Name: AED use
Primary Actor: person using the AED

- Scope: AED, patient, area surrounding patient
- Level: user goal

Stakeholders and Interests:

- User: wants to use the device to save the patient
- Patient: wants the device to be used to save their life
- First Responders: in charge of responding to calls sent by user or other people nearby
- Minimal guarantee: the AED has safety features installed to insure that it cannot be used if it senses that it will malfunction in the attempt to use it or if it is missing crucial components

Precondition: the AED device is functioning properly
Success Guarantee: the patient is stabilized and taken to a hospital by first responders
Main Success Scenario:

1. User sees a person collapse and suspects cardiac arrest
2. User brings and turns on the AED. it will run a self diagnostic to test whether or not it is fit to use
3. If the diagnostic says it is fit to use, the AED will prompt the user to check patient responsiveness, asking them if they are okay as the user shakes them
4. If patient does not respond, the AED will tell the user to immediately call 911 or get someone else to get 911
5. Next, attach the AED's defib pads to the patient's bare chest, using the pediatric electrode pads for patients under 8 years old or weighing less than 55 pounds. DO NOT waste time trying to confirm patient age and weight. Defib pads will have instructions on how to properly attach them (extensions 5)
6. The indicator light will flash. Do NOT touch the patient at this point. The AED is analyzing the patient's condition to determine the necessary treatment
7. One of two things will occur. The AED will either recommend that no shock be applied, or tell everyone to stand back as it administers a shock
8. After the AED administers a shock or says that no shock is needed, the AED will inform the user to perform CPR, with 2 breaths for every 30 compressions.
9. After 2 minutes of CPR, the AED will inform the user to stop CPR, and will repeat from step 6.

Extensions:
2. The AED gives a response that it is not fit for use

a. Plug in cable: user should attach the electrode cable to the defib pads
b. Unit failed: user should turn the unit off and on again
c. Change batteries: user should change out all 10 of the AED's batteries, located on the bottom of the AED

3. If patient does not respond and AED is a PASS type
    a. If patient is not suspected to have head or neck injury, remove the pass cover from the AED and place it underneath the patient, by the top of their back to lift their shoulders and tilt their head backwards to help them breathe

5. Attaching defib pads
    a. CPR-D (8+ years old only).
        Preparing the patient
        1. Remove all clothing covering patient's chest
        2. Ensure that the patient's chest is dry
        3. If patient has excessive chest hair, shave/clip it to ensure proper adhesion of electrode pads

        Applying the electrode pads
        1. Tear open the electrode package and unfold the electrodes. Place electrodes on patient according to the figure on the package (see figure 5)
        2. Hold the CPR sensor and place the sensor between the nipples and on the middle of the patients breastbone, using the sensor's crosshairs to guide you
        3. Press the CPR sensor with your right hand and pull the #2 tab to peel the protective backing from the electrode. Press the electrode from the center out to make sure it adheres properly to the patient's skin
        4. Press the CPR sensor with your left hand and pull the #3 tab to peel the protective backing from the electrode. Press the electrode from the center out to make sure it adheres properly to the patient's skin

        NOTE: if the victim is large or there is a need to place the electrode under a breast, you may need to tear away the lower pad at the perforated line and extend the pad. Place the pad slightly to the victim's left and below the victim's left breast.

        NOTE: if the victim has an implanted pacemaker or defibrillator in the upper right chest, angle the electrodes slightly to avoid placing the electrodes over either device. Make certain that the CPR sensor maintains a position over the lower half of the breastbone.

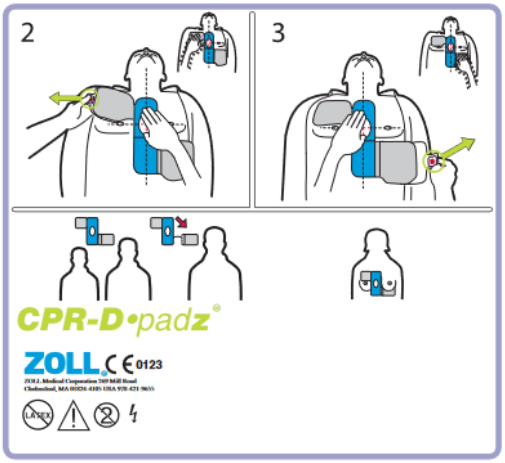


*Figure 5: Placement of* CPR-D-padz

b. Applying Pedi-padz ii (infant/child electrodes)

