

Sequence Diagrams

Juan Use Case 1-5

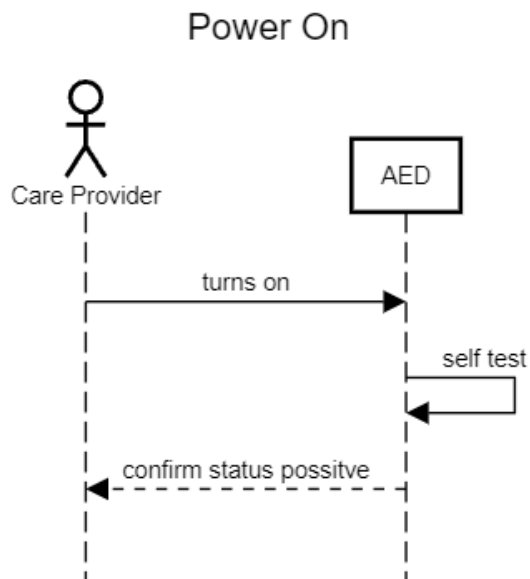
All made using: [SequenceDiagram.org](https://sequencediagram.org)

Use Case 1: Power On

```
title Power On

actor Care Provider

Care Provider->>AED: turns on
AED->>AED: self test
AED-->>Care Provider: confirm status positive
```



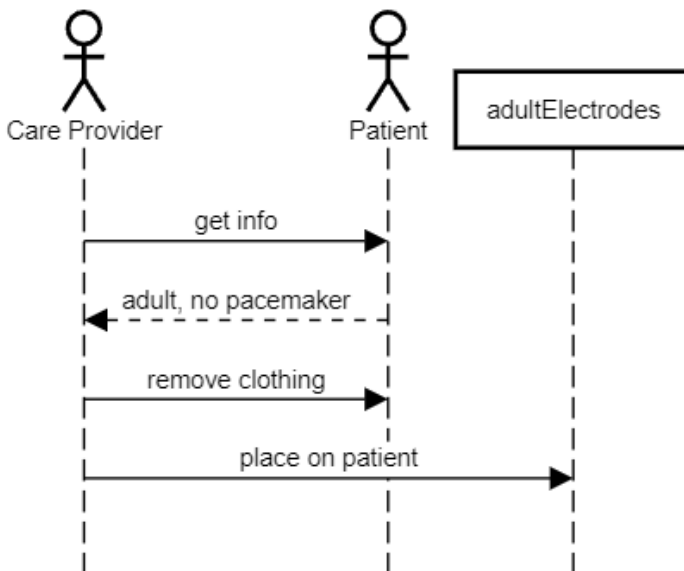
Use Case 2:

```
title Place Electrodes

actor Care Provider
actor Patient

Care Provider->>Patient: get info
Patient-->>Care Provider: adult, no pacemaker
Care Provider->>Patient: remove clothing
Care Provider->>adultElectrodes: place on patient
```

