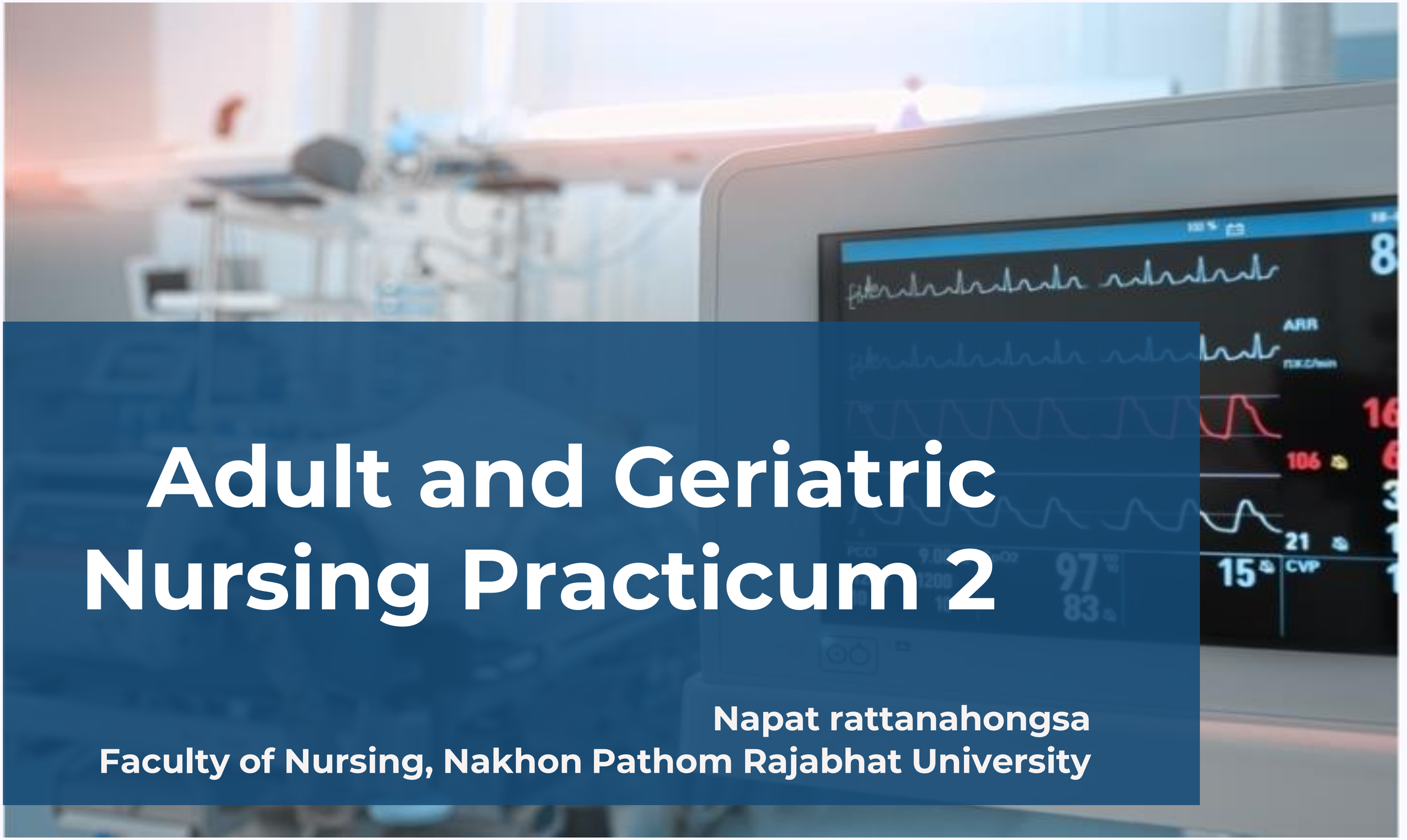
มหาวิทยาลัยราชภัฏนครปฐม



Adult and Geriatric Nursing Practicum 2

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Cardiac Arrest

cardiac arrest is When the heart stops beating, blood cannot properly circulate around the body and the blood flow to the brain and other organs is decreased.

