Bart's City Life Saver

Adult, Baby and Child Basic Life Support and Automated External Defibrillator training course

Part 1 - Adult BLS and AED familiarisation

Objectives

By the end of part 1 of this course, you will be able to:

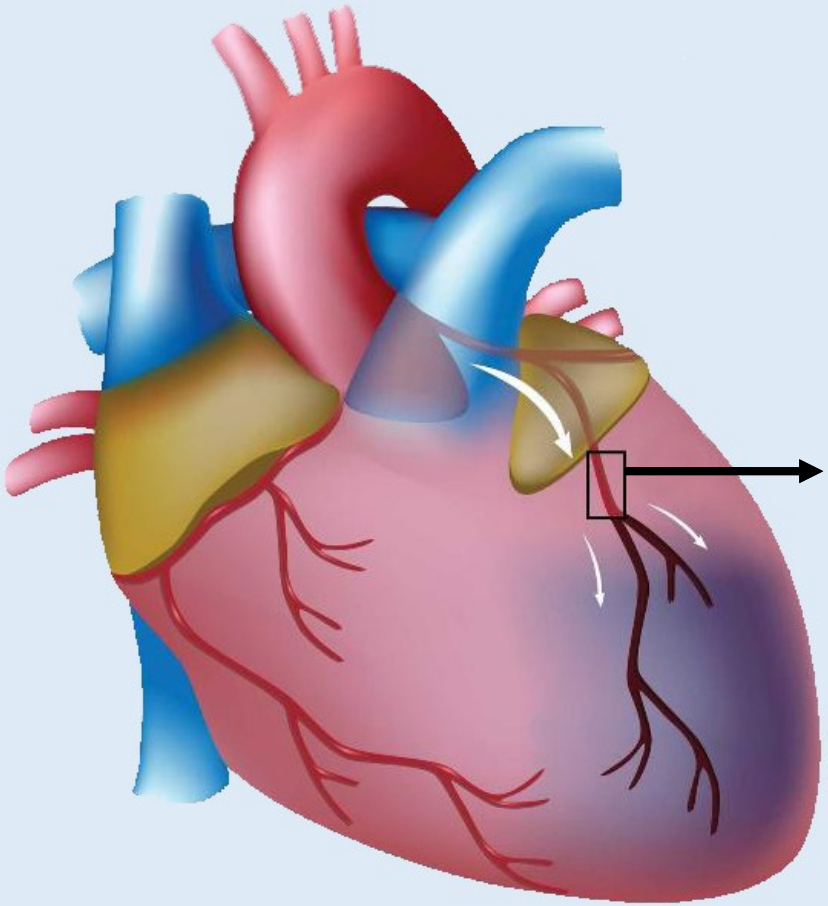
- Explain the cause, signs, symptoms and treatment for a heart attack.
- Understand how to turn an unconscious casualty who is breathing normally into the recovery position.
- Understand how to perform effective basic life support (BLS).
- Recognise and understand the safe use of an automated external defibrillator (AED) and acknowledge its role in cardiac arrest.

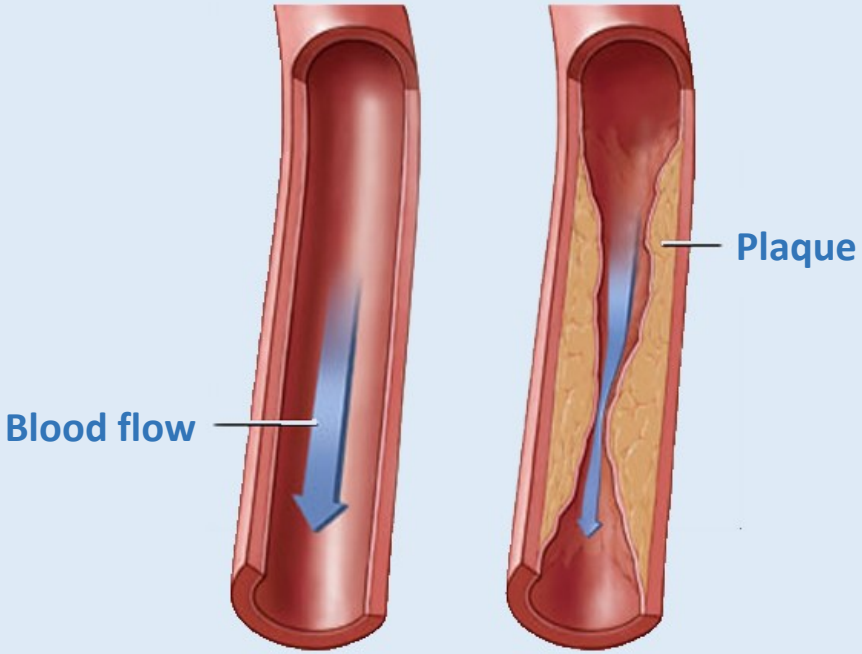
Background

- Around one person every three minutes has a heart attack in the UK [1]
- If untreated, cardiac arrest occurs in one third to a quarter of people who suffer a heart attack
- Immediate bystander resuscitation can double, or even quadruple, survival from cardiac arrest [2]
- Early defibrillation can produce survival rates as high as 50-70%[3]

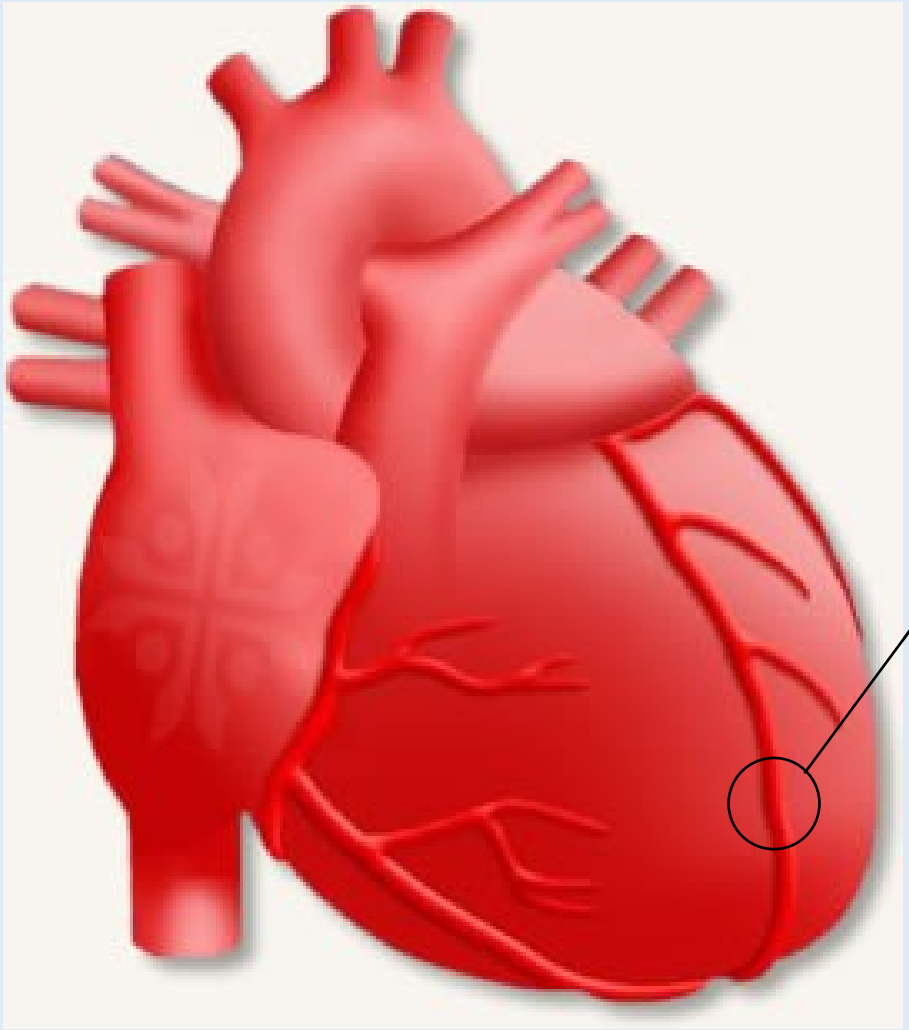
1. British Heart Foundation (2015). British Heart Foundation Headline Statistics. Available at: https://www.bhf.org.uk/research/heart-statistics. [Accessed: 19/11/15].
2. Sasson, C. Rogers, M, Dahl, J. Kellerman, A (2010). Predictors of survival from out-of-hospital cardiac arrest: a systematic review and meta- analysis. Circ Cardiovasc Qual Outcomes. 3, 63-81
3. Valenzuela, T, Roe, D, Nicol, G, Clark, L, Spaite, D, Hardman, R (2000). Outcomes of rapid defibrillation by security officers after cardiac arrest in casinos. New Eng J Med. 343, 1206-1209