Place Electrodes

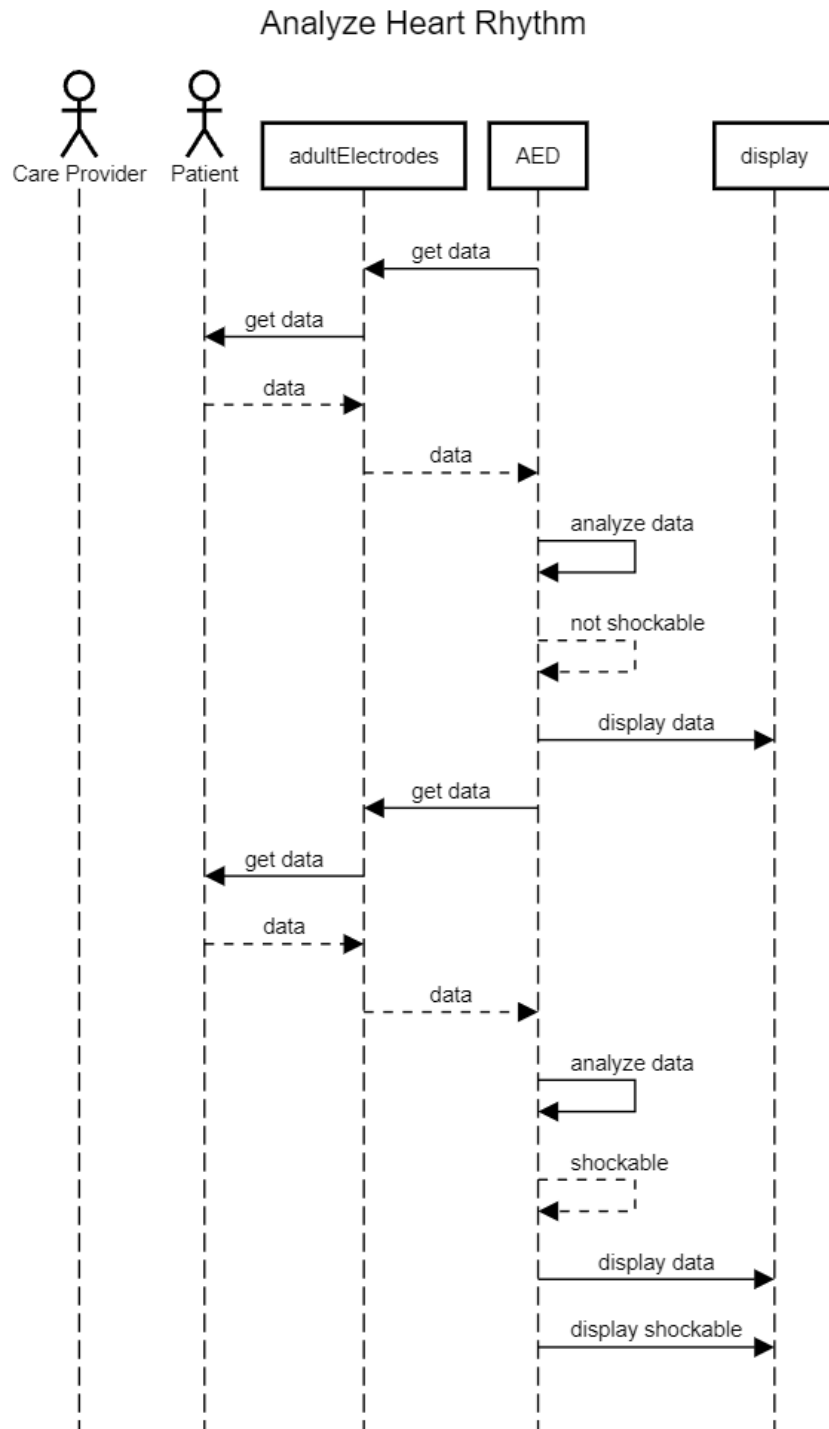


Use Case 3: Analyze Heart Rhythm

```
title Analyze Heart Rhythm

actor Care Provider
actor Patient
participant adultElectrodes

AED->>adultElectrodes: get data
adultElectrodes->>Patient: get data
Patient-->>adultElectrodes: data
adultElectrodes-->>AED: data
AED->>AED: analyze data
AED-->>AED: not shockable
AED->>display: display data
AED->>adultElectrodes: get data
adultElectrodes->>Patient: get data
Patient-->>adultElectrodes: data
adultElectrodes-->>AED: data
AED->>AED: analyze data
AED-->>AED: shockable
AED->>display: display data
AED->>display: display shockable
```



