ADVANCED LIFE SUPPORT

EUROPEAN RESUSCITATION COUNCIL
GUIDELINES 2021

Unresponsive with absent or abnormal breathing

Call EMS/Resuscitation team

CPR 30:2
Attach defibrillator/monitor

Assess rhythm

Shockable
(VF/PULSELESS VT)

1 shock
150J → 270J → 270J

Immediately resume chest compressions for 2 minutes

Return of spontaneous circulation (ROSC)

Non-shockable
(PEA/ASYSTOLE)

Immediately resume chest compressions for 2 minutes

Give high-quality chest compressions and
- Give oxygen
- Use waveform capnography
- Continuous compressions if advanced airway (LMA,ETT)
- Minimise interruptions to compressions
- Intravenous or intraosseous access
- Give adrenaline every 3-5 min
- Give amiodarone after 3 shocks
- Identify and treat reversible causes

Identify and treat reversible causes
- Hypoxia
- Hypovolaemia
- Hypo-/hyperkalemia/metabolic
- Hypo-/hyperthermia
- Thrombosis – coronary or pulmonary
- Tension pneumothorax
- Tamponade- cardiac
- Toxins

Consider ultrasound imaging to identify reversible causes

Consider
- Coronary angiography/percutaneous coronary intervention
- Mechanical chest compressions to facilitate transfer/treatment
- Extracorporeal CPR

After ROSC
- Use an ABCDE approach
- Aim for SpO_2 of 94-98% and normal $PaCO_2$
- 12 Lead ECG
- Identify and treat cause
- Targeted temperature management
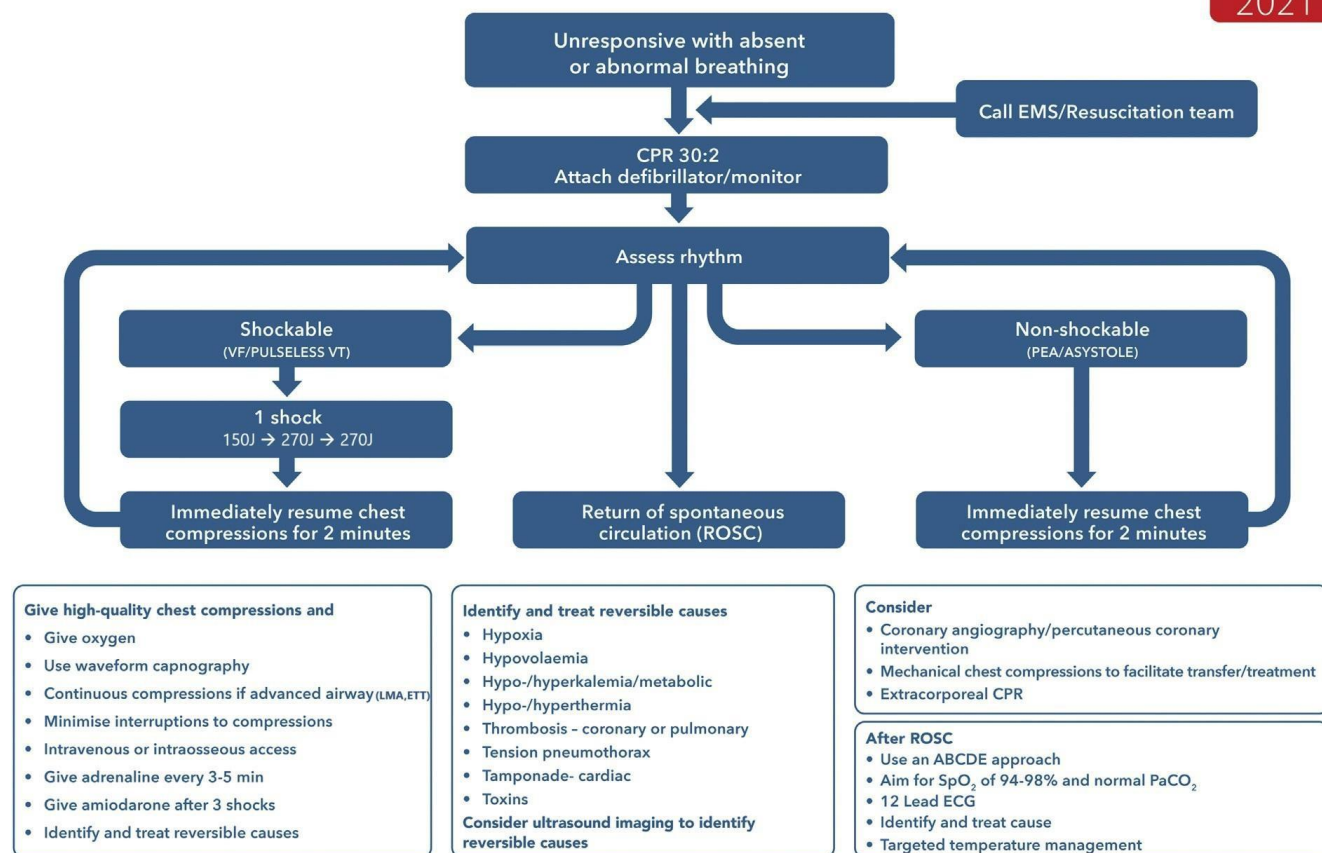
Advanced Life Support algorithm. ABCDE airway, breathing, circulation, disability, exposure CPR cardiopulmonary resuscitation; ECG electrocardiogram; EMS emergency medical system; PEA pulseless electrical activity; $PaCO_2$ arterial partial pressure of carbon dioxide; ROSC return of spontaneous circulation; SpO_2 arterial oxygen saturation; VF ventricular fibrillation; VT ventricular tachycardia.