

# Update in CPR Guidelines 2020



American  
Heart  
Association.

**2020**

CPR & ECC  
**GUIDELINES**

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# 2020 AHA GUIDELINES FOR CPR & ECC

Learn the latest science and  
changes in CPR to help save lives

RELEASE DATE: OCT. 21, 2020

#AHAGuidelines

[eccguidelines.heart.org](http://eccguidelines.heart.org)



**2020**

CPR & ECC  
GUIDELINES

Circulation

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<https://doi.org/10.1161/CIR.0000000000000916>

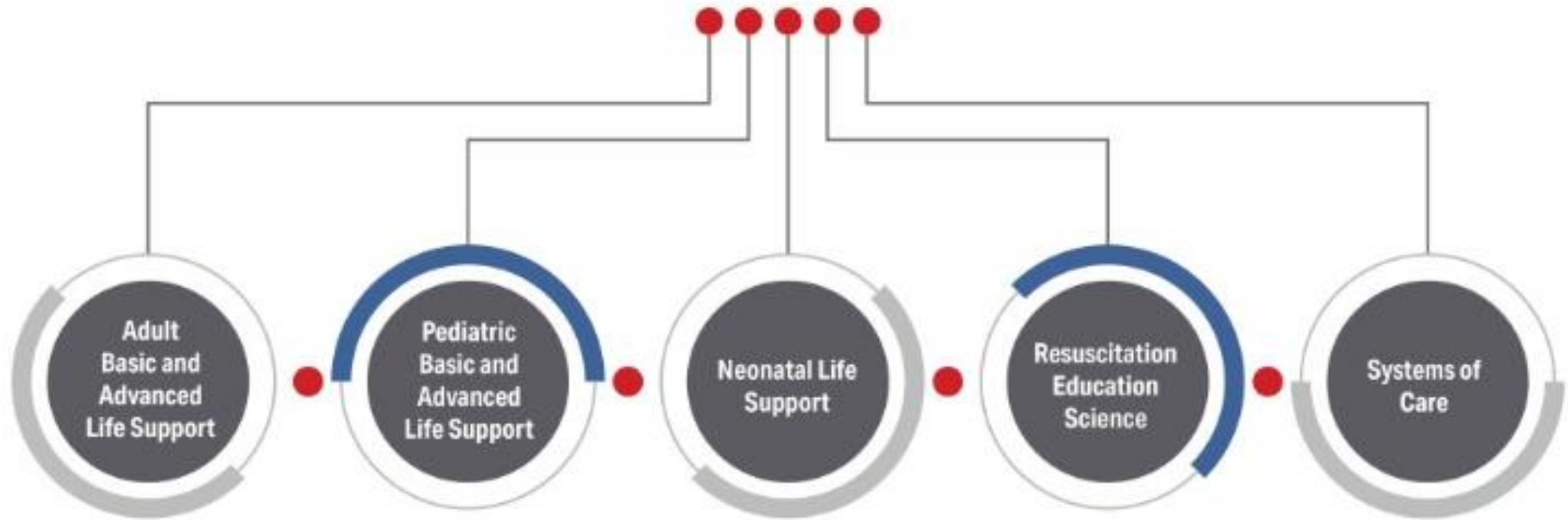


## 2020 AMERICAN HEART ASSOCIATION GUIDELINES FOR CARDIOPULMONARY RESUSCITATION AND EMERGENCY CARDIOVASCULAR CARE

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# Topics





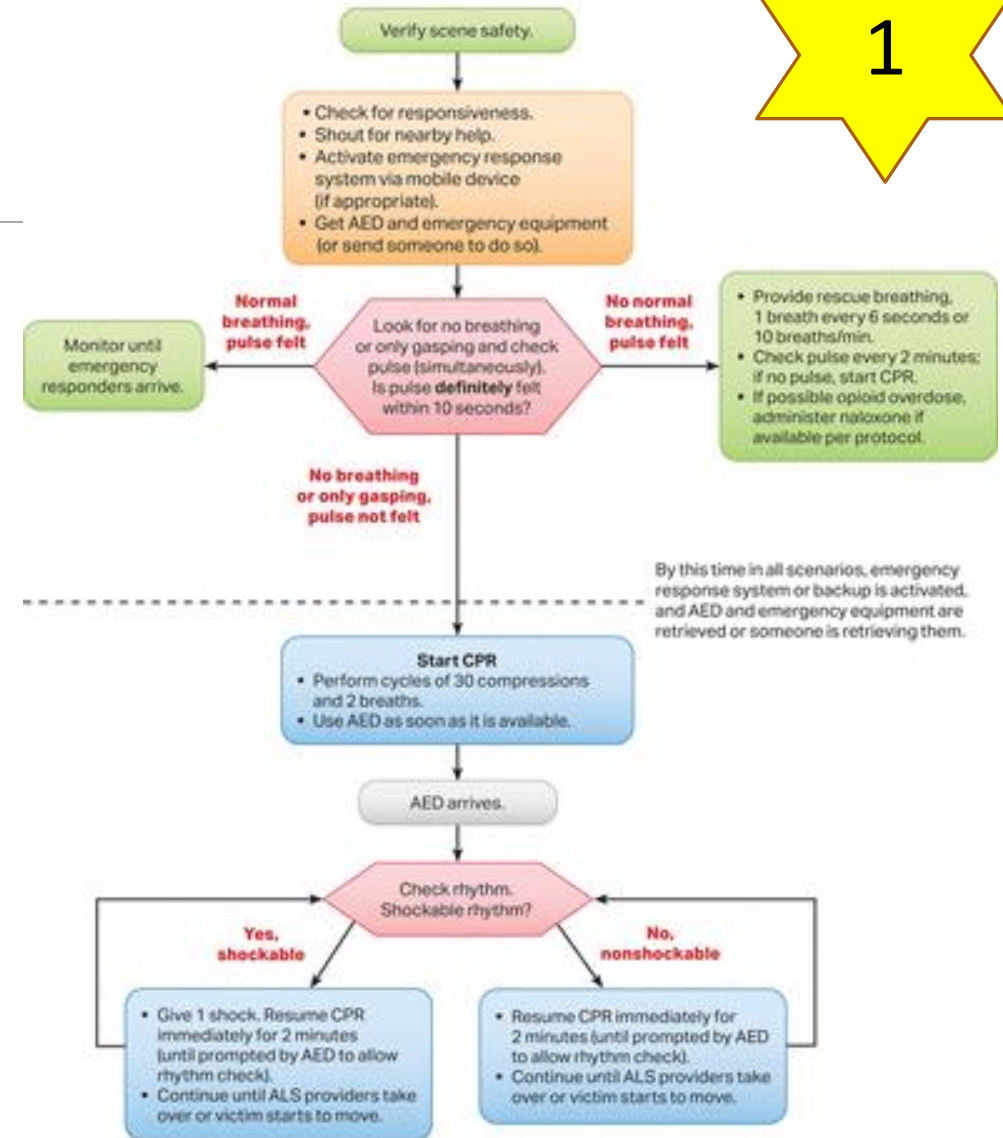
### Adult IHCA Chain of Survival

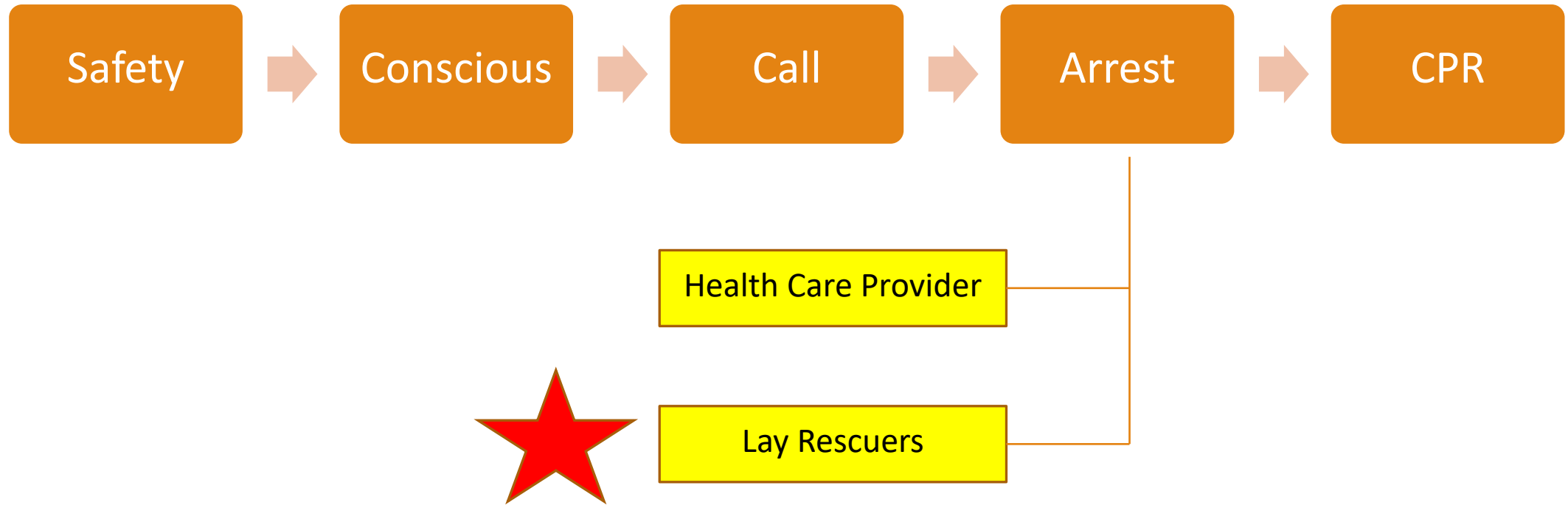


### Adult OHCA Chain of Survival



## Adult Basic Life Support Algorithm for Healthcare Providers









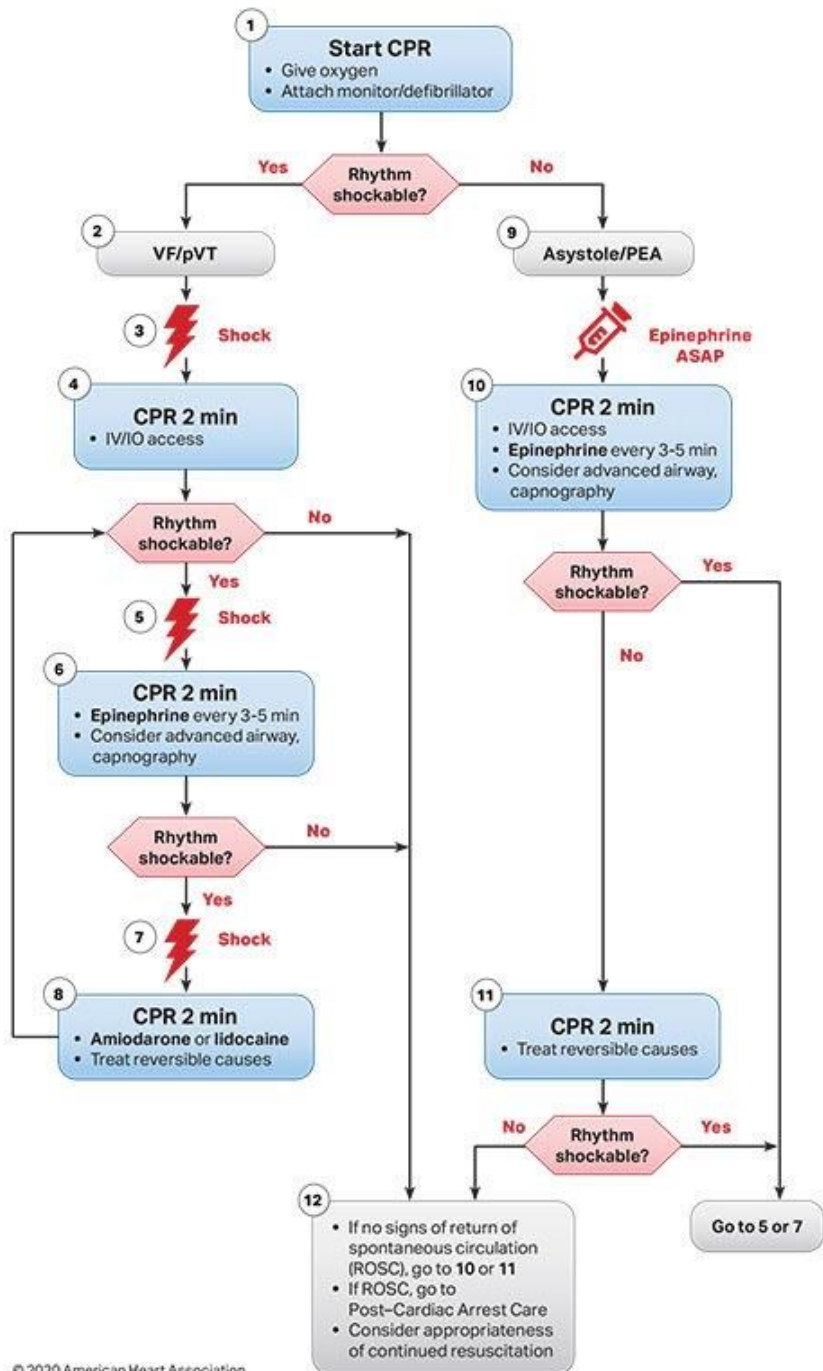
No Arrest + CPR



Arrest + No CPR







CPR Quality