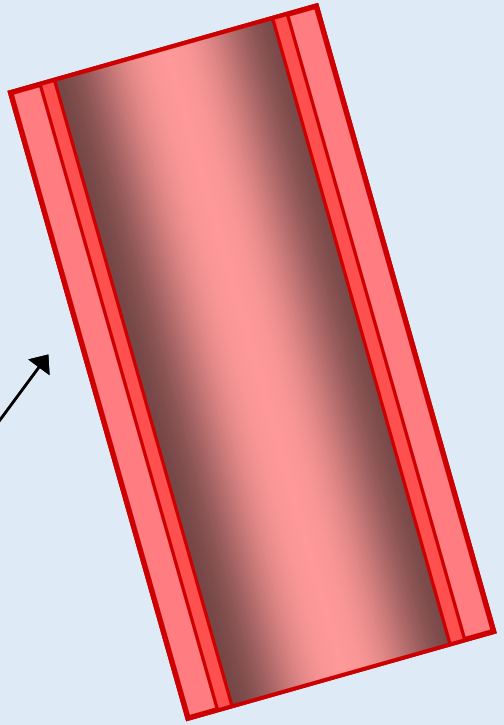
The Cause of a Heart Attack





The Cause of a Heart Attack





Signs & Symptoms



View video at:
https://youtu.be/Z8aMN0oy8Qs

Signs & Symptoms

Pale or grey in colour

Feeling or being sick

Heavy sweating causing clammy skin

Impending sense of doom



Crushing central chest pain often radiating into the arms, neck, jaw or back

Difficulty in breathing

Collapse without warning

Action to be taken



Send for an ambulance (999/112)

