Advanced Cardiac Arrest
Adult and Paediatric

RESUSCITATION COUNCIL OF SOUTHERN AFRICA

2025

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HAZARDS
HELLO?
HELP!

Ensure the scene is safe
Wear appropriate PPE
If unresponsive, check for breathing and pulse
Call for Defibrillator

HAS PULSE AND BREATHING
Place in recovery position
Monitor breathing and pulse
Reassess patient regularly
Call for help as required

HAS PULSE BUT NO EFFECTIVE BREATHING
Give rescue breaths
- Adult: every 6 seconds
- Child: every 3 seconds
- Infant: every 2 seconds

Reassess patient regularly
Call for help as required

NO PULSE OR NOT SURE
Pulse rate <60/min in children and infants despite adequate ventilation

LOOK FOR REVERSIBLE CAUSES

Hypoxia	Tension Pneumothorax
Hypovolaemia	Tamponade (cardiac)
Hypothermia	Toxins
Hydrogen ion (Acidosis)	Trauma
Hypo/Hyper-kalaemia	Thrombosis (Coronary)
Hypoglycaemia	Thrombosis (Pulmonary)

CHEST COMPRESSIONS

Start chest compressions, rate 100-120 per minute
Push hard | Ensure full chest recoil | Minimise interruptions

Hands only
continous compressions
until ventilation equipment arrives

BREATHS

Attempt 2 breaths at 1 breath/second (with oxygen if available), Avoid excessive ventilation
Chest compression to breath ratio **Adult 30:2 | Children or infants 30:2 (2-rescuer 15:2)**
With advanced airway in place, do continous compressions with:
Adult: 1 breath every 6 seconds
Child: 1 breath every 3 seconds
Infant: 1 breath every 2 seconds

Continue until AED/Defibrillator arrives
Consider caponography and arterial line monitoring

HIGH QUALITY CPR

Continuous CPR with compressions and breaths for 2 minute cycles
Consider CPR coach and feedback device
Search for reversible causes
Give high levels oxygen
Obtain IV (or IO) access and draw blood gas

ANALYSE RHYTHM EVERY 2 MINUTES

Attach AED/Defibrillator immediately

SHOCK ADVISED (VF/pVT)

Give 1 Shock
AED: Follow instructions
Adult: 120-360 J (max joules if unknown)
Paediatric: 4J/kg
If refractory to shocks, consider:
Adrenaline 1mg
every 3-5 minutes (0.01mg/kg paediatric)
AND
Amiodarone 300mg followed by 150mg
(5mg/kg paeds, max 3 doses)
OR
Lignocaine 1mg/kg followed by 0.5mg/kg

NO SHOCK ADVISED (PEA/Asystole)

Immediately resume CPR starting with compressions, 2 minute cycle
Consider **Adrenaline** early 1mg every 3-5 minutes (0.01mg/kg paediatric)

If signs of life present, provide post-ROSC care

ADDITIONAL CONSIDERATIONS
- Consider 1-2g Magnesium if Torsades de pointes
- After 3 refractory shocks, consider changing vectors or double sequence defibrillation
- VA ECMO may be considered in appropriate centres where available
- Ultrasound can be considered as a diagnostic and procedural tool where expertise and resources exist; and CPR is not interrupted