<ul style="list-style-type: none"> <li>• Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.</li> <li>• Minimize interruptions in compressions.</li> <li>• Avoid excessive ventilation.</li> <li>• Change compressor every 2 minutes, or sooner if fatigued.</li> <li>• If no advanced airway, 30:2 compression-ventilation ratio.</li> <li>• Quantitative waveform capnography               <ul style="list-style-type: none"> <li>– If PETCO<sub>2</sub> is low or decreasing, reassess CPR quality.</li> </ul> </li> </ul>
Shock Energy for Defibrillation
<ul style="list-style-type: none"> <li>• <b>Biphasic:</b> Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.</li> <li>• <b>Monophasic:</b> 360 J</li> </ul>
Drug Therapy
<ul style="list-style-type: none"> <li>• <b>Epinephrine IV/IO dose:</b> 1 mg every 3-5 minutes</li> <li>• <b>Amiodarone IV/IO dose:</b> First dose: 300 mg bolus. Second dose: 150 mg.</li> <li>or</li> <li>• <b>Lidocaine IV/IO dose:</b> First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.</li> </ul>
Advanced Airway
<ul style="list-style-type: none"> <li>• Endotracheal intubation or supraglottic advanced airway</li> <li>• Waveform capnography or capnometry to confirm and monitor ET tube placement</li> <li>• Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions.</li> </ul>
Return of Spontaneous Circulation (ROSC)
<ul style="list-style-type: none"> <li>• Pulse and blood pressure</li> <li>• Abrupt sustained increase in PETCO<sub>2</sub> (typically ≥40 mm Hg)</li> <li>• Spontaneous arterial pressure waves with intra-arterial monitoring</li> </ul>
Reversible Causes
<ul style="list-style-type: none"> <li>• Hypovolemia</li> <li>• Hypoxia</li> <li>• Hydrogen ion (acidosis)</li> <li>• Hypo-/hyperkalemia</li> <li>• Hypothermia</li> <li>• Tension pneumothorax</li> <li>• Tamponade, cardiac</li> <li>• Toxins</li> <li>• Thrombosis, pulmonary</li> <li>• Thrombosis, coronary</li> </ul>

## Early Administration of Epinephrine





# Real-Time Audiovisual Feedback



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# Physiologic Monitoring of CPR Quality

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Quantitative waveform capnography  
Arterial pressure monitoring  
Arterial relaxation diastolic pressure  
Central venous oxygen saturation