Position the casualty comfortably

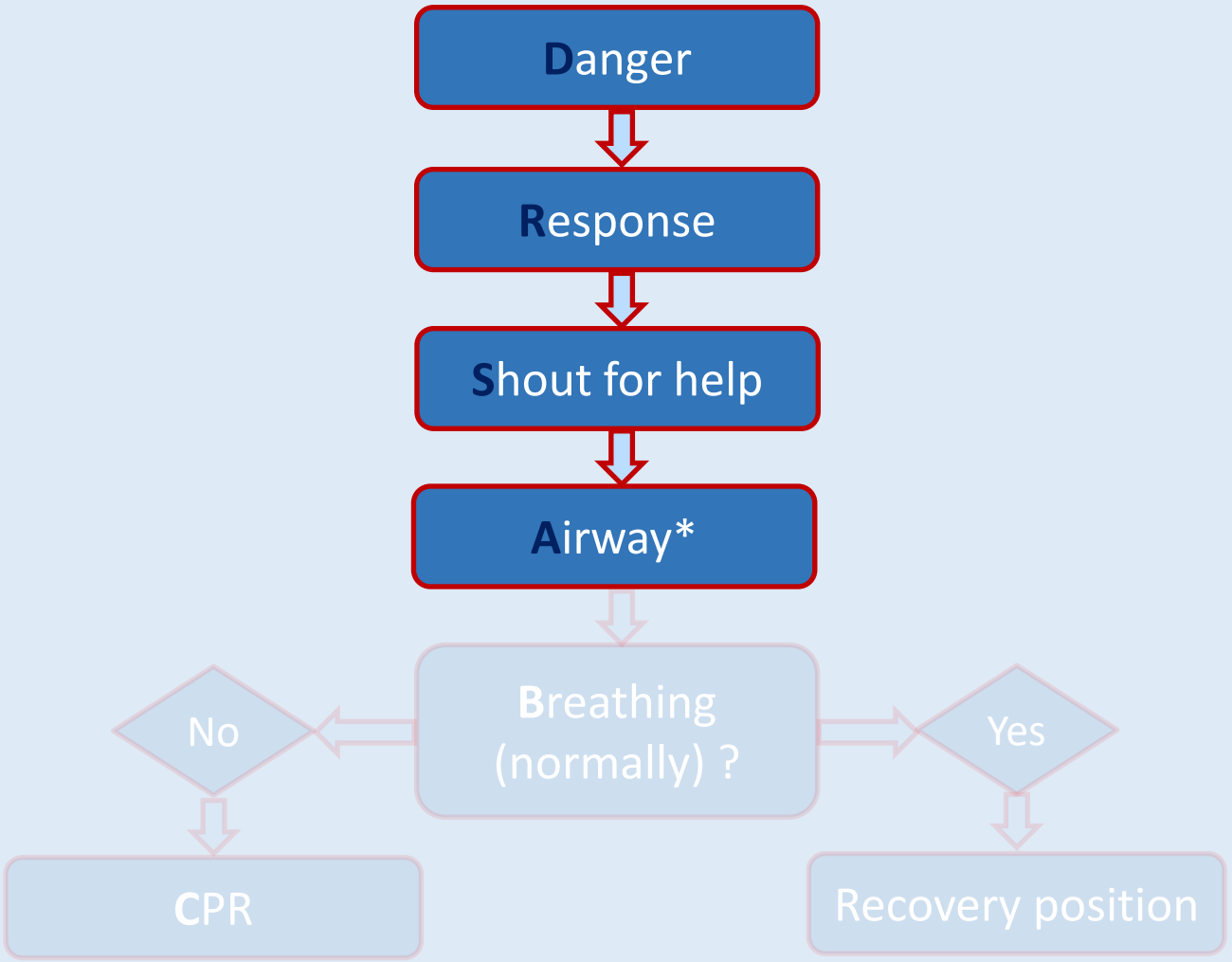
Loosen tight clothing

Monitor & reassure

Offer aspirin

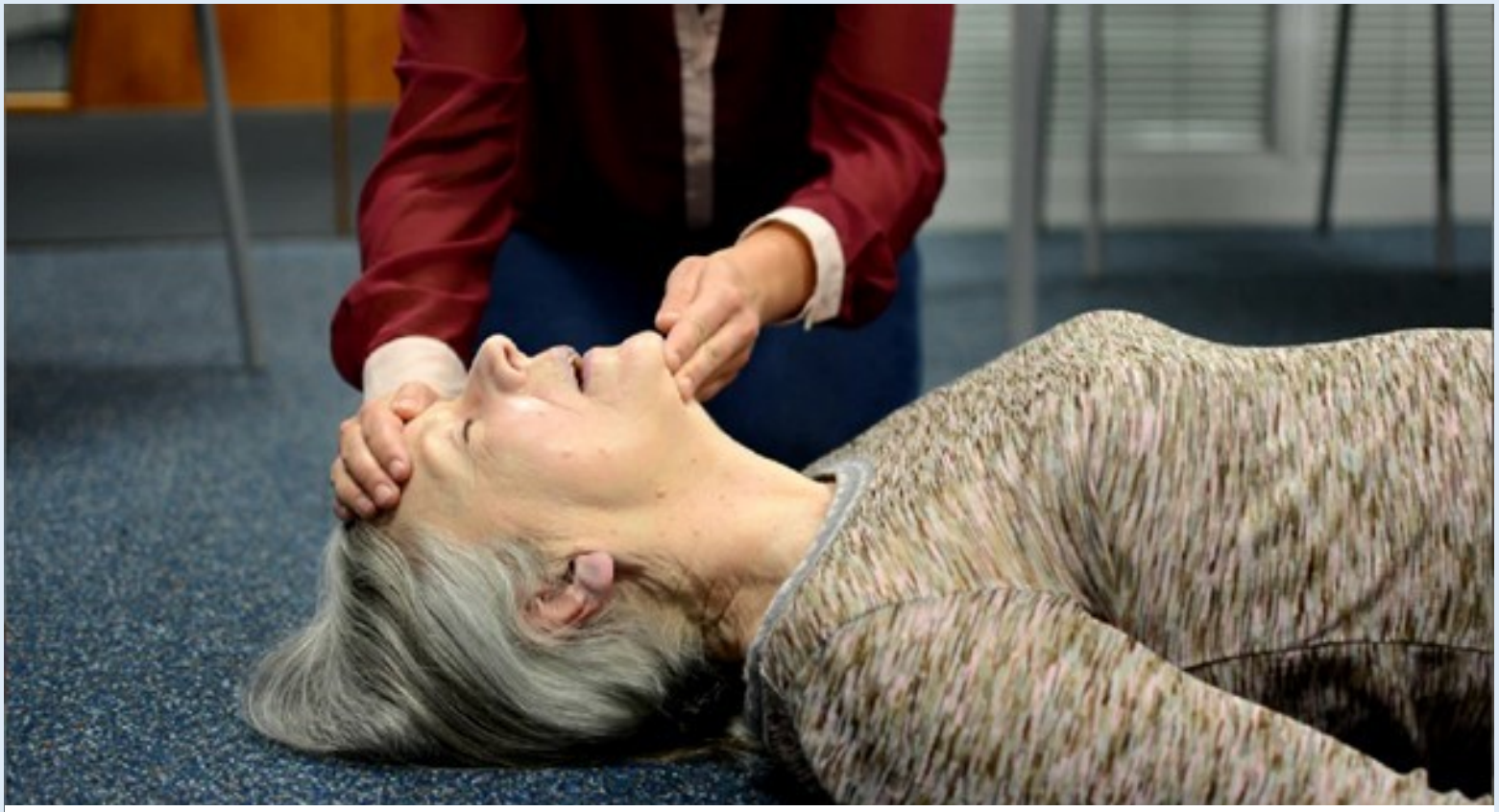
Send for AED

Collapsed Casualty…



Opening the Airway

Head tilt & chin lift to open up the airway



View video at:
https://youtu.be/DZgJLJTKNB8

Collapsed Casualty…



Recovery Position

Turn the casualty into the recovery position

Continue monitoring for further deterioration

Call for an ambulance when it is safe and appropriate



Steps of the Recovery Position

1



2



Steps of the Recovery Position

3





4



Collapsed Casualty…



Normal Breathing Absent

Cardiac arrest may be associated with:

- Agonal breathing [40% of patients]
- No breathing at all
- Involuntary muscle twitching that may resemble a seizure

Normal Breathing Absent



View video at:
https://youtu.be/A2wWou7RTjU

Automated External Defibrillators









CardioPulmonary Resuscitation





Performing rescue breaths



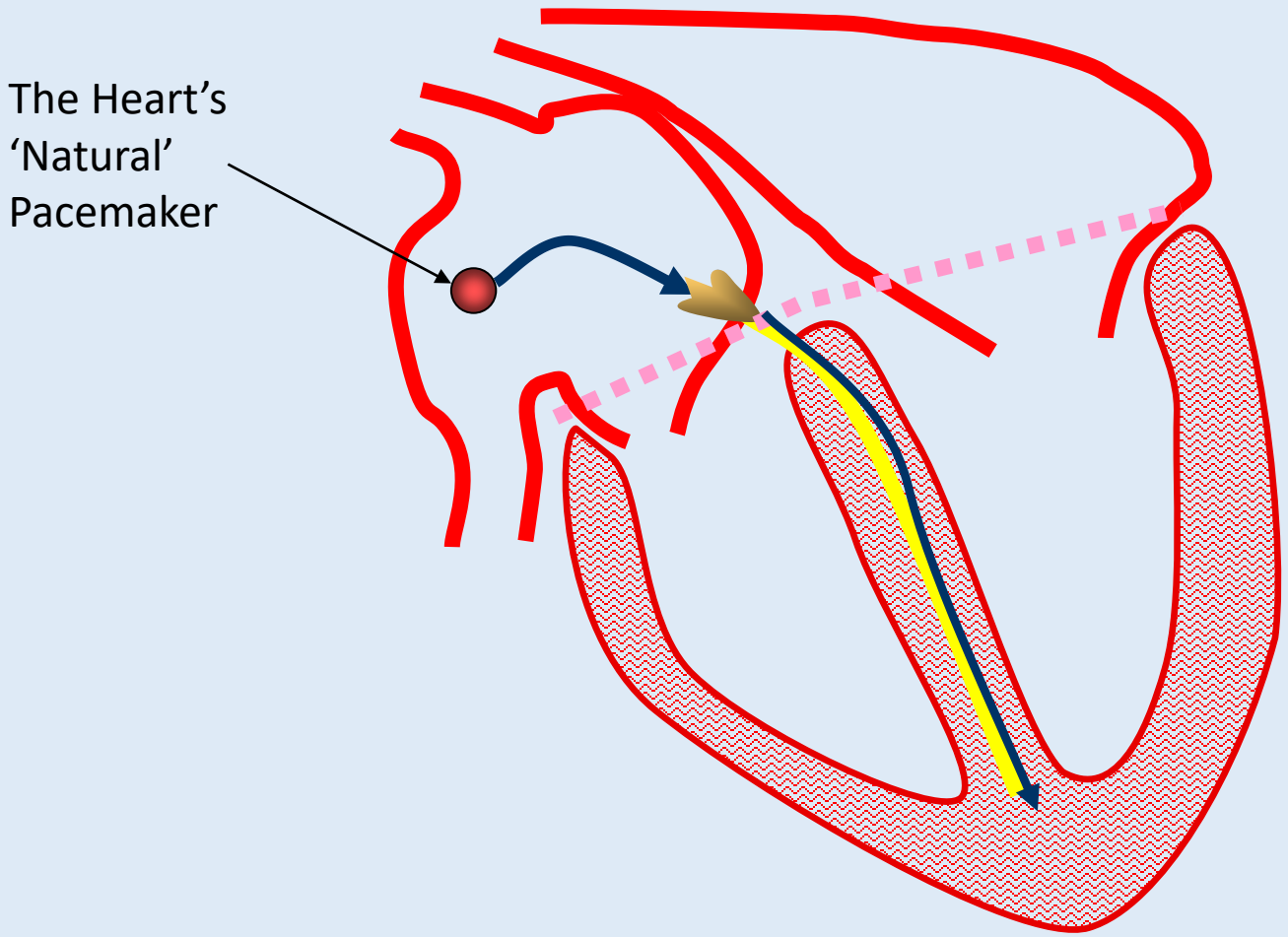
View video at:
https://youtu.be/PaZtxbV-9wk

Compression Only Life Support



Whilst 30:2 is the ‘Gold Standard’ approach, it is acceptable to not perform rescue breaths if you are unwilling to do so.