Chain of Survival

(American Heart Association, 2023)

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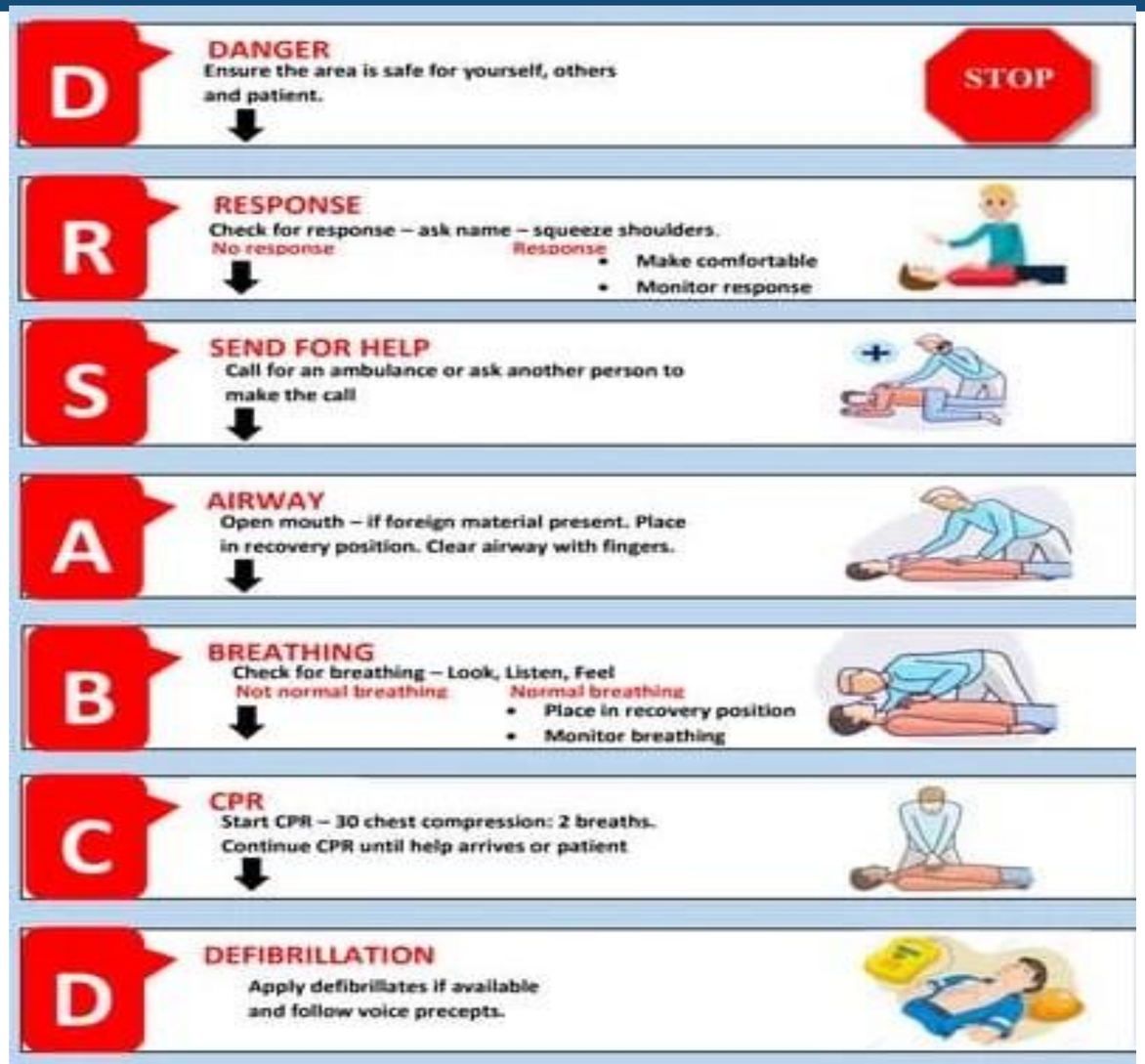
Cardiac Arrest



