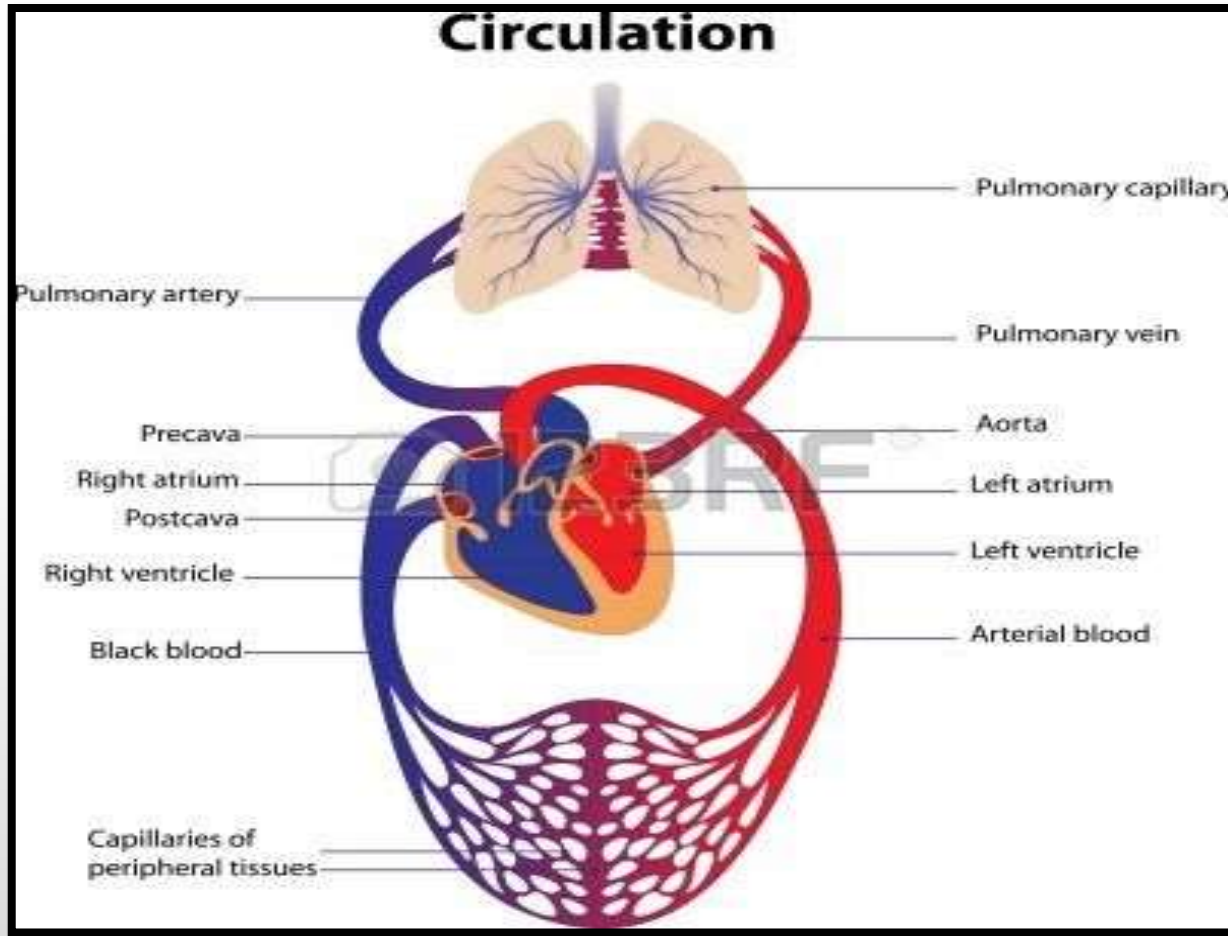


# CPR + AED

Topic 6

# Anatomy and physiology of the circulatory system



# Principles of Resuscitation

**Principles of resuscitation / Determine if CPR is necessary by examining casualty, which include the following:**

- CPR stands for **Cardio-Pulmonary Resuscitation**.
- Cardio refers to the heart and pulmonary refers to the lungs.
- CPR is the process of circulating oxygenated blood to the brain, heart and other vital organs of a person who is unable to perform this for himself. Without this oxygen-rich blood a person will die.
- You only perform CPR on someone who has had a cardiac arrest.

