

# **BRONZE MEDALLION**

## **PUA21010 Certificate II in Public Safety (Aquatic Rescue)**

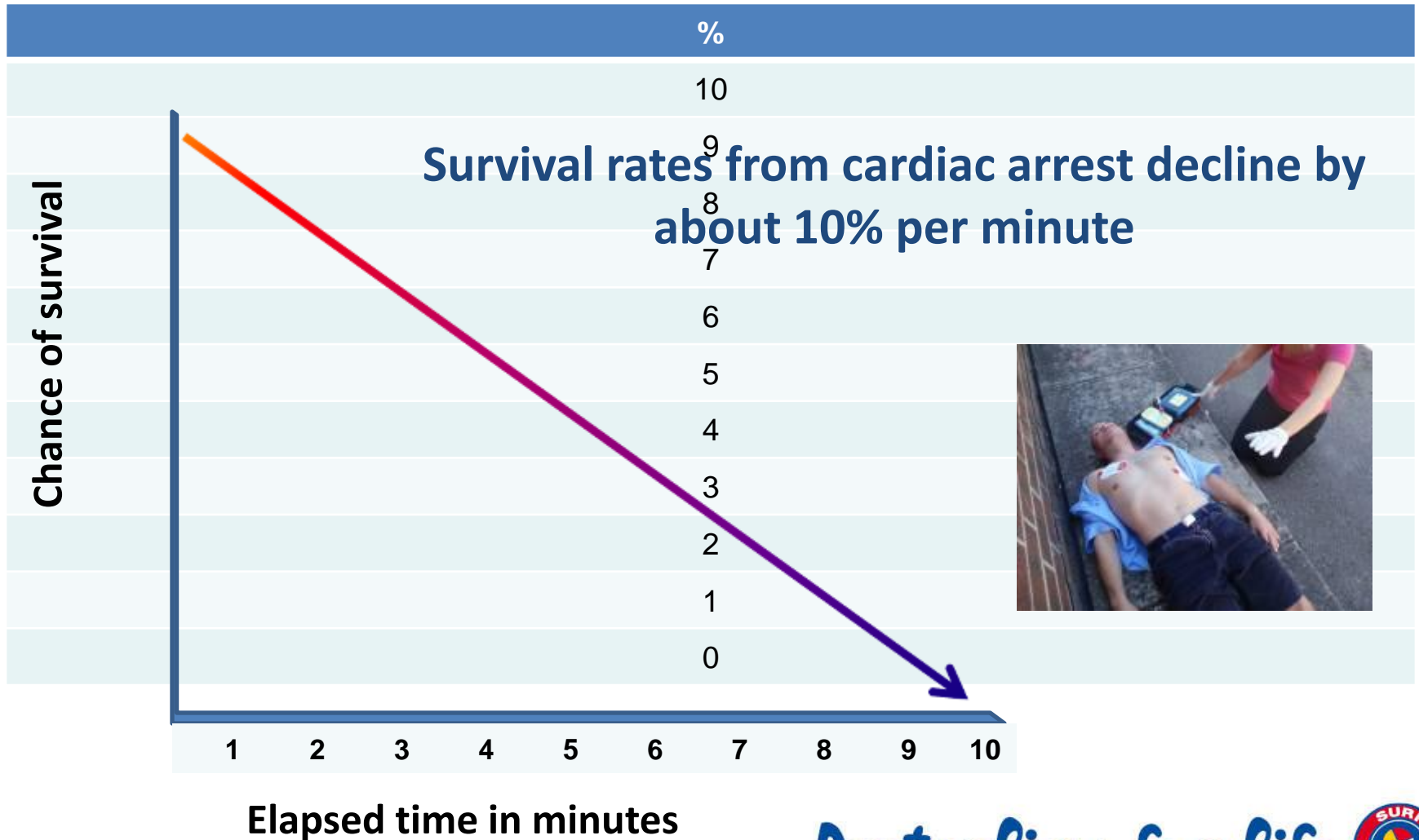
### **DEFIBRILLATION AND BASIC OXYGEN**

#### **Chapter 5**

# Learning outcomes

- What is defibrillation?
- Set-up and use of defibrillators
- Oxygen aided resuscitation
- Oxygen therapy

