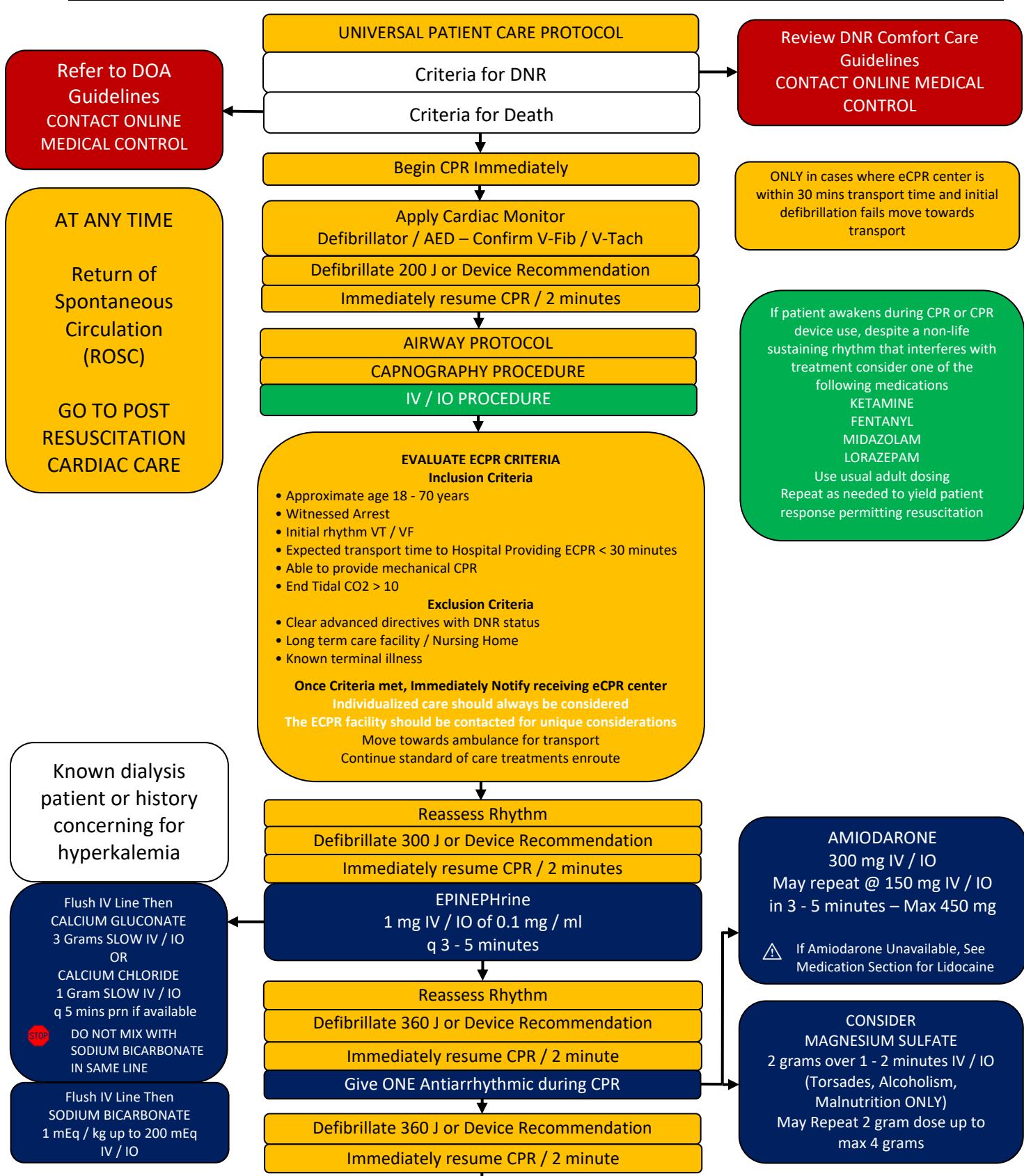


## VENTRICULAR FIBRILLATION

## PULSELESS VENTRICULAR TACHYCARDIA for ECPR Departments



EMT Intervention

AEMT Intervention

PARAMEDIC Intervention

Online Medical Control

# VENTRICULAR FIBRILLATION

## PULSELESS VENTRICULAR TACHYCARDIA for ECPR Departments

HISTORY	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none"> <li>Estimated down time</li> <li>Past medical history</li> <li>Medications</li> <li>Events leading to arrest</li> <li>Renal failure / dialysis</li> <li>DNR</li> </ul>	<ul style="list-style-type: none"> <li>Unresponsive, apneic, pulseless</li> <li>Ventricular fibrillation or ventricular tachycardia on ECG</li> </ul>	<ul style="list-style-type: none"> <li>Asystole</li> <li>Artifact / device failure</li> <li>Cardiac</li> <li>Endocrine / metabolic</li> <li>Drugs</li> <li>Pulmonary embolus</li> </ul>

### ECPR Centers

Cleveland Clinic Main Campus  
UH Cleveland Medical Center

#### KEY POINTS – ECPR

- If shockable rhythm and in an area with ECPR (ECMO CPR) capability at the receiving hospital, those ECPR guidelines for resuscitation and abbreviated field treatment may be followed
- If ROSC is achieved during transport, EMS should continue to the ECPR center that they were originally transporting to
- Standard treatments for V-FIB / V-Tach applies during transport if ECPR criteria met
- Specific cases not explicitly included in the inclusion or exclusion criteria should be discussed with the ECPR center real time
- Successful outcomes of ECPR hinges on early identification, early notification of the ECPR center, and timely transport and transfer of the patient
- Mechanical CPR is paramount during care for maintenance of quality CPR – apply as soon as possible

#### KEY POINTS – V-FIB / V-TACH

- Exam: Mental Status
- Always minimize interruptions to chest compressions.
- When IV access failed or difficult, humeral head IO are preferred routes over tibial IO for resuscitation.
- Effective CPR should be as continuous as possible with a minimum of 5 cycles or 2 minutes.
- Reassess and document endotracheal tube placement and Capnography frequently, after every move, and at discharge.
- Polymorphic V-Tach (Torsades de Pointes) may benefit from administration of Magnesium Sulfate.
- If the patient converts to another rhythm, or has a return of circulation, refer to the appropriate protocol and treat accordingly.
- If the patient converts back to ventricular fibrillation or pulseless ventricular tachycardia after being converted to ANY other rhythm, defibrillate at the previous setting used.
- Defibrillation following effective CPR is the definitive therapy for ventricular fibrillation and pulseless ventricular tachycardia. Magnesium Sulfate should be administered early in the arrest if hypomagnesemia (chronic alcoholic or malnourished patients) is suspected.
- If patient is pregnant and in cardiac arrest, manually manipulate the uterus to the left during CPR
- Zoll and Phillips equivalency settings are 120,150,200 Joules to Physio Control / Stryker 200,300,360 Joules. If unsure about settings use highest joule setting per AHA.
- Damage to defibrillators during double sequential defibrillation may not be covered by manufacturers, use the technique with prior approval from your department
- Dextrose should only be administered to a patient with a confirmed blood glucose level less than 70 mg / dl.