**You can recognise someone who has had cardiac arrest because they will be:**

- **Unconscious**
- **Not breathing**



# Chain of Survival

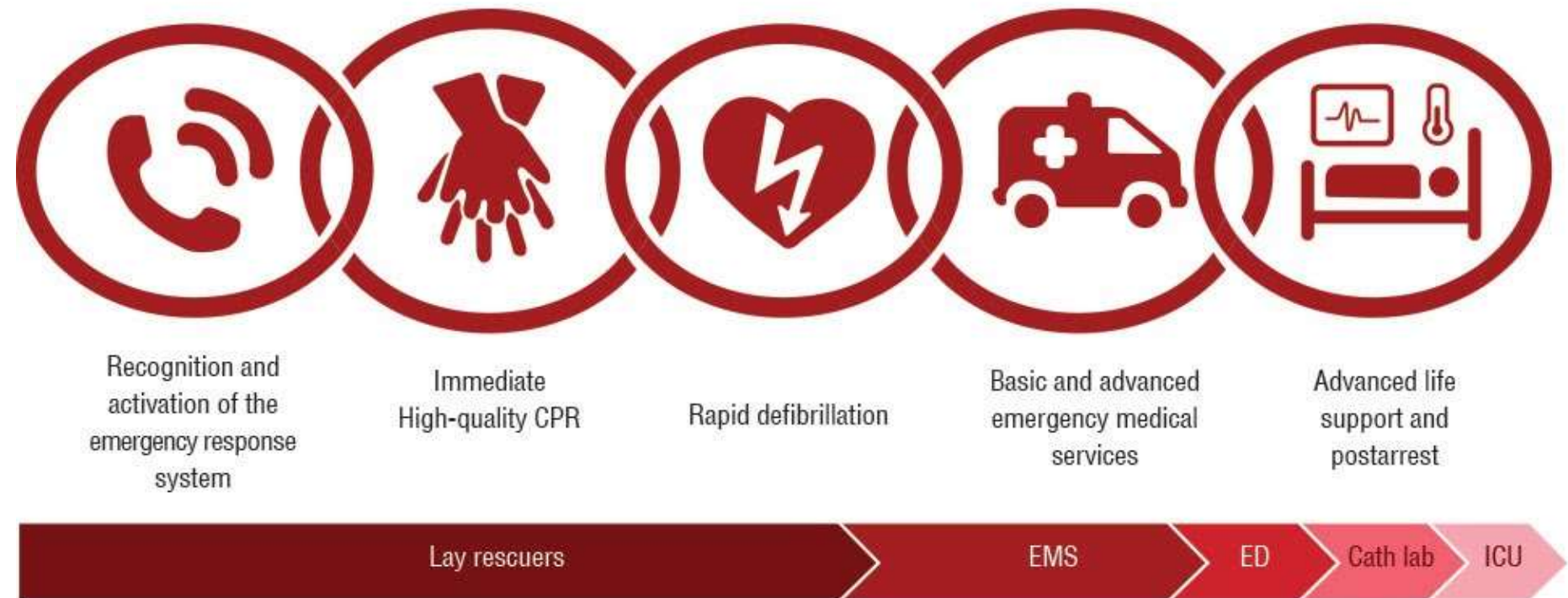
The chain of survival, which include the following links:

**Early Recognition and Activation of Emergency Response, Immediate High Quality CPR, Rapid Defibrillation, Basic and Advanced Emergency Medical Services and Advanced Life Support and Postarrest.**

- It highlights the steps that are critical to achieve successful resuscitation of a casualty having cardiac arrest.
- The success of resuscitation depends upon the activation of these chain in a timely manner.
- Any delay in any of the links will significantly decrease a casualty's chances of survival.
- The first aider is well placed to give a casualty who is in cardiac arrest vital early treatment and as such is a critical element in the chain.