No clinical study has examined

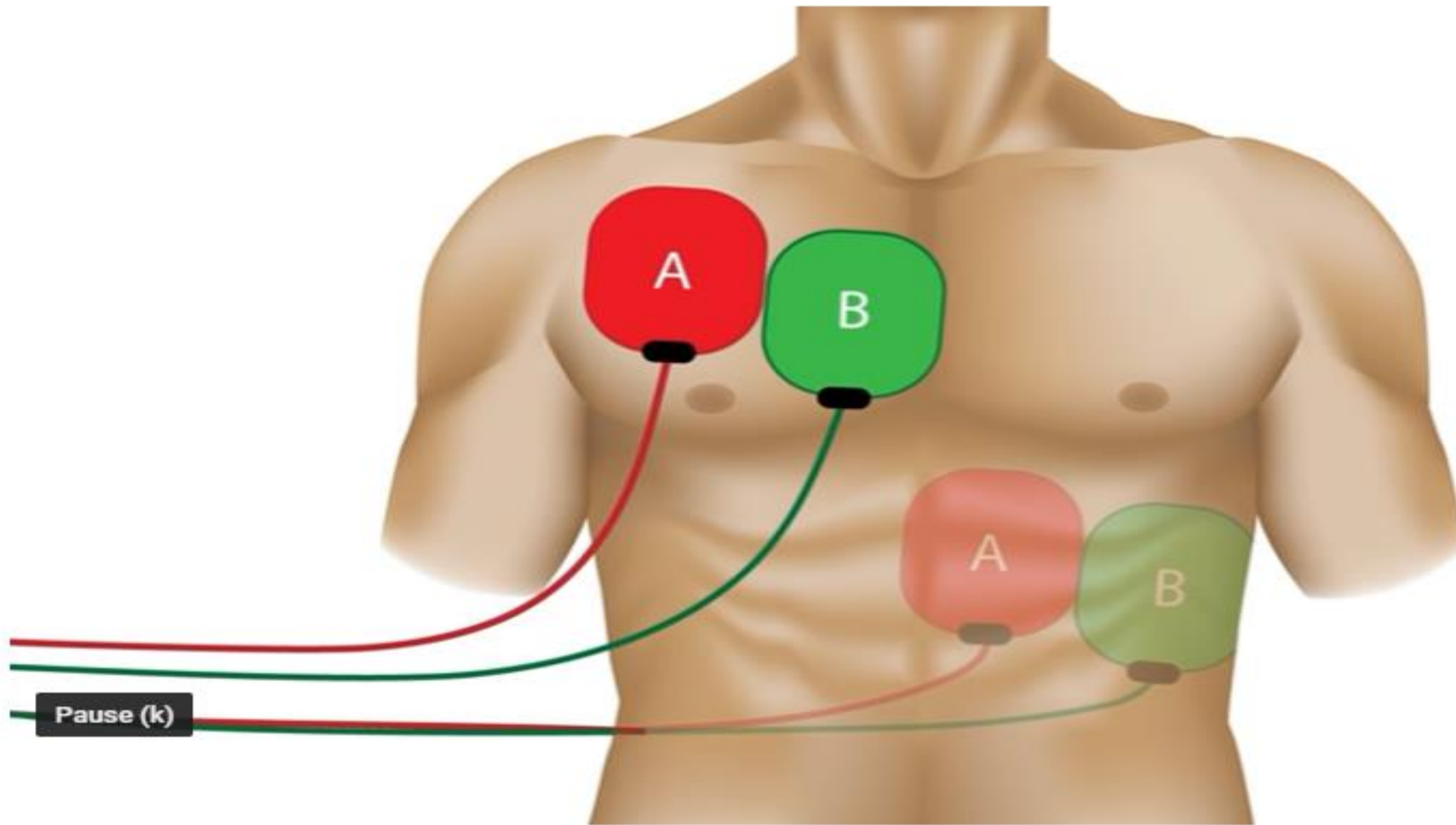


May be reasonable to use  
physiologic parameters

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# Double Sequential Defibrillation Not Supported

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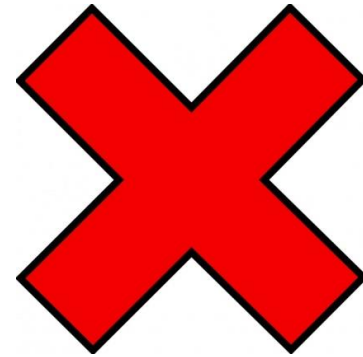
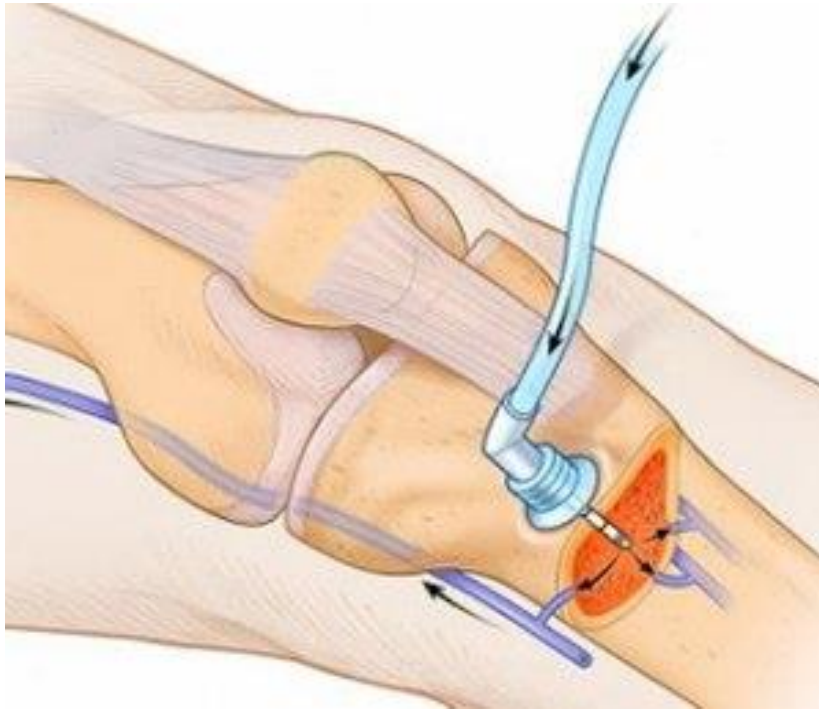