Basic life support

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Position Hands Over Sternum

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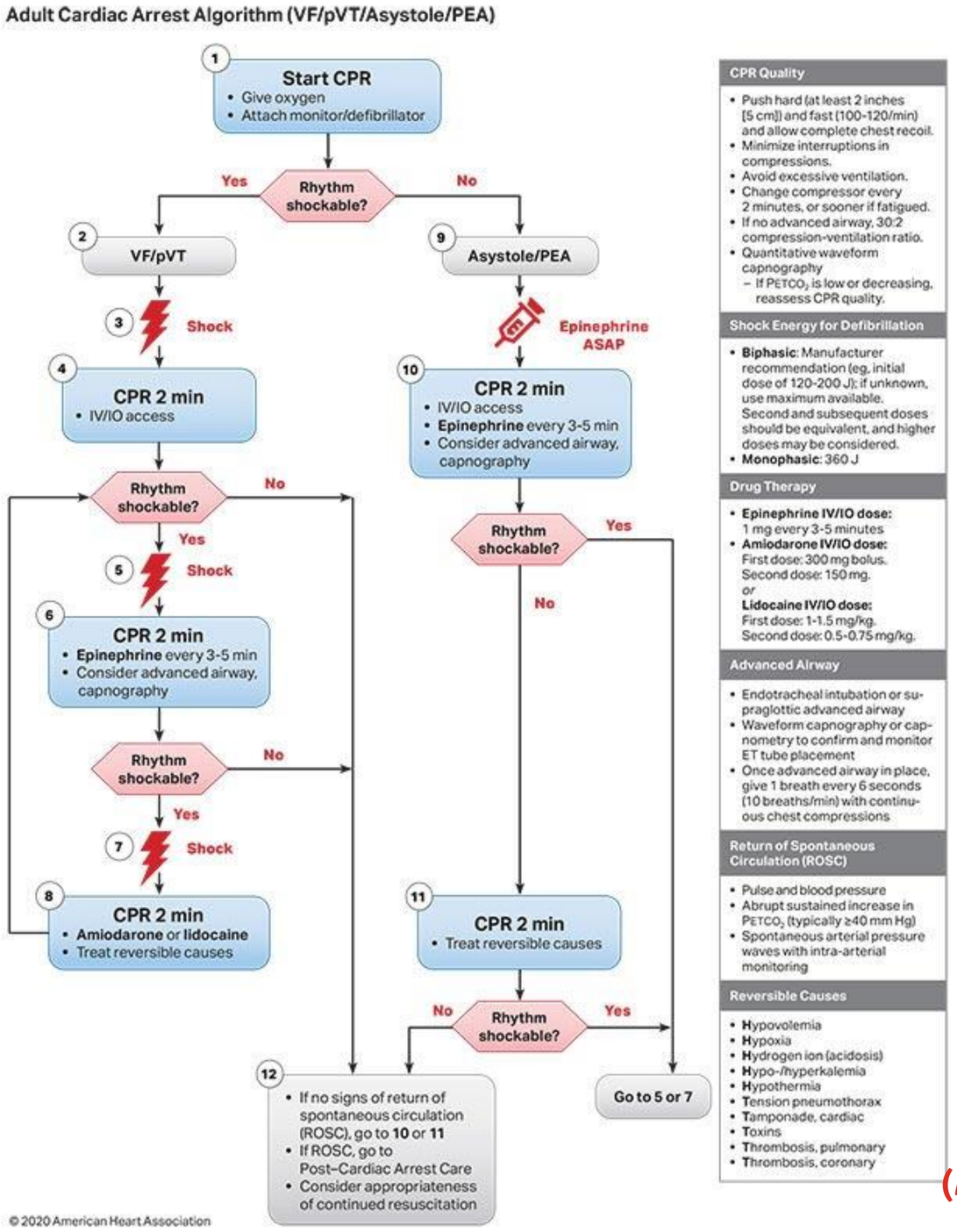
Cardiac Arrest



CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If $PETCO_2$ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- **Biphasic**: Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic**: 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg.
  or
  Lidocaine IV/IO dose: First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

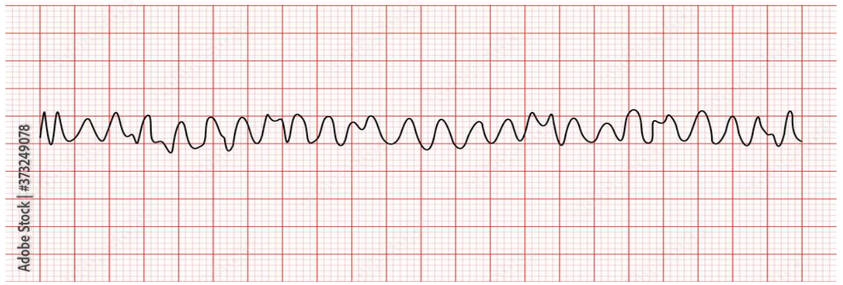
Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in $PETCO_2$ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen ion (acidosis)
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**ension pneumothorax
- **T**amponade, cardiac
- **T**oxins
- **T**hrombosis, pulmonary
- **T**hrombosis, coronary