# Chain of Survival



# Early Recognition & Access

**D**

## **DANGER**

Your safety is first!

**R**

## **RESPONSE**

Tap and ask, 'Hello, are you okay?'

**S**

## **SHOUT**

Get someone to call 995 for the ambulance!

**A**

## **AED**

Get the nearest AED

**B**

## **BREATHING**

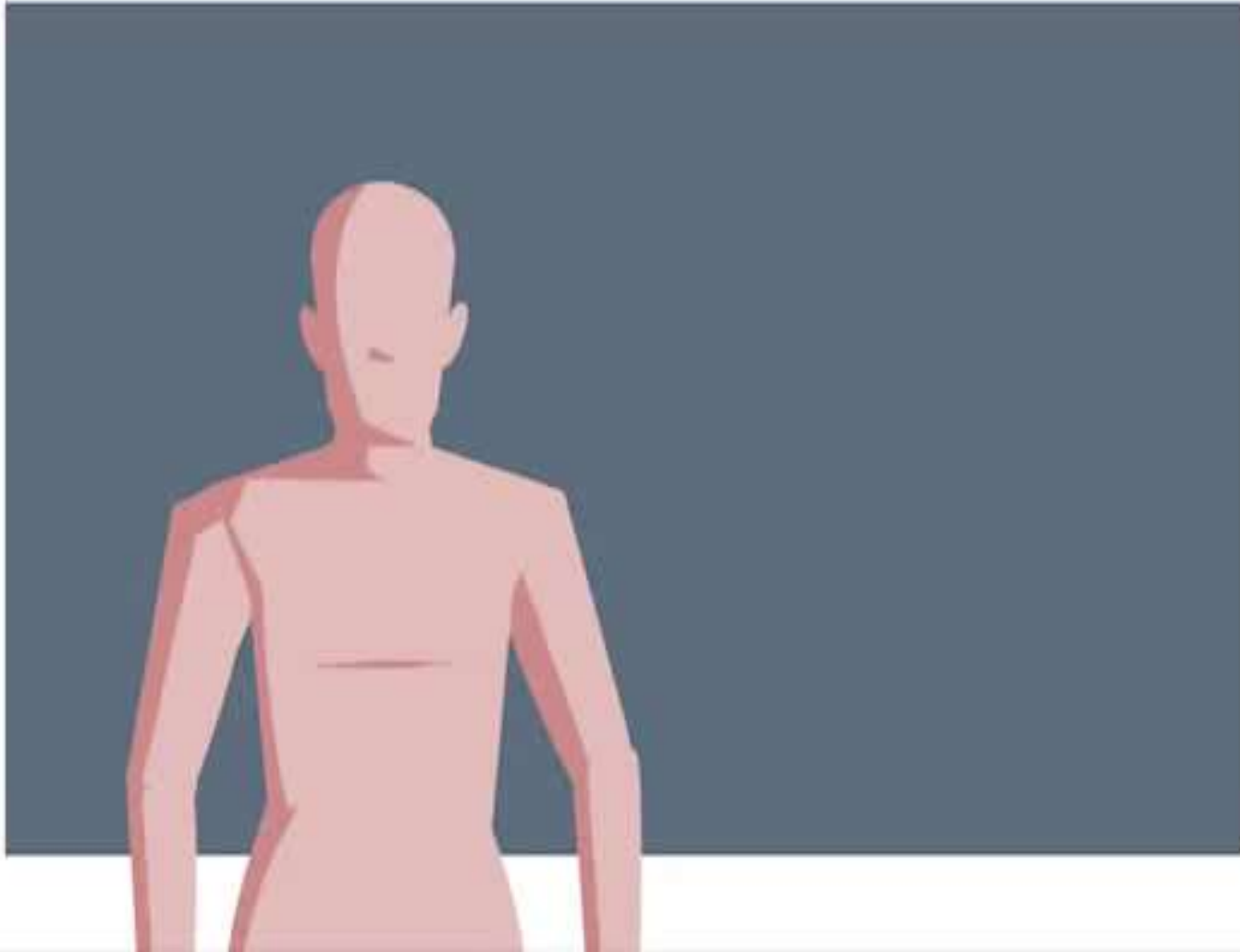
Look for chest movement up to 10 seconds (and pulse).