Electricity in the Heart

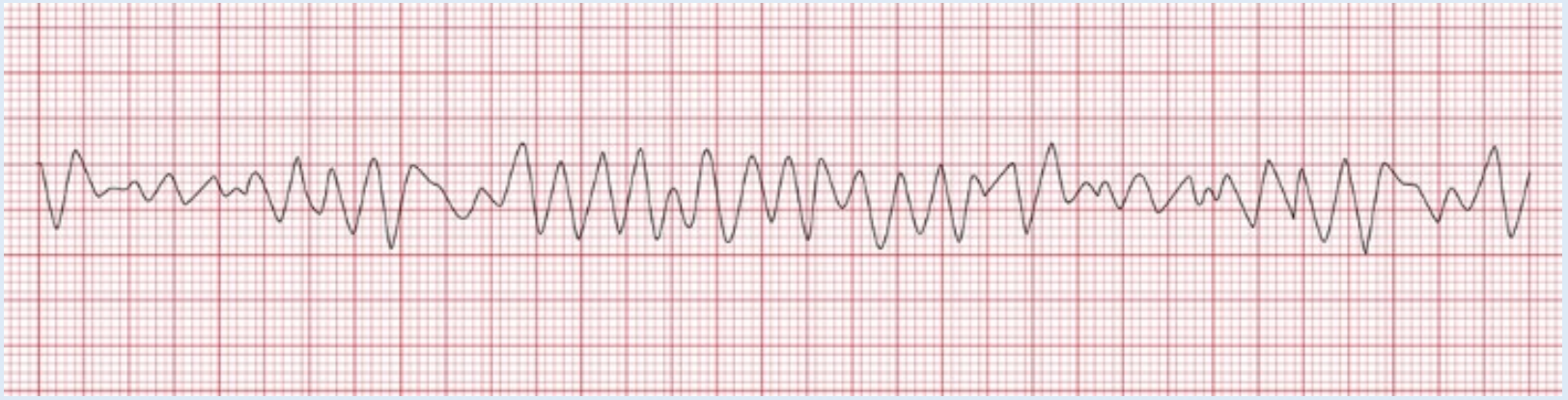


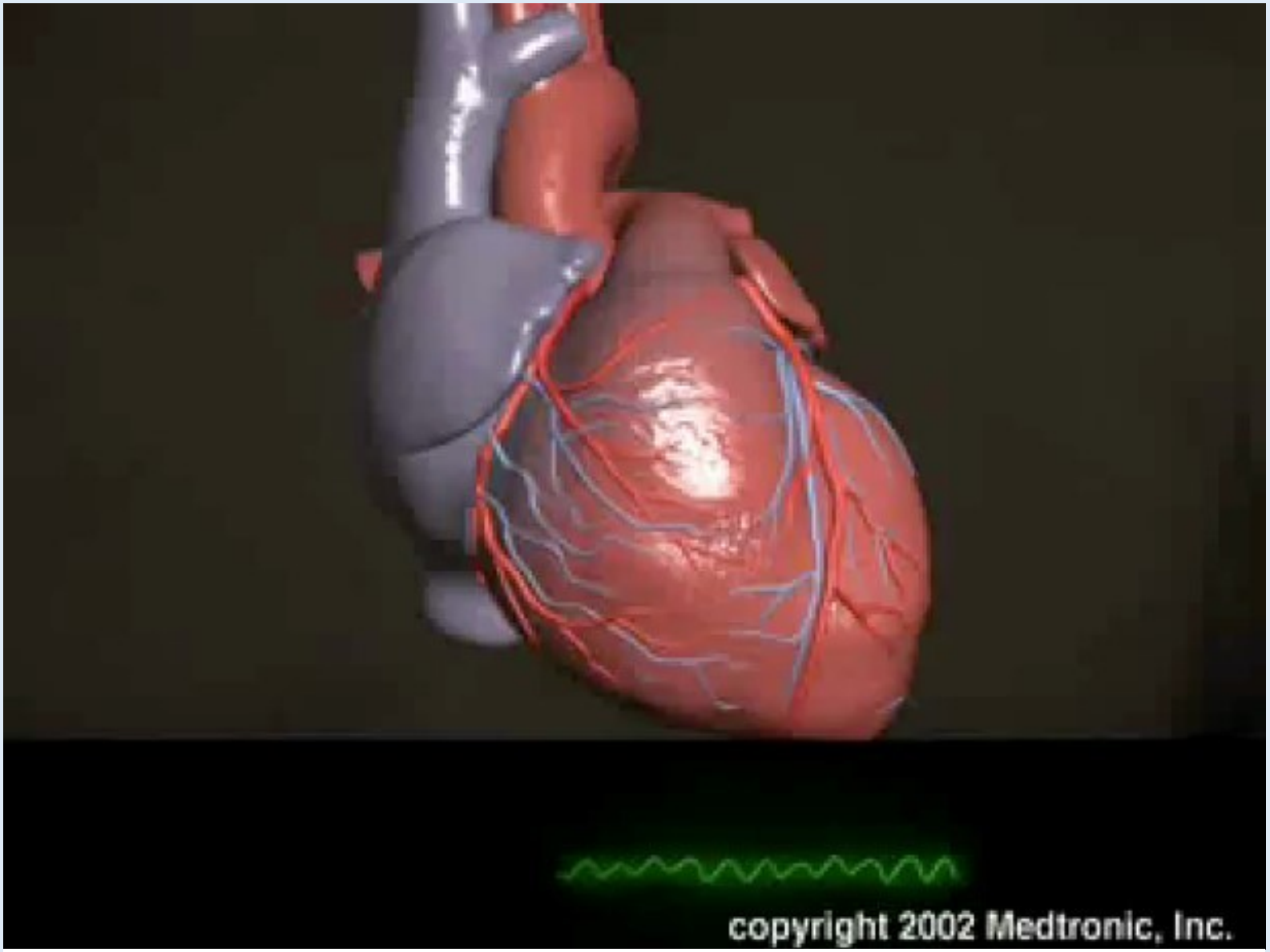
Electrical Pattern of the Heart

‘Normal’ Heart Rhythm



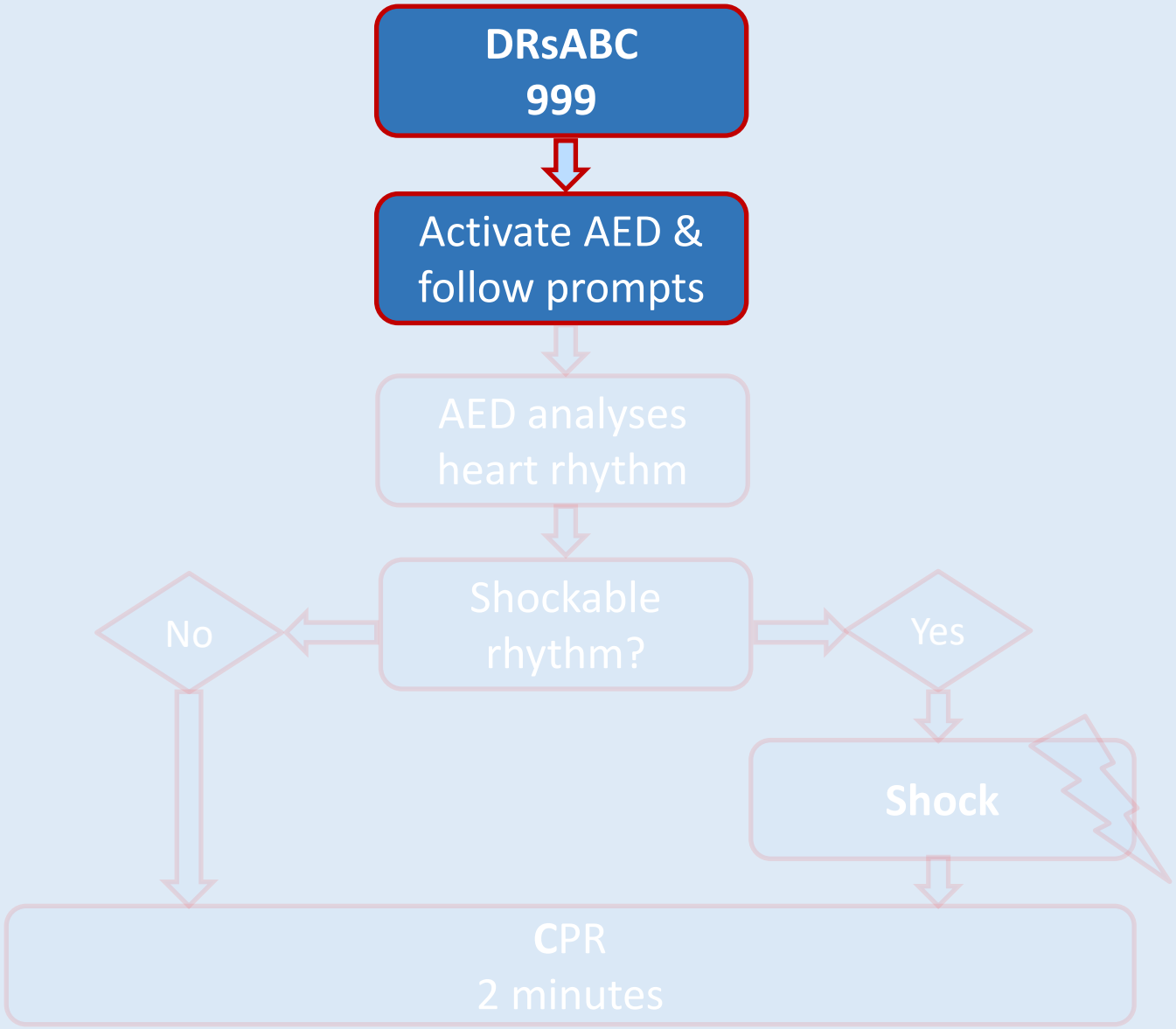
Ventricular Fibrillation (VF)