Ventricular Fibrillation (VF)



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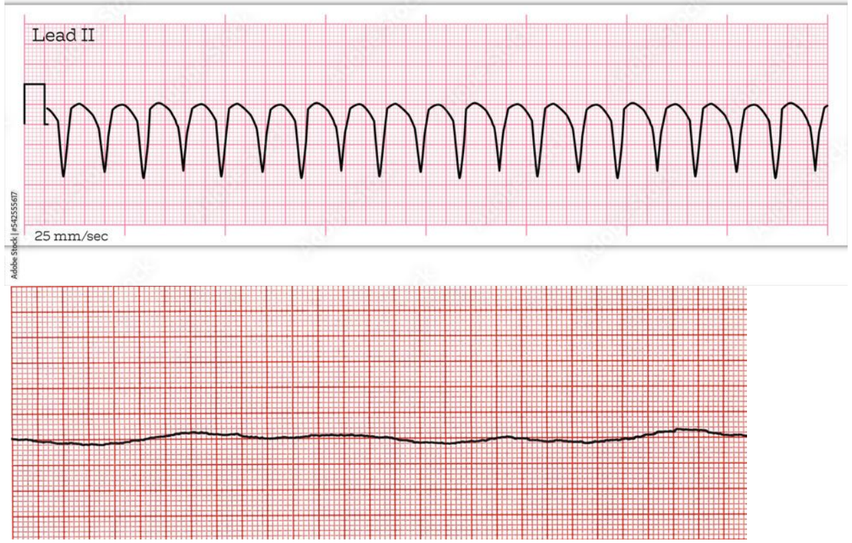
Ventricular Tachycardia Monomorphic



(American Heart Association, 2023)

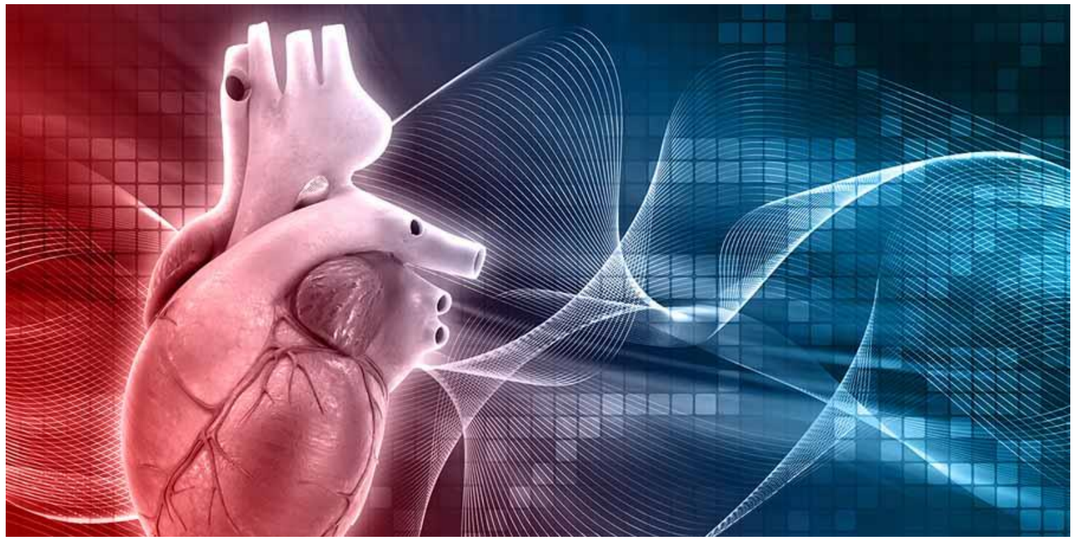
Cardiac Arrest

6 H's

- Hypo or Hyperkalemia
- Hypoglycemia
- Hypothermia
- Hypovolemia
- Hypoxia
- H+ (Acidosis)

6 T's

- Tension Pneumothorax
- Tamponade (Cardiac)
- Thromboembolism (Massive PE)
- Thrombosis (Coronary)
- Trauma (Stunned myocardium)
- Toxins (Drug OD, ingestions)



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(American Heart Association, 2023)

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