feedback.
- 4. The Medical Director may check with the hospital on the patient and provide feedback to the site.

B. Debriefing

- 1. If requested by anyone involved in the emergency occurrence, an incident review and debriefing conducted by Police, Fire or Gold Cross should be scheduled as soon as it can be arranged. ~~(Exhibit 2).~~ An AED Post Incident Critique Form (Exhibit 2) should be completed with a copy of this information forwarded to the Human Resources Department.
- 2. The debriefing is intended to provide support in the following areas:
 - Success rates and expectations during a resuscitation
 - The human dimension of CPR
 - Recognition of successful aspects of the rescue efforts
 - Stress reactions of rescuers, witnesses, and families after resuscitation attempts
 - Identify any areas for improvement

3. Equipment Readiness

After each use, the Parks, Recreation and Facilities Management Department should be notified to check the AED batteries and the related equipment so it can be restocked and checked for readiness. ~~by the Parks, Recreation and Facilities Management Department.~~

VII. TRAINING

A. Required CPR and AED Training

Both OSHA (Occupational Safety and Health Administration) and WI DSPS (Department of Safety and Professional Services) require employers to provide CPR and AED training for the following employees:

- Any employee serving the role as an authorized attendant or entrant when involved with entry into a permit-required confined space.
- Those employees involved in logging operations.
- Employees required to respond to medical emergencies in the workplace.
- Employee members of a dive team.

B. ~~CPR and AED Refresher Course~~ Voluntary CPR and AED Training

The Appleton Fire Department may periodically conduct CPR and AED training courses for those city employees that want this training on a voluntary basis. Training videos from the manufacturers of city-placed AED's will also be available through our intranet.

C. CPR and AED Training Certification and Re-Certification

When CPR and AED training is required, this training will be certified and re-certified according to either the American Heart Association (AHA) ~~and~~ or the American Red Cross (ARC) Guidelines. CPR and AED certifications from both the AHA and ARC are valid for two years from the date of issuance.

VIII. EQUIPMENT MAINTENANCE

The following are suggested steps to maintain the AED:

- A. The Parks, Recreation and Facilities Management Department will conduct equipment checks on a quarterly basis. Batteries and equipment will be replaced as needed.
- B. Replace the AED pads if the date on the pads is expired or ~~they are no longer fully sealed in their original package.~~
- C. Replace CPR supplies after each use of the equipment.

A. Cleaning the Unit

- A. After each use, clean and disinfect the unit with a soft damp cloth using 90% isopropyl alcohol, soap and water or chlorine bleach and water mixture (30ml/liter water).
- B. Do not immerse any part of the unit in water.
- C. Do not use ketones (MEK, acetones, etc.) to clean the unit.
- D. Avoid using abrasives (e.g. paper towel) on the display unit or IrDa port.
- E. Do not sterilize the device.

B. AED Tracking

~~U.S. Federal Law requires the tracking of defibrillators. The City will~~ is responsible to notify its Medical Director ~~and Gold Cross immediately of any changes to the locations of the City's AEDs. if the AED is lost, stolen, or removed in any way from the locations.~~

Exhibit 1

AED INCIDENT REPORT

| | |
|-------------------------|---------------|
| Patient & Incident Data | |
| Patient Name: | Patient Age : |
| Incident Date: | Incident Time |
| Incident Location: | |

| | | |
|-------------------------------------------------------------------------------------|------------------|------------|
| Incident History | | |
| Patient activity prior to incident | | |
| Patient complaints prior to incident | | |
| Was incident witnessed? Yes <input type="checkbox"/> No <input type="checkbox"/> | If Yes, by whom? | What Time? |
| Was CPR started? Yes <input type="checkbox"/> No <input type="checkbox"/> | If yes, by whom? | What Time? |