Use Case 4: Deliver Shock

title Deliver Shock

actor Care Provider

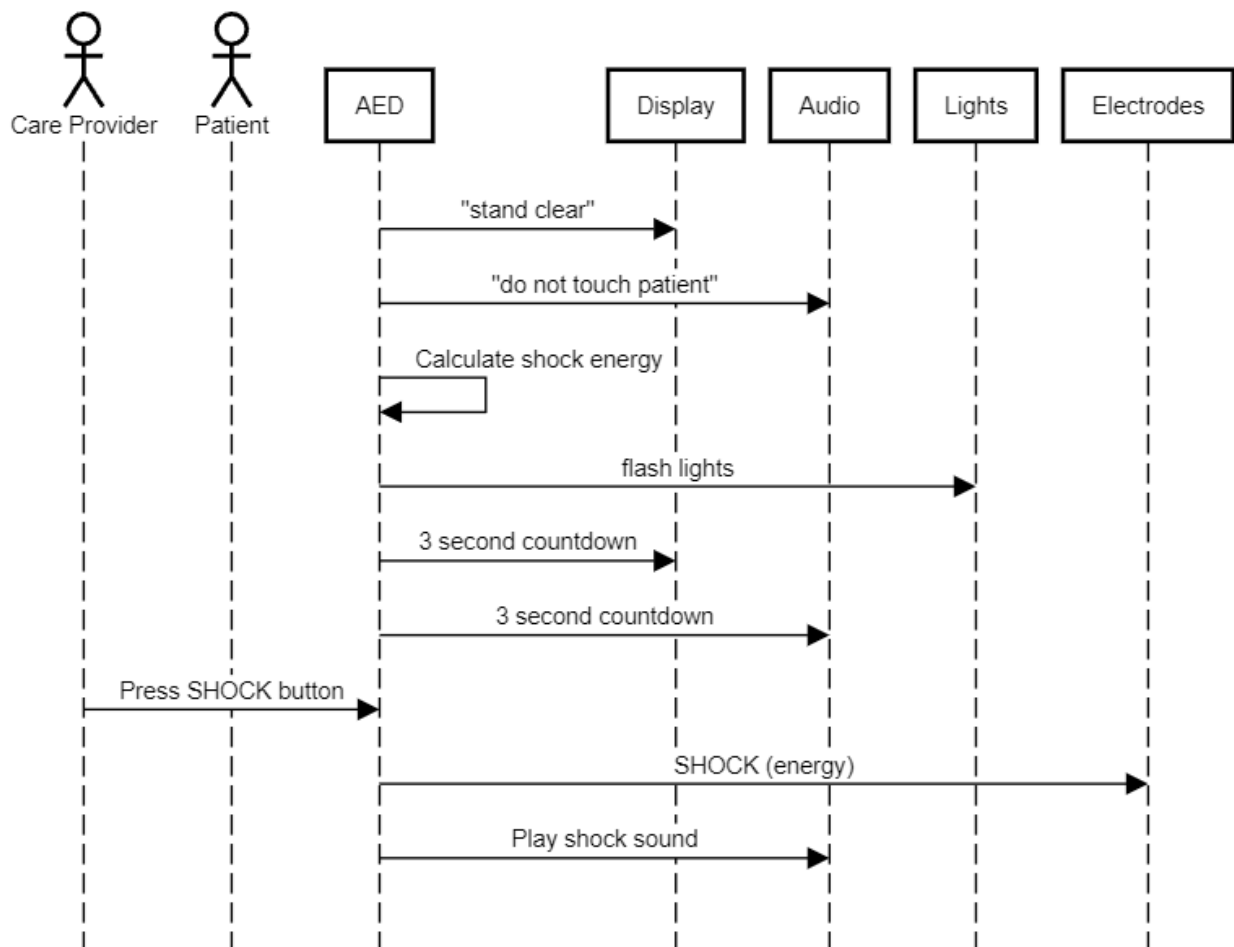
```

actor Patient
participant AED
participant Display
participant Audio
participant Lights

AED->>Display: "stand clear"
AED->>Audio: "do not touch patient"
AED->>AED: Calculate shock energy
AED->>Lights: flash lights
AED->>Display: 3 second countdown
AED->>Audio: 3 second countdown
Care Provider->>AED: Press SHOCK button
AED->>Electrodes: SHOCK (energy)
AED->>Audio: Play shock sound