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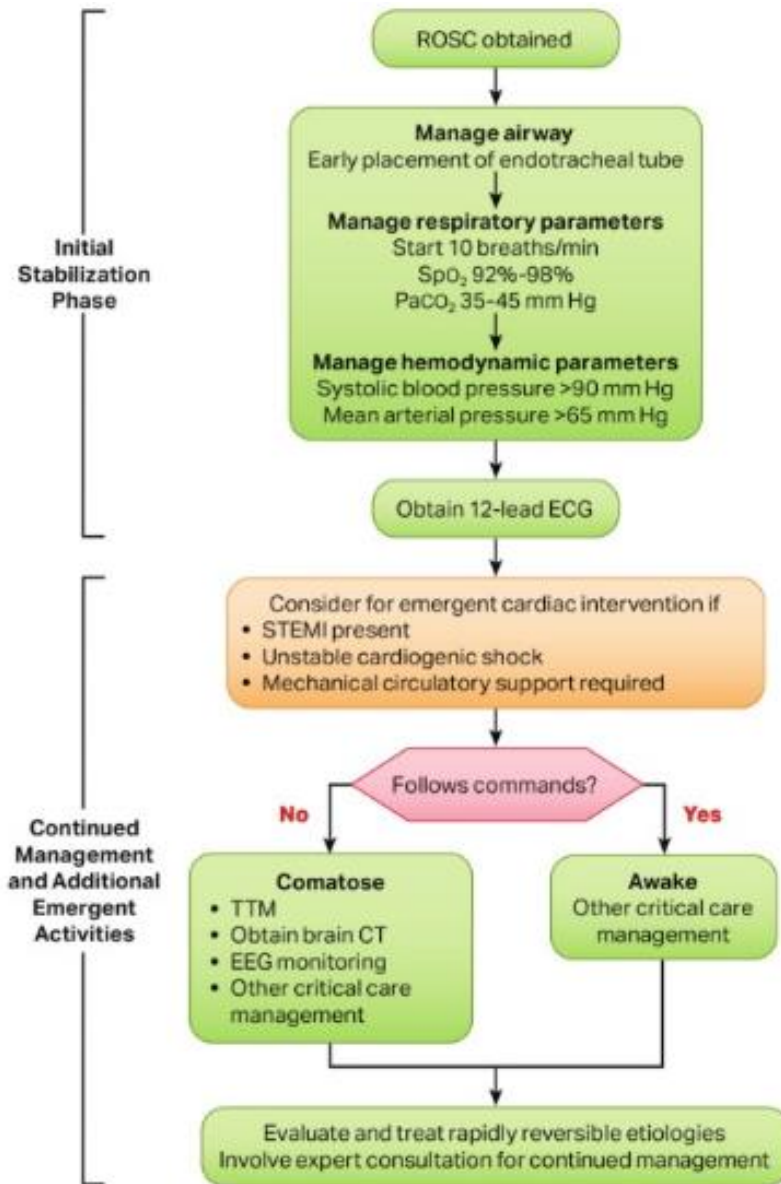
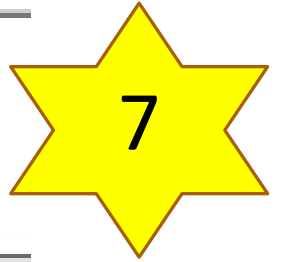
## IV Access Preferred Over IO