View video at:
https://youtu.be/K290iIkF908

Cardiac Arrest



Preparing for Defibrillation

- Ensure there are no environmental hazards
  - metals and water
  - flammable gases
- Expose the chest fully (cut clothing and move jewellery)
- Dry the skin
- Shave excess hair
- Remove medication patches



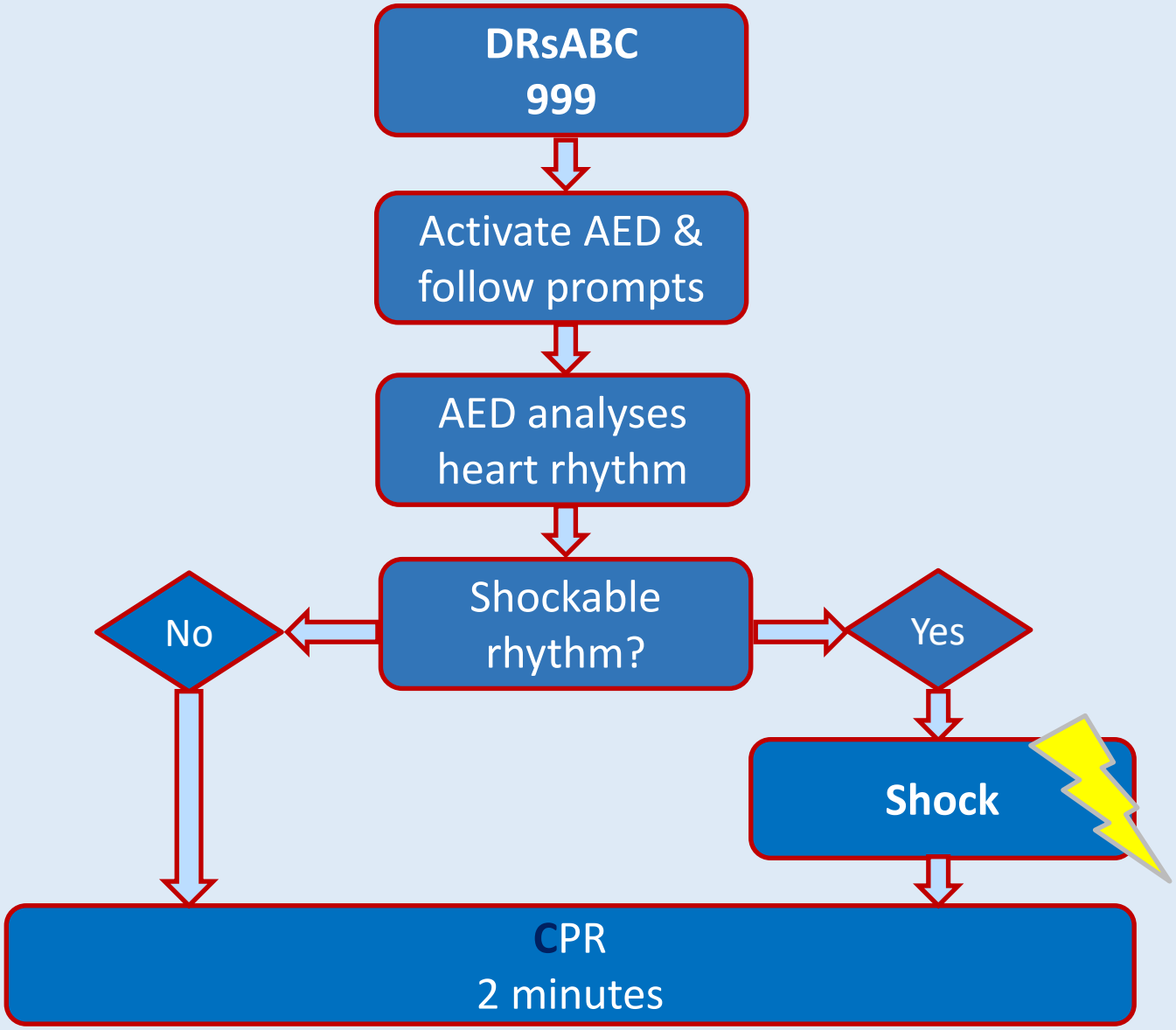
Placing the AED Pads

- Place one pad to the right of the breastbone in line with the middle of the collar bone

- Place the second pad vertically in line with the armpit away from the breast tissue



Cardiac Arrest…



Non-technical Skills

Watch this short video clip, reflect on the following points and then discuss with your trainer…

- The technical skills of the responders:
  - Did they assess the situation and the casualty appropriately?
  - Were their interventions appropriate?

- The non-technical skills of the responders:
  - What did you notice about their communication?
  - Were they effective as a team?

Use of an AED



View video at:
https://youtu.be/0C7LBx_M_vI

The Aftermath

In the aftermath of the event consider the following:

- Any documentation that is required (work environment)
- The replenishing of equipment
- Consider AED software download (contact the manufacturer)
- Wash your hands with soap and water or disinfect with alcohol-based gel after a resuscitation attempt.

Take some time to reflect on the situation, take care of yourself and talk to somebody if you need to…

Part 1 - Adult BLS and AED familiarisation Summary

You are now able to:

- Explain the cause, signs, symptoms and treatment for a heart attack;
- Understand how to turn an unconscious casualty who is breathing normally into the recovery.
- Understand how to perform effective basic life support.
- Recognise and understand the safe use of an automated external defibrillator and acknowledge its role in cardiac arrest.

Part 2 – Baby and Child BLS
(with choking protocols for all ages)
Objectives

By the end of part 2 of this course, you will be able to:

- Explain the difference between mild and severe choking;
- Describe the correct treatment for severe choking in an adult, child and baby;
- Describe how to support a baby in the recovery position, when unconscious and breathing normally;
- Demonstrate effective basic life support for babies and children.