| | | |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------|
| Assessment and Treatment | | |
| Was patient unresponsive? | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| Were the airway, breathing, and circulation checked? | Yes <input type="checkbox"/> Time: No <input type="checkbox"/> | If yes, by whom? |
| Was rescue breathing started? | Yes <input type="checkbox"/> Time: | |
| Was CPR Started? Yes <input type="checkbox"/> No <input type="checkbox"/> | Time? | If yes, by whom? |
| Was Shock Advised? Yes <input type="checkbox"/> No <input type="checkbox"/> | Time | |
| Was shock #1 delivered? Yes <input type="checkbox"/> No <input type="checkbox"/> | Time? | If yes, by whom? |
| Was shock #2 delivered? Yes <input type="checkbox"/> No <input type="checkbox"/> | Time? | If yes, by whom? |
| Was shock #3 delivered? Yes <input type="checkbox"/> No <input type="checkbox"/> | Time? | If yes by whom? |
| Did the person's heart re-start? | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| Did the person regain consciousness? | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| Return of Pulse: | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| Return of Respiration: | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| EMS arrival at patient? | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| Was the patient transferred to EMS? | Yes <input type="checkbox"/> Time: | No <input type="checkbox"/> |
| Patient condition at EMS hand-off: | | |
| Care given by rescue personnel: | | |
| Time Patient transported: | | |
| Patient transported to: (hospital) | | |

COMMENTS:

Report Completed by: _____ Date: _____

Exhibit 2

**AED
POST INCIDENT CRITIQUE FORM**

COMMENTS:

Report Completed by: _____ Date: _____

Medical Director Signature: _____ Date: _____

Police, Fire or Gold Cross Signature: _____ Date: _____

| City of Appleton AED Inventory (excluding those in Police and Fire) | | | | | |
|---------------------------------------------------------------------|------------------------------------------------------|---------------|---------------|-------------------------------------|-----------------------------------|
| Building | AED Location | Manufacturer | Serial Number | Monthly Inspection (Responsibility) | Software Updates (Responsibility) |
| City Hall | 6 th Floor Lobby | Zoll AED Plus | X04L046541 | Facilities | Risk Manager |
| City Hall | 5 th Floor Lobby | Zoll AED Plus | X04J045902 | Facilities | Risk Manager |
| City Hall | 1 st Floor Lobby | Zoll AED Plus | X06H093080 | Facilities | Risk Manager |
| PRFMD | Office Lobby | Zoll AED Plus | X08H168049 | Facilities | Risk Manager |
| PRFMD | Rec. Programmer's Office | Philips | B16C-00057 | Facilities | Risk Manager |
| Library | 1 st Floor on Cement Pillar in Main Entry | Zoll AED Plus | X04E033372 | Facilities | Risk Manager |
| Municipal Services Bldg. | Hallway by Office | Zoll AED Plus | X08H168091 | Facilities | Risk Manager |
| Transit Center | 1 st Floor Lobby | Philips | B07L-01040 | Facilities | Risk Manager |
| Wastewater Plant | First Aid Room in S Building | Zoll AED Plus | X08H168063 | Facilities | Risk Manager |
| Water Treatment Plant | 1 st Floor Lobby | Zoll AED Plus | X09L434424 | Facilities | Risk Manager |
| Appleton Memorial Park | Jones Bldg. Main Entrance Lobby | Zoll AED Plus | X12H562454 | Facilities | Risk Manager |
| Mead Pool | Mead Pool Managers Office | Zoll AED Plus | X06G090475 | Facilities | Risk Manager |
| Erb Pool | Erb Pool Managers Office | Zoll AED Plus | X07A103774 | Facilities | Risk Manager |
| Golf Course | Clubhouse | Zoll AED Plus | X16I864047 | Facilities | Risk Manager |
| Dance Studio | Studio 2 | Zoll AED Plus | X20C260936 | Facilities | Risk Manager |
| Scheig Center | Front Desk | Zoll AED Plus | X206260842 | Facilities | Risk Manager |
| Appleton Police Department | 1 st Floor Lobby | Philips | B07H-01403 | Ryan Neff | Ryan Neff / Gold Cross |
| Appleton Police Department | Mobile in Squads | Zoll | X07H124702 | Ryan Neff | Ryan Neff / Gold Cross |
| Appleton Police Department | Mobile in Squads | Zoll | X07H124898 | Ryan Neff | Ryan Neff / Gold Cross |
| Appleton Police Department | Mobile in Squads | Zoll | X07H125110 | Ryan Neff | Ryan Neff / Gold Cross |
| Appleton Police Department | Mobile in Squads | Zoll | X07H124859 | Ryan Neff | Ryan Neff / Gold Cross |

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|-------------------------------|------------------|------|------------|-----------|---------------------------|
| Appleton Police Department | Mobile in Squads | Zoll | X07H125113 | Ryan Neff | Ryan Neff / Gold Cross |
| Appleton Police Department | Mobile in Squads | Zoll | X07H125115 | Ryan Neff | Ryan Neff / Gold Cross |