

# Paediatric Advanced Cardiac Arrest Algorithm for Covid-19 Pandemic

May 2020

May 2020

## PREPARATION + HAZARDS

Advisable to have pre-arrest readiness teams, to not delay resus → Pre- cardiac arrest discussion on DNAR  
 Ensure environment is safe → **Don all appropriate PPE** → Alert for Covid 19

## HELLO

- Look from a distance, keep others safely away
- Do not feel for breathing, but look for visible chest rise and feel for pulse

## HELP

Call either 112 or local ambulance, Call for assistance, Defib/AED

EMERGENCY NUMBER

No pulse or not sure  
 Pulse rate <60/min

### HAS PULSE AND BREATHING

- Place in recovery position
- Look from a distance for continued breathing and reassess regularly
- Maintain "Crowd control" at least 2m from the child

### HAS PULSE BUT NO EFFECTIVE BREATHING

- Give rescue breaths
- Two handed mask technique with tight seal, viral filter between mask and self- inflating bag
- Try to get definitive airway ASAP
- Supraglottic or Video laryngoscopy

Single rescuer – cover face with surgical mask/3 ply cloth  
 Team rescuer – cover face with BVM + tight seal + filter

## START CHEST COMPRESSIONS

- Push Hard and Fast (almost 2/second)
- Ensure full chest recoil
- Minimize interruptions
- If suspected cardiac cause of arrest, continuous compressions while waiting ECG analysis with tight fitting non-rebreather mask @ 100% FiO<sub>2</sub>

## AIRWAY MANAGEMENT

- NB – highest risk of viral contamination to rescuers
- Rescuer must have full PPE
- Early definitive airway with attachment to ventilator
- Viral filter protection placed on BVM and ventilator
- Video laryngoscopy is recommended to distance rescuer from the pt's mouth and nose ( if competent) – otherwise SGD (LMA/iGel)
- Cover the patient's mouth and nose after the airway procedure

## HIGH QUALITY CPR

- Compression rate 100 – 120 per minute
- Avoid excessive ventilation
- 1 breath every 3-5 seconds if advanced airway
- Rotate compressors every 2 minutes (or 1 min if full PPE and tiring)
- Consider capnography and arterial monitoring

## BREATHS

- Early intubation is preferable
- Delay breaths with continuous compressions until full PPE donned for airway manager
- Attempt 2 breaths at 1 breath/second with 100% Oxygen
- Infants & Children 30:2 if alone, 15:2 if 2-rescuer
- Continue until AED/Defib arrives and attach immediately

## ADVANCED CONSIDERATIONS

- Correct the cause as soon as possible
- Avoid prolonged resuscitations (if no cause found)
- Obtain IO/IV access, take ABG/VBG
- Early intubation with viral protection due to aerosol generation
- Continuous chest compressions after definitive airway – place on ventilator as soon as possible with viral protection (adjust alarm settings)
- Consider Adrenaline and other anti-arrhythmics
- Adrenaline 0.1 mls/kg of 1:10 000 (1mg diluted with 9mls N/S)

## ATTACH AED / DEFIB IMMEDIATELY

### ANALYSE RHYTHM

Shock Advised (VF/VT)

No Shock Advised (PEA/Asystole)

Give 1 Shock  
 Infants + Children  
 2-4J/kg

If signs of life are present monitor and provide post ROSC care.  
 If absent continue CPR

Immediately resume CPR starting with compressions.  
 Continue for 2 minutes

## CONTRIBUTORY CAUSES

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