Age and resuscitation

In resuscitation, both the age and the size of the casualty influence what treatment is delivered:

- From birth to 1 year – treat as a **baby**
- From 1 year to adolescence (puberty) – treat as a **child**
- From adolescence (puberty) – treat as an **adult**

History & signs of severe choking

Usually witnessed

Sudden onset

Recently eating

<u>In children:</u> recently playing with small objects



Unable to speak or cry

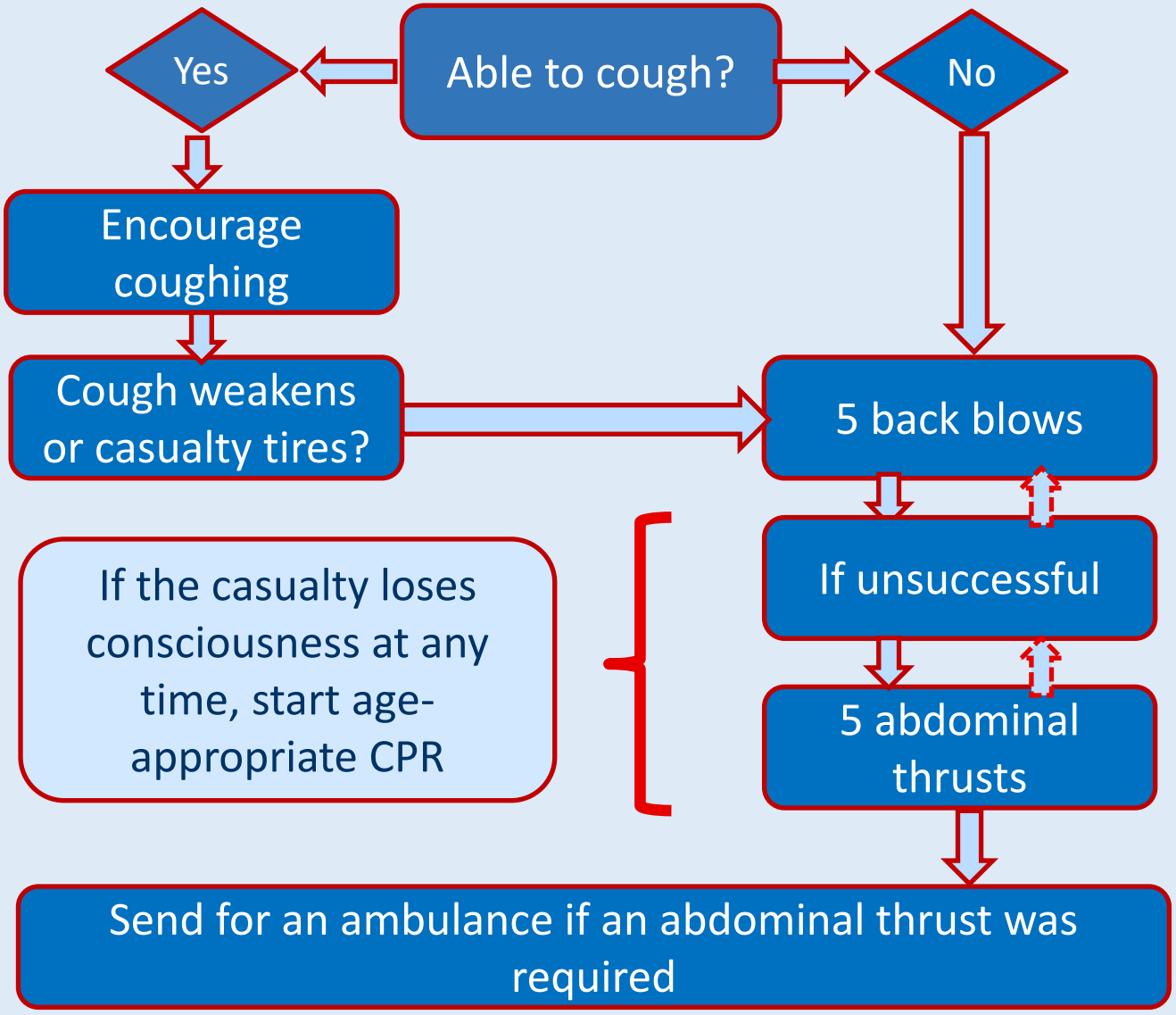
Unable to breath

Weak or absent cough

Colour change