**C**

## **COMPRESSION (Early CPR)**

Start CPR immediately if there is no breathing/ gasping.

# Agonal Breathing (Gasping)



# Agonal Breathing (Gaspings)





# Techniques of one man CPR

Good quality CPR includes the following:

Compress on the chest at the lower half of the breastbone.

30 Compressions : 2 Ventilations

Depth of Compression 4 - 6cm with full relaxation.

Compress the chest at the rate of 100 to 120 beats per minute.

Continue CPR till; patient shows signs of breathing, paramedic take over or AED prompt to stop.

1&2&3&4&5 & 1&2&3&4&10 & 1&2&3&4&15 1&2&3&4&20  
1&2&3&4&25 1&2&3&4&30

# Introduction to AED

AED stands for **Automated External Defibrillator**.

It is an electronic device that analyses the heart rhythm and if necessary delivers an electric shock, known as defibrillation, to the heart.

- Early defibrillation has successfully resuscitated many victims with cardiac arrest.
- If any of the links in the chain are absent, the chance of survival for the victim decreases.



# Introduction to AED

## Safety Considerations when using AED:

- Ensure no **water**, metal or **flammable gas**

## Use Only:

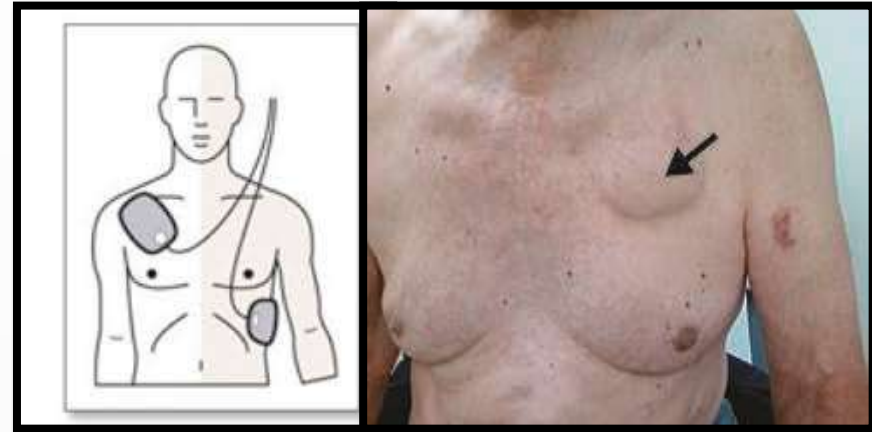
- Unresponsive
- Not breathing



# Introduction to AED

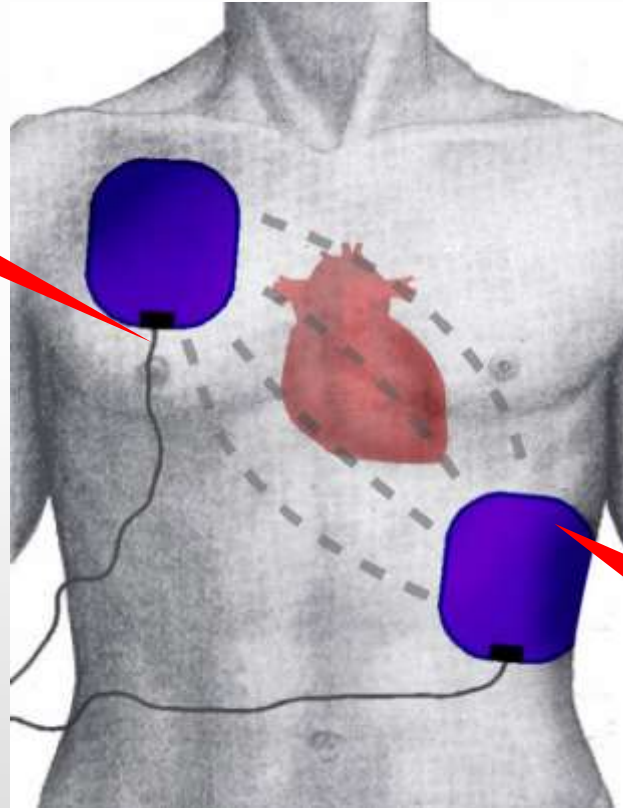
## Chest Preparation and Electrodes Pad Placement:

1. Expose the person's chest.
2. **(H)** If the person has a lot of chest **hair**, you may have to shave it.
3. **(J)** Shift any metal **jewellery** to the side.
4. **(P)** Check the person for implanted medical devices, such as a **pacemaker** and also check for body piercings (Move the defibrillator pads at least 4 fingers away from implanted devices or piercings).
5. **(M)** If the person has a **medicated patch** that's in the way, remove it and clean the medicine from the skin.
6. **(S)** If the person's chest is wet (may due to **sweat**), dry it.
7. Place one pad on the right side of the person's chest below the collarbone. Place the other pad below the left armpit (Follow diagram on the pad).



