

## AED Use Case

### Primary Actor

- AED Operator

### Stakeholders and Interests

- Patient - needs AED to work in order to survive
- AED company - needs AED to function to keep selling the product
- Paramedics - needs AED to stabilize patient for long enough for them to arrive

### Precondition

- Someone is in cardiac trouble and needs assistance

### Minimal guarantee

- AED operator will attempt to use the AED to assist the patient

### Success guarantee

- AED operator will successfully operate AED to either completely solve the problem or stabilize the patient for long enough that medical help can arrive

### Trigger

- Patient experiences cardiac trouble and a bystander has access to an AED

### Main Success scenario

1. Bystander sees the patient experience cardiac trouble
2. Bystander retrieves AED device and returns to the patient
3. Bystander turns on the AED
4. Bystander asks someone to call for help and holds the ON/OFF button for 5 seconds to get the AED to perform a self test
5. If the self test is ok, bystander checks responsiveness of the patient by shaking and shouting at them
6. If the patient is wearing any clothing, it is removed for access to the patient's chest
7. Bystander determines if they should use the child or adult sized defibrillator pads
8. After choosing the correct pads, bystander follows the instructions on the chosen pad's packaging and attaches them to the patient
9. Bystander waits for AED to analyze the patient's cardiac status
10. If there is anyone else nearby, and the AED determines that a shock is needed, bystander warns them to stand back
11. If the AED determines that a shock is needed, bystander presses the shock button and waits while AED delivers a shock to the patient
12. Bystander performs cpr on the patient, at a rate of 2 breaths for every 30 compressions
13. After cpr has been given for 2 minutes, return to step 9

### Extensions

3. If AED does not turn on, check if all batteries are present, if they are and AED still does not turn on, a bystander will need to either find another AED or replacement batteries to continue
5. If the AED self test is not ok, attempt to replace the batteries and electrodes, if AED still does not pass self test, find another AED and make a note to contact the building authority about the AED

- 6. If clothing cannot be removed easily, find a sharp object and cut the clothes away for access
- 8. If pads cannot be removed from packaging or the instructions are confusing, the bystander can ask around for help
- 9. If AED cannot determine if a shock is needed, go to step 12
- 13. If at any point medical professionals arrive, bystander should let them take over the process of helping the patient