# Why use defibrillation ?



# Defibrillation

- Defibrillation is used to restore a normal rhythm to the heart
- An automated external defibrillator (AED) is used when a casualty is not breathing and not responsive
- AED's do not replace CPR, both techniques are used together

Turn the machine on



Apply the pads



Respond to the prompts



# What is an AED ?

## Automatic external defibrillators (AED's) are:

- Portable devices
- Able to recognise shockable rhythms in a patient in cardiac arrest
- Able to deliver an electrical shock to attempt to revert the heart back to its normal rhythm



### ***SLSA Policy :***

***An AED can be used on children aged 1 and above. If the AED has a child setting this should be used.***

# Defibrillation process

## To prepare the casualty:

- Expose the casualty's chest
- If necessary shave chest where the pads will be placed
- Dry casualty's chest
- Remove any medication patches in pad area
- Remove conductive jewelry around the chest/neck area
- Pads 8 cm away from pacemakers

# Safety precautions

A safe working environment must be created before defibrillation can occur. The three danger areas are:

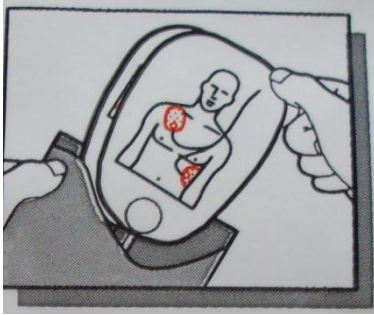
- **Contact**
  - No person to be in direct or indirect contact with the casualty when shock is delivered “I’m clear, your clear”
- **Conduction**
  - No conductive items near or on the casualty, including:
    - **Fluids, metal, body fluids on the casualty’s chest (sweat, blood, etc)**
- **Explosion**
  - Oxygen equipment, minimum 1m away
  - No combustible gasses/vapors
  - No naked flames
  - No flammable substances on clothes