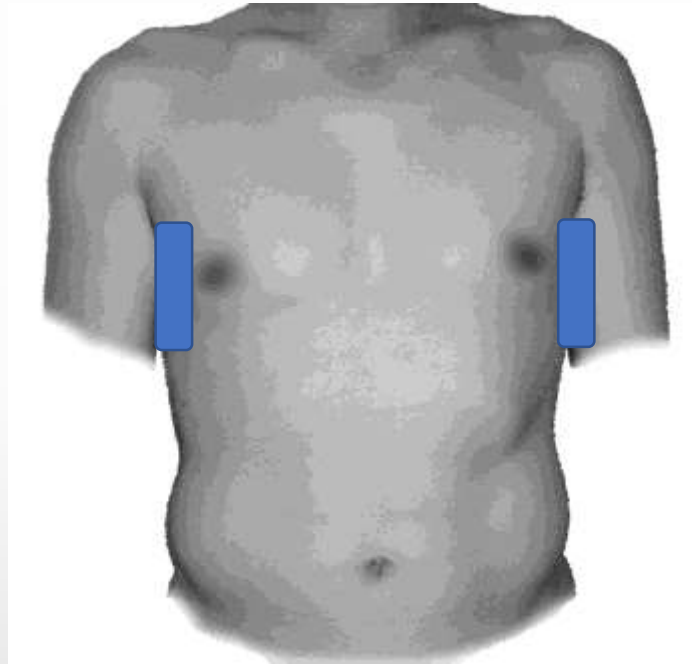
# Pads Placement

Sternum Pad  
Below right collarbone



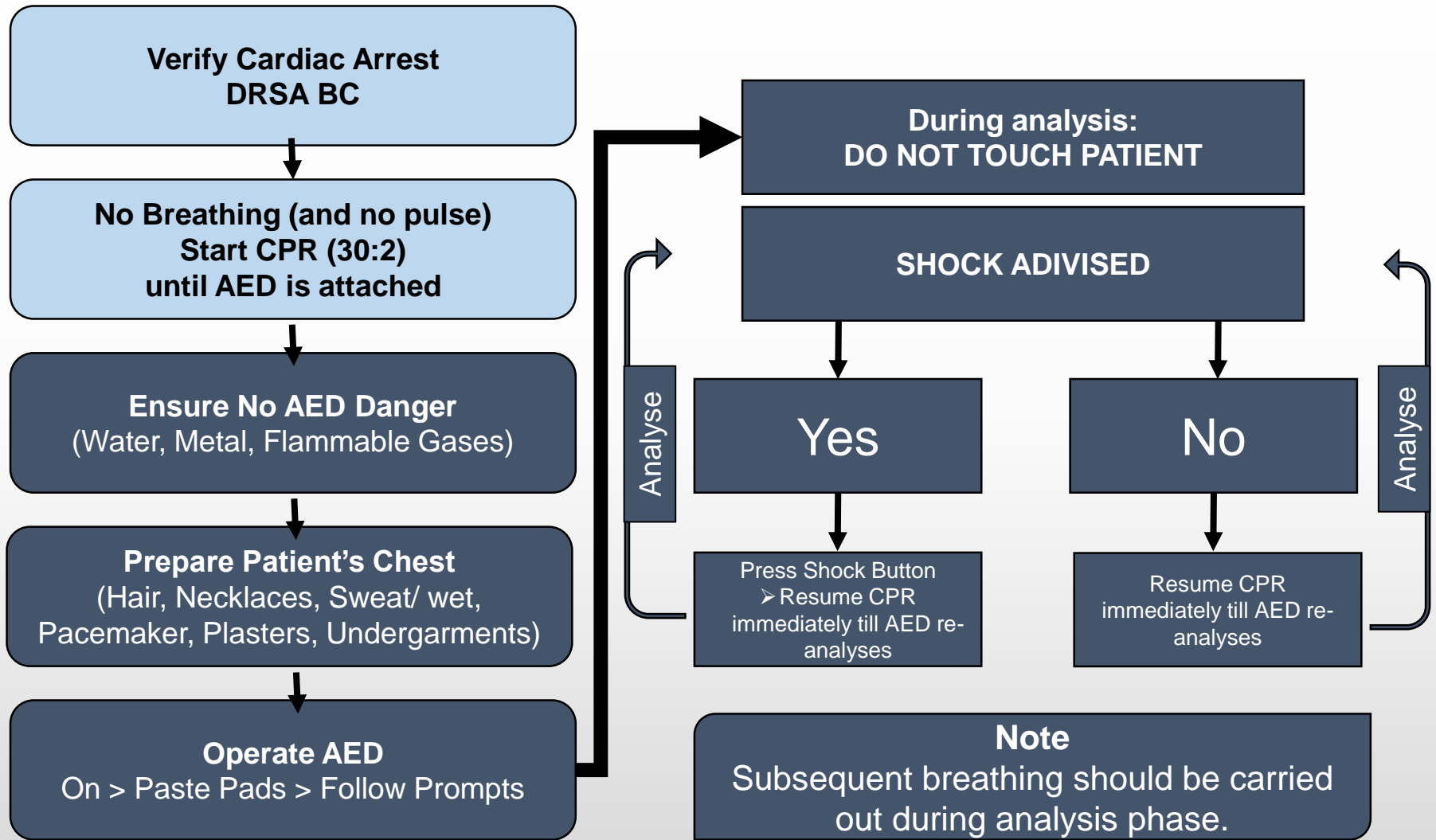
Apex Pad  
Below left nipple at the outer left  
chest wall

# Alternative Pads Placement



Bi - axillary  
**Alternative**

# AED Protocol



# Handing Over to Paramedics & Housekeeping

1. When paramedics arrives, let them take over and only assist when needed.
2. Return the used AED device to person in charge and inform them the items to be replenished.
3. Be prepared to exchange details & particulars with the ambulance crew, police officers and/or the owner of the AED.





**Thank you.**