```

Deliver Shock



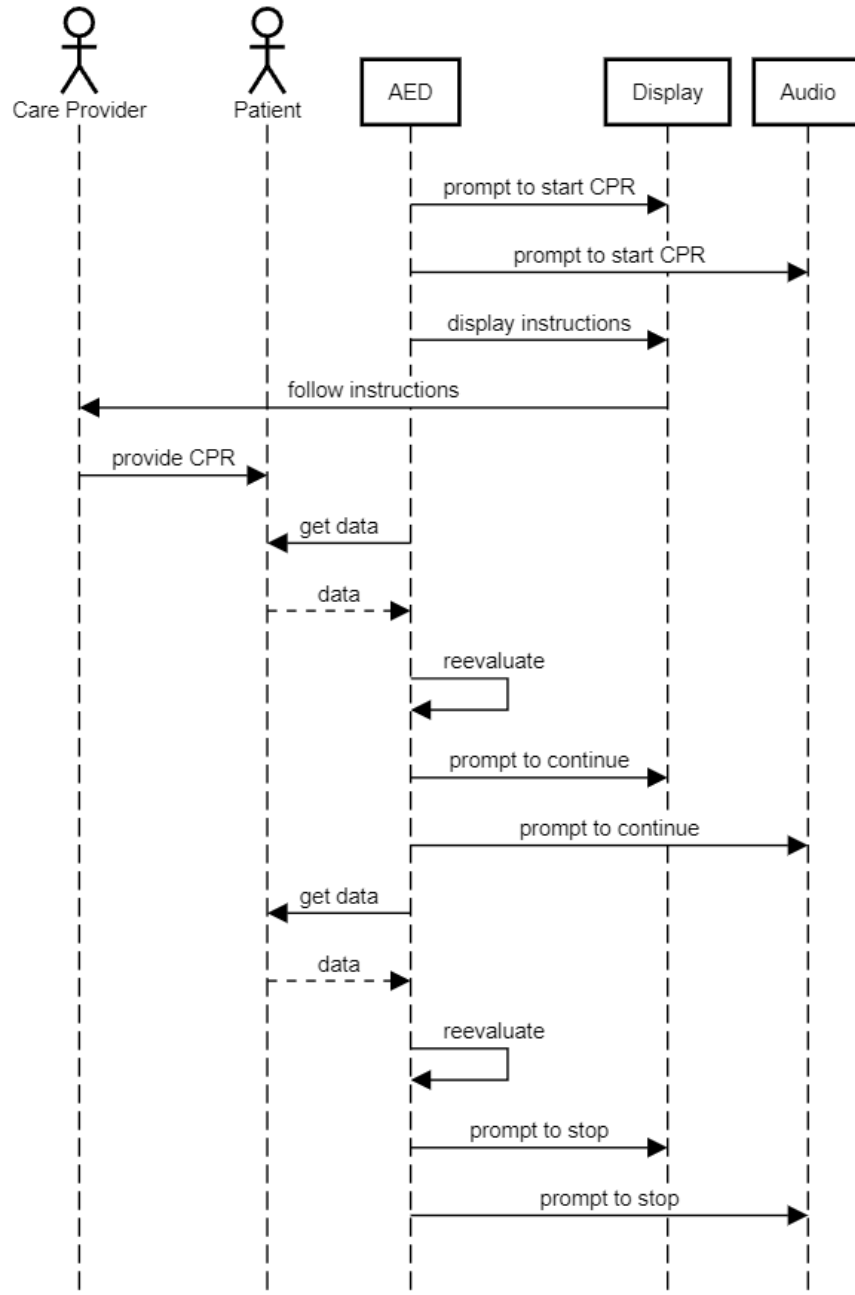
Use Case 5: Give CPR instructions

```
title Give CPR Instructions

actor Care Provider
actor Patient
participant AED
participant Display
participant Audio

AED->Display:prompt to start CPR
AED->Audio:prompt to start CPR
AED->Display: display instructions
Display->Care Provider: follow instructions
Care Provider->Patient: provide CPR
AED->Patient: get data
Patient-->AED: data
AED->AED: reevaluate
AED->Display:prompt to continue
AED->Audio:prompt to continue
AED->Patient: get data
Patient-->AED: data
AED->AED: reevaluate
AED->Display:prompt to stop
AED->Audio:prompt to stop
```

Give CPR Instructions



Cole

Use case 6: Display Device Status

Title: Use Case 6 Display Device Status

actor Care Provider

actor Patient

participant AED

participant Display

participant Electrodes

participant Care Provider

participant Double click to edit text

Care Provider->AED: Power On

AED->AED: self test

AED->Display: Displays Battery Percentage

AED->Electrodes: Check for ready signal

Electrodes->AED: returns ready flag

AED->Display: displays Electrodes ready

Care Provider-->Display: checks percentage

Care Provider-->Display: checks Electrodes ready

Care Provider->Patient: gets information

Patient-->Care Provider: Adult detected. No pacemaker

Care Provider->Patient: Remove Clothing

Care Provider->Electrodes: placed on patient

AED->Electrodes:getData

Electrodes->Patient: getData

Patient-->Electrodes: getData

Electrodes-->AED: sendData

AED->AED: analyzeData

AED-->AED: notShockable

AED->Display: displayData

AED->Electrodes: getData

Electrodes->Patient: getData

Patient-->Electrodes: sendData

Electrodes-->AED: sendData

AED->AED: analyzeData

AED-->AED: shockable

AED->Display: displayData

AED->Display: displayShockable

AED->Display: "stand clear"

AED->Display: "Analyzing patient"

```
AED->Audio: "do not touch patient"  
AED->AED: Calculate shock energy  
AED->Lights: flash lights  
AED->Display: 3 second countdown  
AED->Audio: 3 second countdown  
Care Provider->AED: Presses SHOCK  
AED->Electrodes: SHOCK (energy)  
AED->Audio: Play shock sound  
AED->Display: display Post-shock care  
  
AED->Display: prompt to start CPR  
AED->Audio: prompt to start CPR  
AED->Display: display instructions
```