# Defibrillator components



Towel/ Chamois

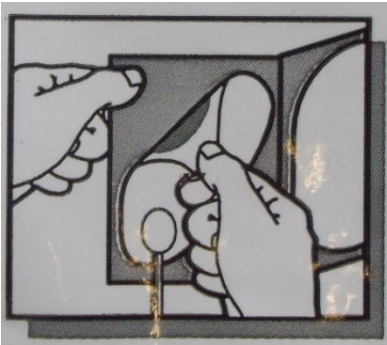
# Pad placement



Remove Pads  
from foil packs

Position pads as shown

- Use rolling motion
- No air bubbles



Peel pads from  
backing



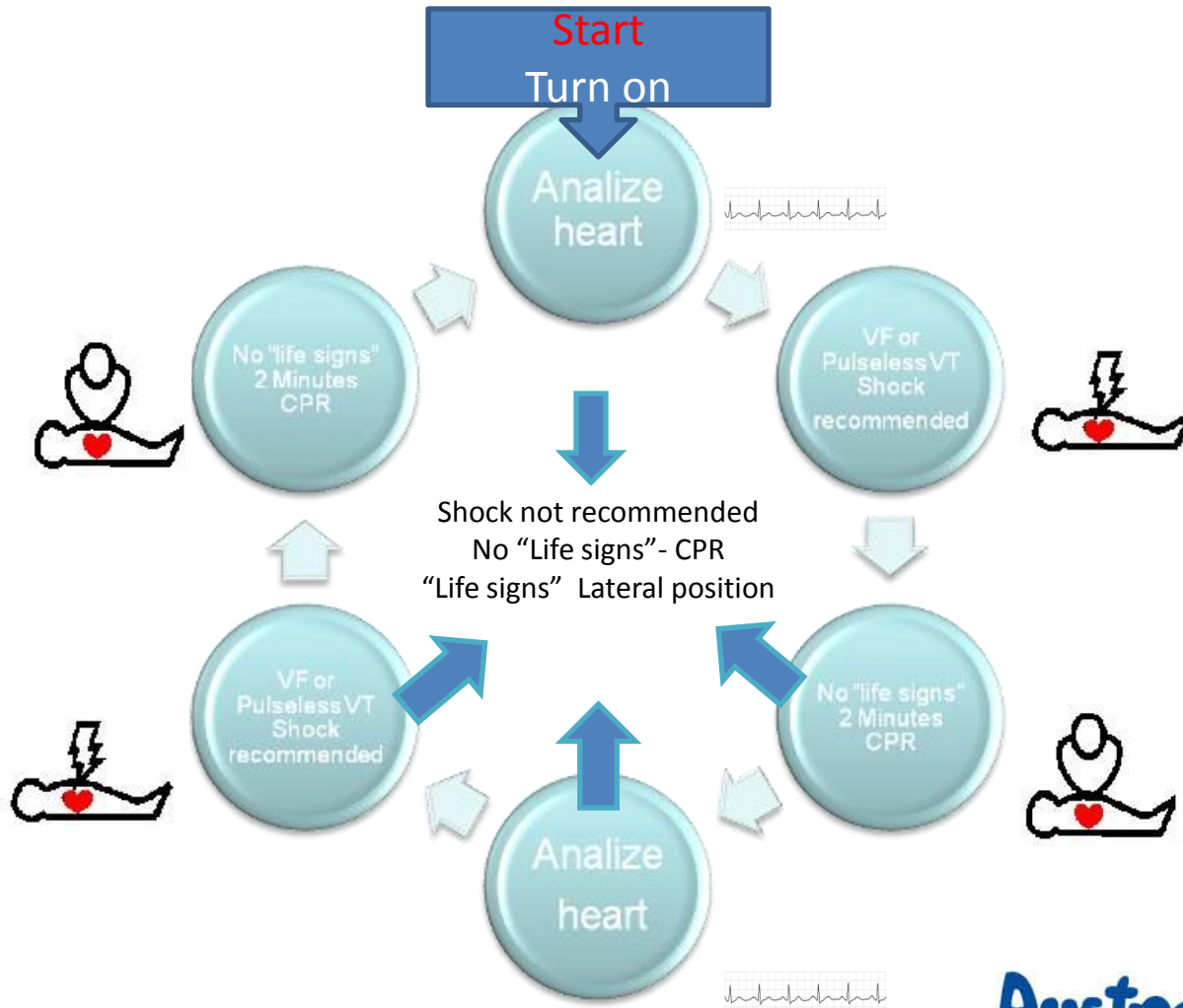
## Note:

Do not remove pads after a patient starts breathing again.

Do not place pads over medication patches

Ensure pads are at least 8cm away from implanted pacemakers

# Shock protocols as recommended by ARC



# Why use oxygen?

**Oxygen assists most patients who require resuscitation or who are recovering from injury or trauma**

- Increases oxygen Uptake ( **concentration in the lungs**)
  - Therapy setting 8L per min: Increases uptake of oxygen from 16% > 45%
  - Resus setting 14-15L per min: Oxygen >50%
- Promote recovery in most First Aid situations
- Minimise cross infection risks (no mouth to mouth/mask)



The oxygen equipment policy is located on the SLSA website at: [www.sls.com.au](http://www.sls.com.au)

# Oxygen - who may benefit?

Unconsciousness



Chest pain



After resuscitation

Shock

Hyperventilation

Circulatory distress

Anaphylaxis



Injuries

Asthma

Blood loss



Shortness of breath



Severe pain

Not breathing



# Oxygen equipment



# Safety precautions

Oxygen equipment must be checked before patrol by a qualified Advanced Resuscitation award holder

- No open flames, cigarettes
- No grease or oil with oxygen equipment
- Keep oxygen equipment clear of defibrillator
- Store oxygen bottles laying flat or secured standing upright
- Store oxygen in a cool, well ventilated place



# Administering oxygen therapy

- Select therapy mask and remove from packaging, attach to tubing and unit
- Turn up flow rate to be detectable
- Secure mask over patient's nose and pinch metal noseband
- Reassure the patient

**If the patient does not want to use the mask. Remove the mask and direct oxygen flow around the mouth and nose**

## Unconscious patient:

- Administer therapy in the Lateral position



# Mouth to mask with oxygen

Used when:

Rescuer is not ART qualified or airbag is not working correctly.



Thank you

Australian for life. 