

# 5 TOP MESSAGES

## 1. After ROSC use ABC approach

- Insert an advanced airway (tracheal intubation when skills available)
- Titrate inspired oxygen to an SpO<sub>2</sub> of 94-98% and ventilate lungs to achieve normocapnia
- Obtain reliable intravenous access, restore normovolaemia, avoid hypotension (aim for systolic BP > 100mmHg)

## 2. Emergent cardiac catheterisation +/- immediate PCI after cardiac arrest of suspected cardiac origin and ST-elevation on the ECG

## 3. Use targeted temperature management (TTM) for adults after either OHCA or IHCA (with any initial rhythm) who remain unresponsive after ROSC

## 4. Use multimodal neurological prognostication using clinical examination, electrophysiology, biomarkers, and imaging

## 5. Assess physical and non-physical impairments before and after discharge from the hospital and refer for rehabilitation if necessary

# CORONARY REPERFUSION

## KEY EVIDENCE



In patients with ST segment elevation (STE) or left bundle branch block (LBBB) on the post-ROSC electrocardiogram (ECG) more than 80% will have an acute coronary lesion

Several large observational series showed that absence of ST segment elevation does not completely exclude the presence of a recent coronary occlusion

## KEY RECOMMENDATIONS

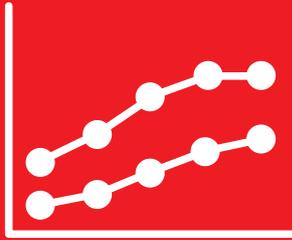


Perform urgent coronary angiography (and immediate PCI if required) in patients with ROSC and ST-elevation on ECG

Consider urgent coronary angiography in patients with ROSC without ST-elevation on ECG if estimated high probability of acute coronary occlusion

## TEMPERATURE CONTROL

### KEY EVIDENCE



A randomised trial and a quasi-randomised trial demonstrated improved neurological outcome at hospital discharge or at 6 months in comatose patients after out-of-hospital witnessed cardiac arrest with an initial shockable rhythm who were cooled to 32–34°C for 12 to 24 hours



One randomised controlled trial in comatose post-non-shockable rhythm cardiac arrest patients showed the use of targeted temperature (TTM) at 33°C compared with 37°C led to a higher percentage of patients who survived with a favourable neurological outcome at day 90

### KEY RECOMMENDATIONS

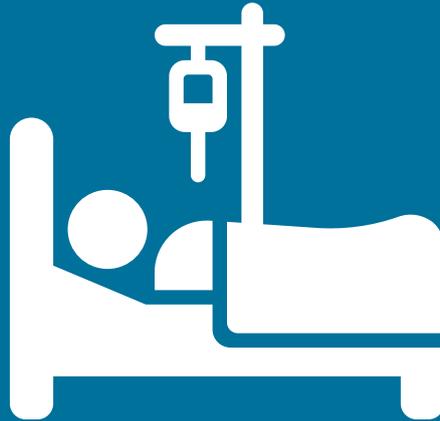
Use TTM for adults after cardiac arrest (with any initial rhythm) who remain unresponsive after ROSC



Maintain a constant target temperature between 32°C and 36°C for at least 24h

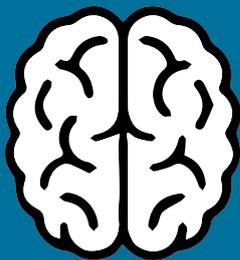
# PROGNOSTICATION

## KEY EVIDENCE



A systematic review of predictors of poor neurological outcome identified 94 studies including 30,200 comatose post-cardiac arrest patients

## KEY RECOMMENDATIONS



A Glasgow Motor Score of  $\leq 3$  at  $\geq 72$ h or later after ROSC may identify patients in whom neurological prognostication is needed



No single predictor is 100% accurate; therefore, use a multimodal neuroprognostication strategy comprising clinical examination, electrophysiology, biomarkers, and imaging



Beware of confounding caused by residual sedation

# LONG-TERM OUTCOME AFTER CARDIAC ARREST

## KEY EVIDENCE

Neurological sequelae may affect long term outcome, with cognitive impairment seen in 40-50% of cardiac arrest survivors



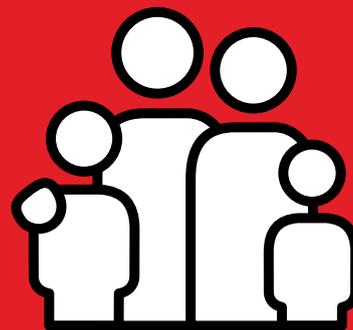
Survivors also report long-lasting emotional, physical and fatigue related problems to affect their everyday life

A scientific statement focusing on survivorship highlights that discharge planning and organisation of further rehabilitation needs after cardiac arrest is often lacking

## KEY RECOMMENDATIONS



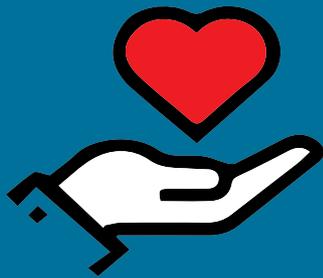
Perform functional assessments of physical and non-physical impairments before discharge from the hospital to identify early rehabilitation needs and refer to rehabilitation if necessary



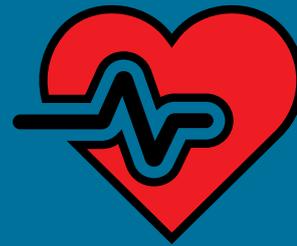
Organise follow-up for all cardiac arrest survivors within 3 months after hospital discharge, including screening for cognitive problems, screening for emotional problems and fatigue, and providing information and support for survivors and family members

# ORGAN DONATION

## KEY EVIDENCE



Post cardiac arrest patients are an increasing source of solid organ donors



Observational studies show that organs (heart, lung, kidney, liver, pancreas, intestine) from donors who have had CPR have similar graft survival rates compared with donors who have not had CPR

## KEY RECOMMENDATIONS



Consider organ donation in post-cardiac arrest patients who have achieved ROSC and who fulfil neurological criteria for death

In comatose ventilated patients who do not fulfil neurological criteria for death, when a decision to start end-of-life care and withdrawal of life support is made, organ donation should be considered after circulatory arrest occurs