Collapse

Choking adult or child…



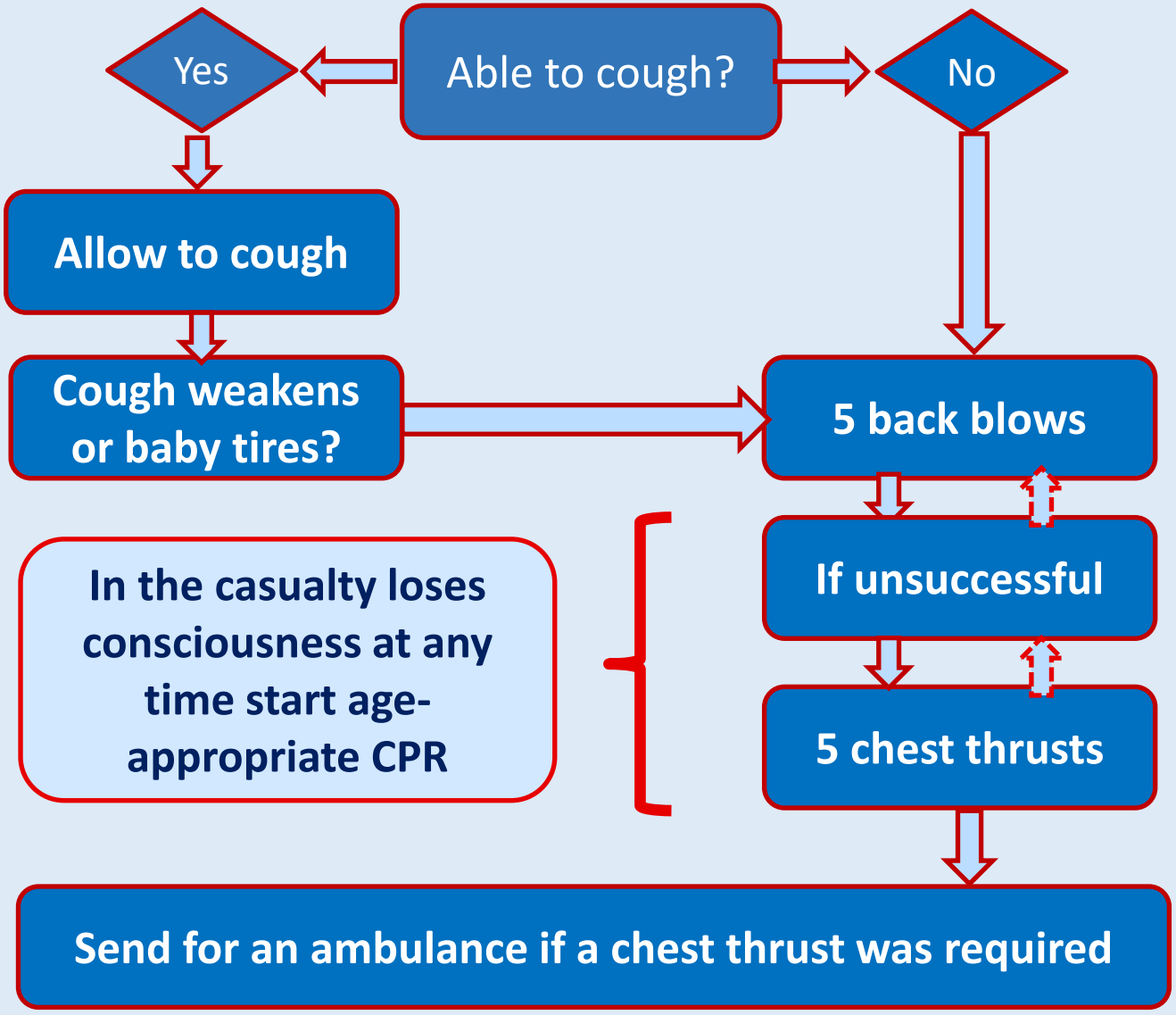
Back blows



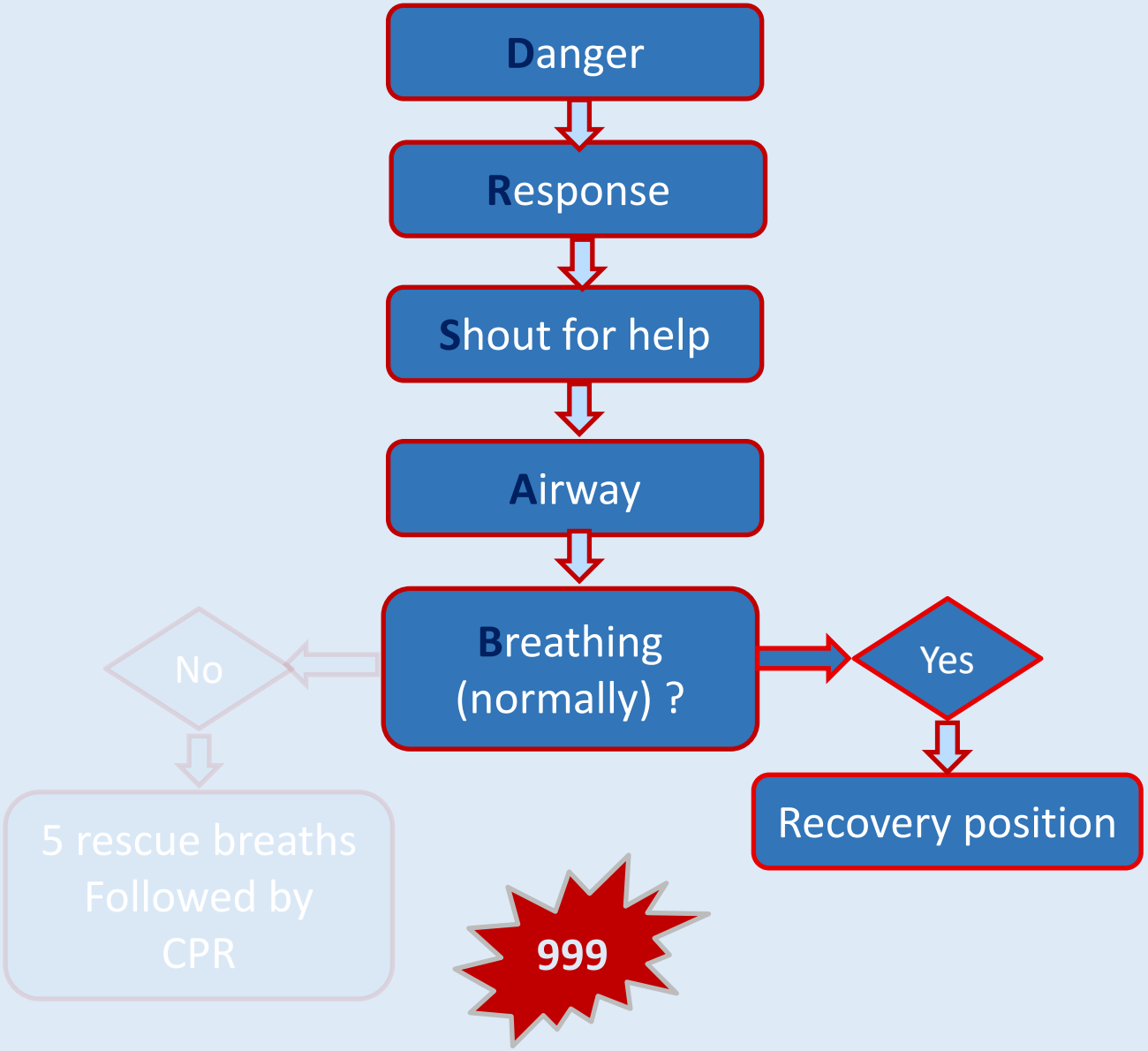
Abdominal thrust



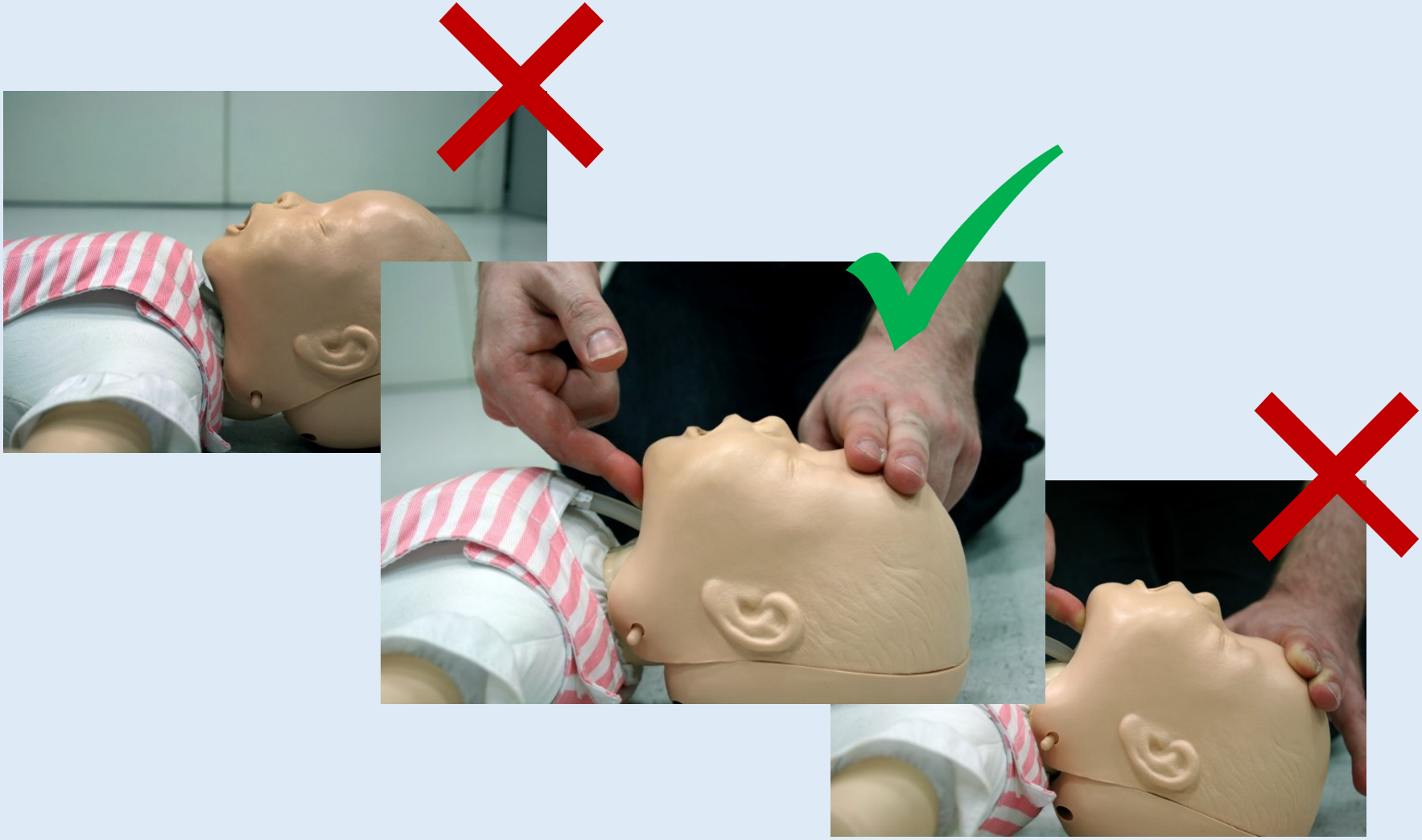
Choking baby…



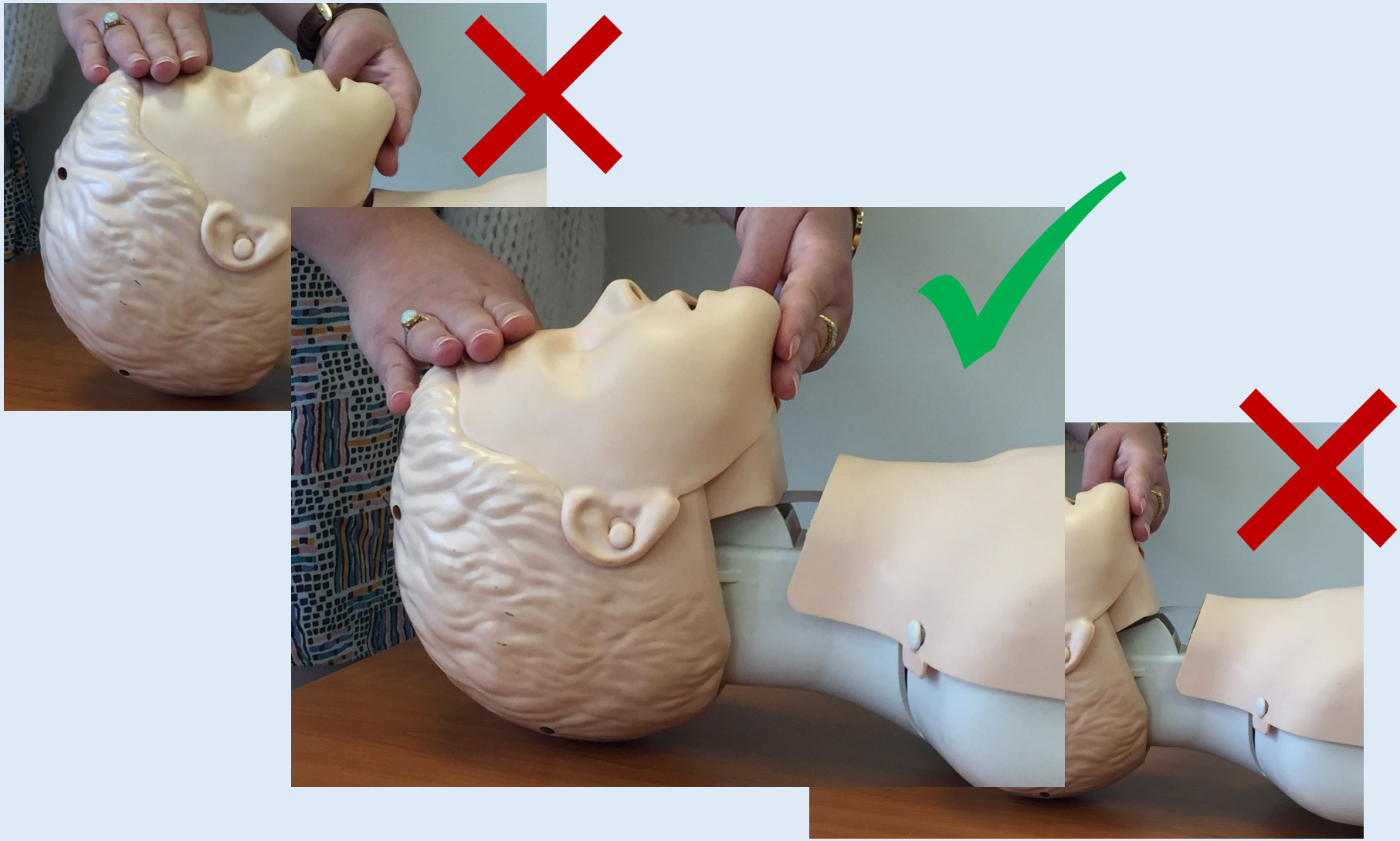
Collapsed baby or child…



Open the airway (baby)



Open the airway (child)



Recovery Position

Turn the casualty into the recovery position

Continue monitoring for further deterioration

Call for an ambulance when it is safe and appropriate





Collapsed baby or child…