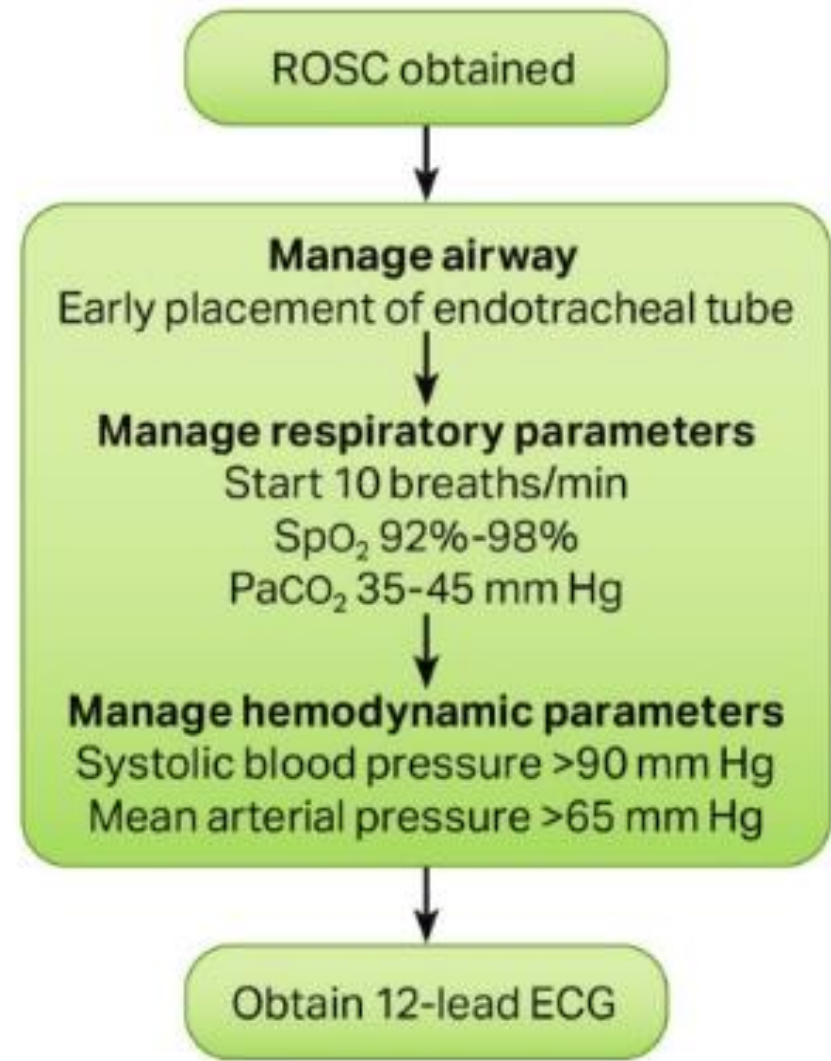
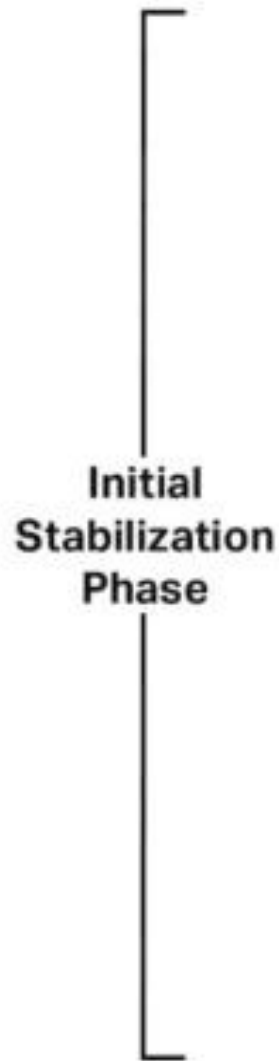
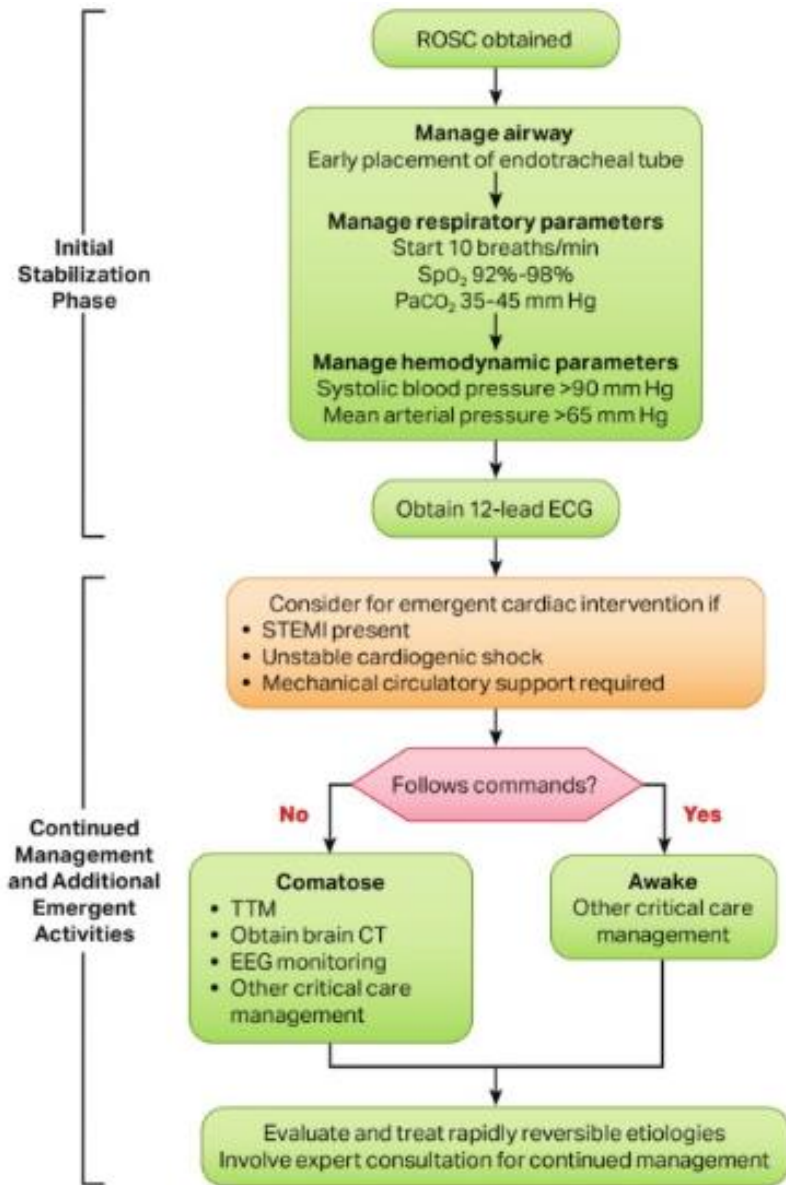
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