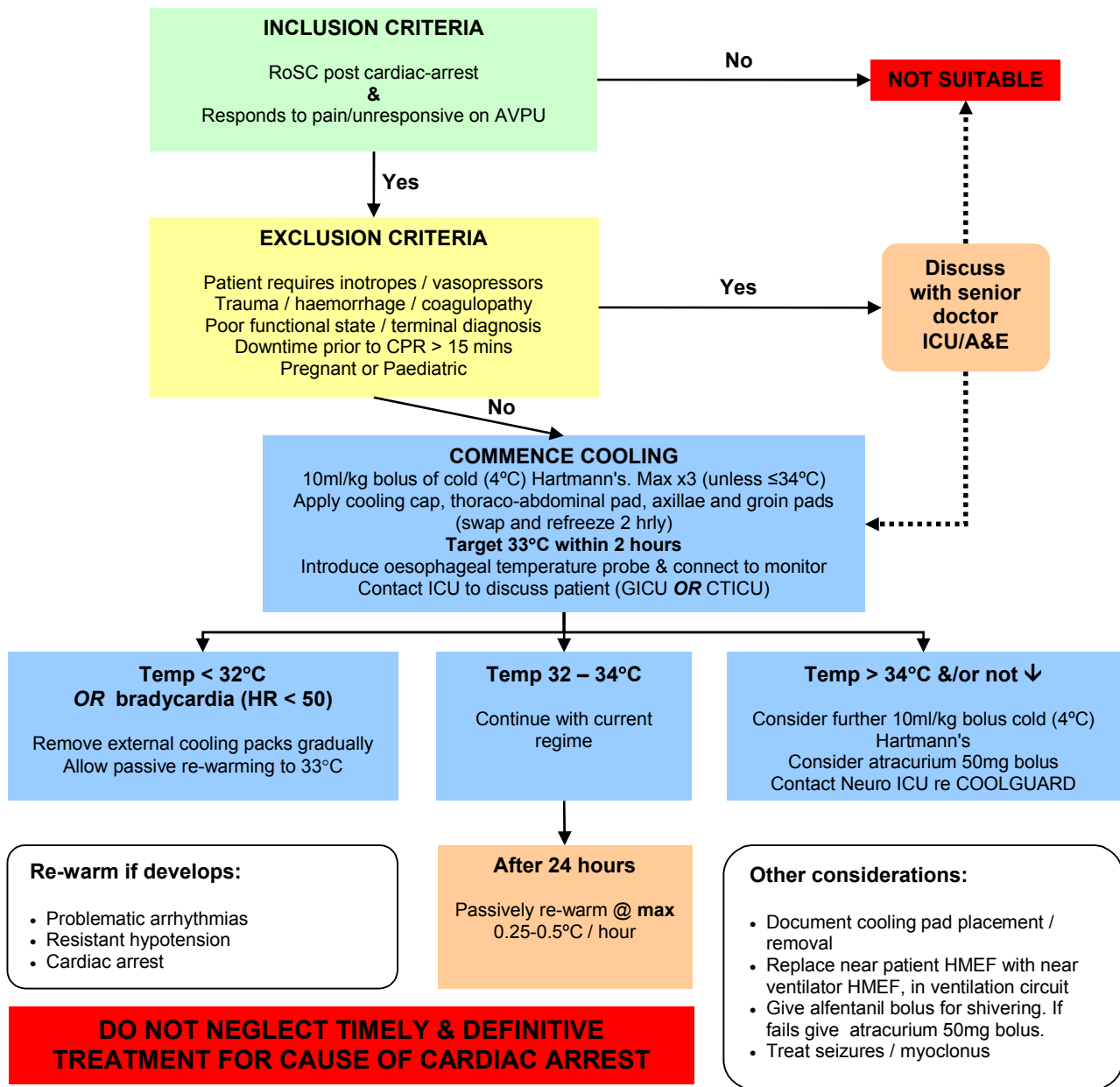


St Georges Healthcare NHS Trust
Mild therapeutic hypothermia (MTH) Post Cardiac Arrest Algorithm



Additional notes - physiological targets

System	Target	Notes
Airway	Intubate	Don't forget nasogastric tube
Breathing	Mechanical ventilation PaO ₂ 8.0-13.0kPa (SpO ₂ 92-97%) PaCO ₂ 4.5-5.5kPa	Maintain spontaneous breathing efforts if possible Avoid both hypoxia & hyperoxia [↓temp ⇒ ↓VO ₂] Avoid both hypo and hyper-capnia [↓temp ↓PaCO ₂]
Circulation	Heart rate 60-90bpm (sinus rhythm) CVP 8-12mmHg MAP 65-75mmHg ScvO ₂ ≥75% or SvO ₂ ≥70% [Expect cold diuresis and replace loses, especially electrolytes]	Optimal treatment for cause of cardiac arrest Initially avoid beta-blockade as hypothermia may induce problematic bradycardia. Use flow monitoring to assess fluid responsiveness, adequacy of cardiac output & oxygen delivery by trending indices of global oxygen balance (i.e. central or mixed venous oxygen saturations). DO NOT target DO2I >600
Disability (& dextrose)	Minimal sedation Neuromuscular blockade Maintain blood sugar 6.0-8.0mmol/l	With propofol and alfentanil. Treat shivering with opiates first, then atracurium 50mg boluses. USE BIS monitor if paralysed. Run 20% dextrose @ 30ml/hr + insulin infusion as required. [↓temp ⇒ ↓insulin sensitivity]. Commence NG Peptamen @ 30ml/hr.
Electrolytes [Measure 6hrly]	Na ⁺ 135-145mmol/l K ⁺ 4.0-5.0mmol/l ----- Mg ²⁺ >0.8mmol/l ----- Ca ²⁺ 1.0-1.3mmol/l ----- PO ₄ ³⁻ >0.8mmol/l pH / lactate -----	Watch for ↓↓ on cooling & ↑↑ on re-warming Load with 16mmols over 15mins then 4mmol/hr <i>Ionised</i> from blood gas machine NOT <i>total</i> from lab Expect metabolic / lactic acidosis DON'T treat
PLEASE complete audit sheets for ALS & MTH– 1 copy with patient notes & 1 copy in arrest audit folder		