Preparing the patient

1. Remove all clothing covering patient's chest
2. Ensure that the patient's chest is dry
3. If patient has excessive chest hair, shave/clip it to ensure proper adhesion of electrode pads

Applying the electrode pads

1. Tear open the electrode package and unfold the electrodes. Place electrodes on patient according to the figure on the package
2. Remove the round electrode from its backing material and place on the patients chest (as shown in figure 6)
3. Place your hand on the electrode edge and, using the other hand, gently roll the electrode onto the patient's chest, pushing any air out from beneath the electrode as you go
4. Roll the victim onto his/her chest, then remove the square electrode from its backing and place it on the patient's back (as shown in Figure 6)
5. Place your hand on the electrode's edge and, using your other hand, roll the electrode onto the victim's skin, pushing any air out from beneath the electrode as you go.
6. Roll the victim onto his/her back and follow the Fully Automatic AED Plus prompts

NOTE: The Pedi-padz II (infant/child electrodes) can also be used with ZOLL pacemaker products for up to one hour of pacing (see the M Series Operator's Guide for information about pacing).

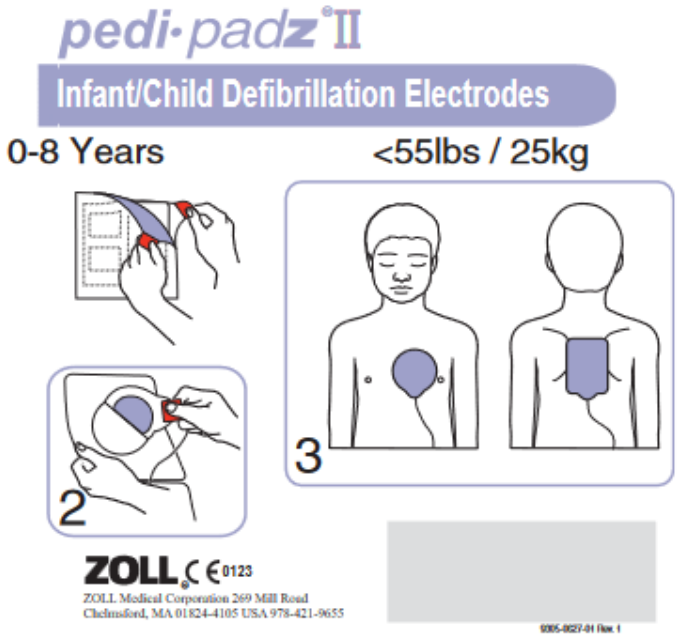


*Figure 6: Placement of Pedi-padz II*

Name: AED maintenance

Primary Actor: person checking the AED
- Scope: AED, user
- Level: user goal

Stakeholders and Interests:
- User: wants to ensure the AED functions properly
- Minimal guarantee: the AED has safety features installed to insure that it cannot be used if it senses that it will malfunction in the attempt to use it or if it is missing crucial components

Precondition: the AED device is available to be inspected

Success Guarantee: the AED has any malfunctions fixed and can now operate as normal

Main Success Scenario:
1. Check the AED for any dirt, damage, or signs of wear
2. Check for any cracks on the AED or any loose parts
3. Verify the electrodes are properly connected to the AED and properly sealed in their package
4. Check the cables to see if there any cuts or exposed/broken wires
5. Check to see if the batteries need replacing, and replace them if necessary
6. Turn the AED on and let it run a self test, verifying that it indicates it is ready for use
7. Check if there are enough extra supplies (razors, masks, gloves, extra batteries)

Extensions:

1. AED has dirt

- clean and disinfect the Fully Automatic AED Plus with a soft, damp cloth using 90% isopropyl alcohol, or soap and water, or chlorine bleach and water mixture (30 ml/liter water)
- Do not immerse any part of the Fully Automatic AED Plus in water.
- Do not use ketones (MEK, acetone, etc.) to clean the Fully Automatic AED Plus.
- Avoid using abrasives (e.g., paper towel) on the display window or IrDa port.
- Do not sterilize the Fully Automatic AED Plus

3. Electrodes are expired
    a. If electrodes are expired, replace them with a fresh pair and verify that they are properly sealed and connected