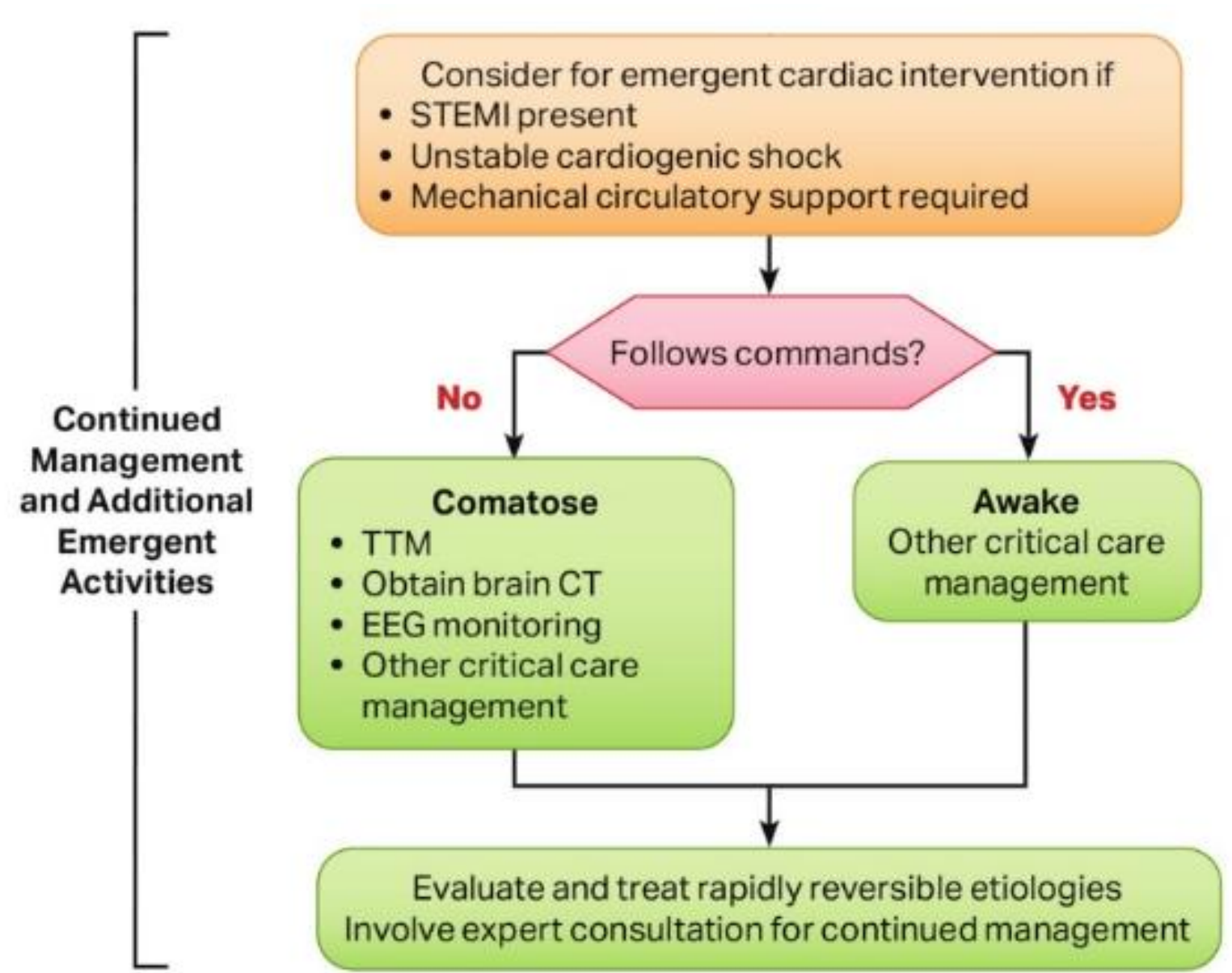
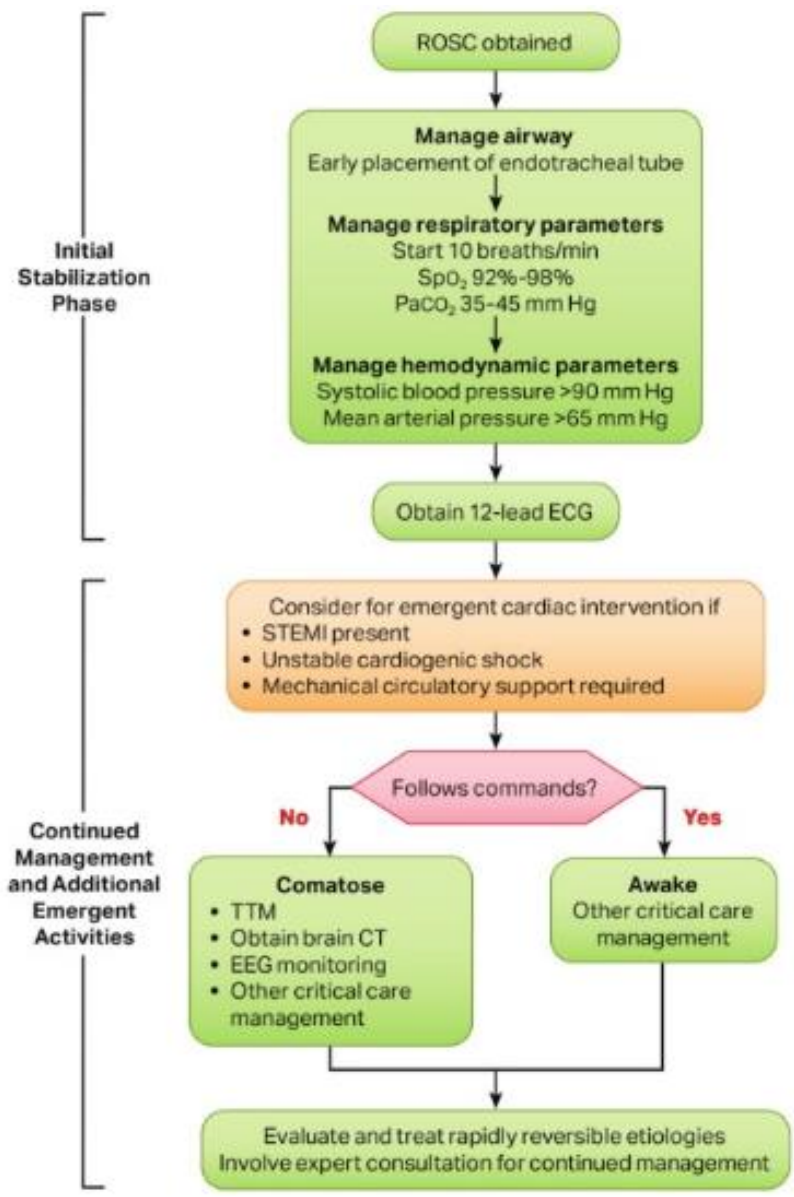
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# Post-Cardiac Arrest Care and Neuroprognostication