Basic life support (child)





Basic life support (baby)





Key differences

3 important modifications for babies and children:

- Give 5 initial rescue breaths before starting chest compression;
- If you are on your own, perform BLS for 1 min before leaving to summon help;
- Compress to a ⅓ of the depth of the chest.

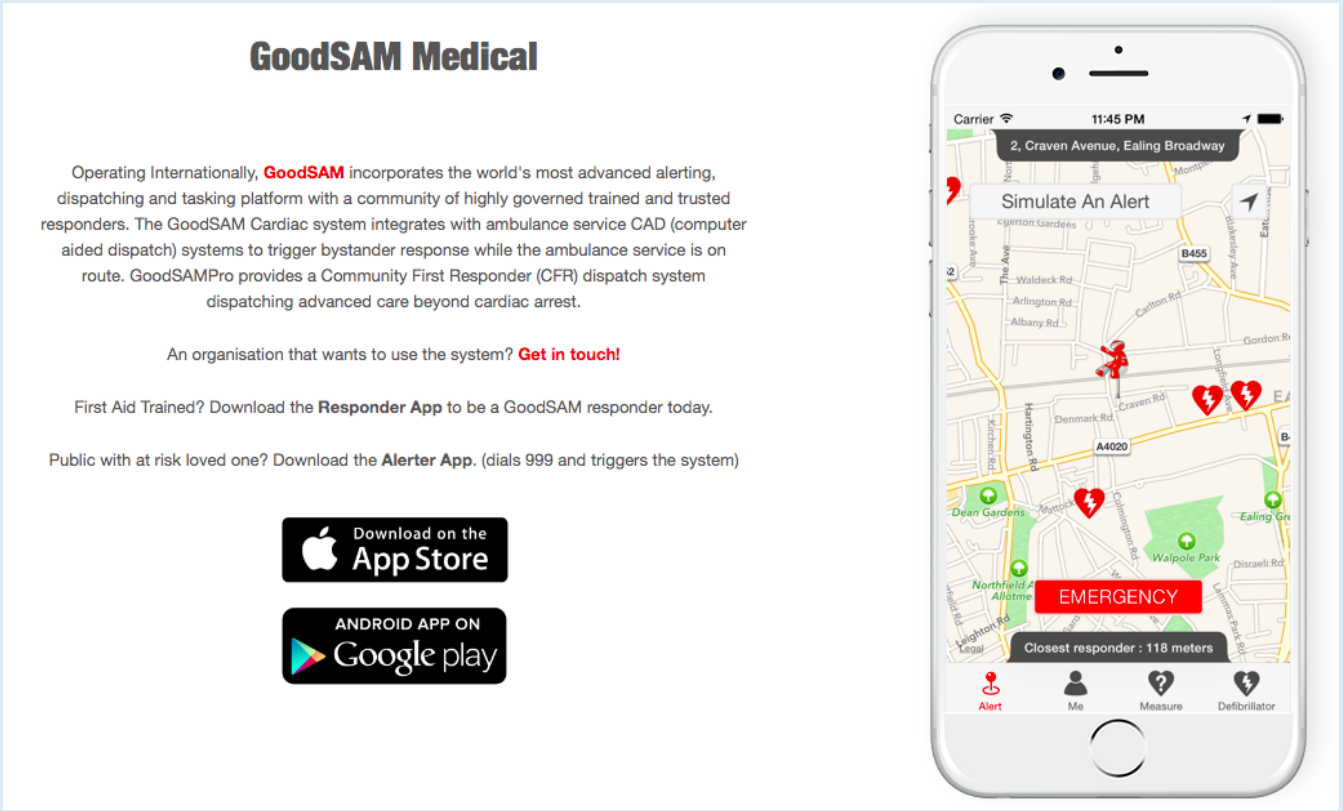
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GoodSAM

- You may wish to download the GoodSAM Responder App
- www.goodsamapp.org/home





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