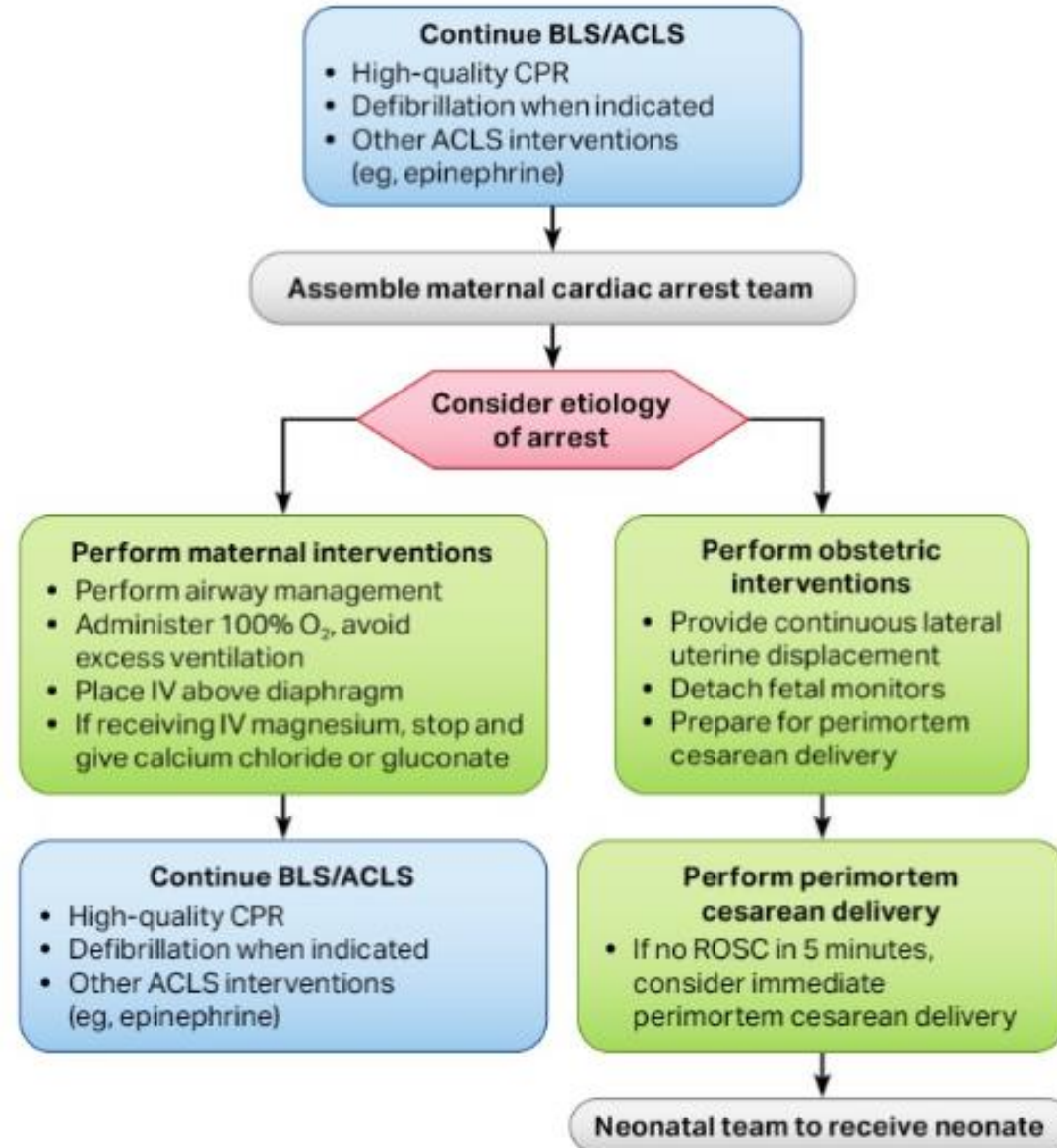








## Cardiac Arrest in Pregnancy In-Hospital ACLS Algorithm.





# 2020 GUIDELINES

NEWS FROM THE AMERICAN HEART ASSOCIATION