CARDIAC ARREST – ECPR (ADULT)

Inclusion Criteria: Patients ≥14 y/o with MEDICAL cardiac arrest
Exclusion Criteria: Patients with TRAUMATIC cardiac arrest, or patients who meet exclusion criteria below

MEDICAL cardiac arrest patient

- Initiate care per CARDIAC ARREST – GENERAL CPG[1,2]

Screen patient for ECPR eligibility using this checklist:[3,4]

Any "**NO**" EXCLUDES the patient from ECPR:

- ❑ INITIAL rhythm was **Ventricular Fibrillation** or **Pulseless Ventricular Tachycardia**.
- ❑ Time of arrest was witnessed, observed, or heard by bystander or crew.
- ❑ Patient age is ≥ 14 y/o.
- ❑ Patient age is ≤ 70 y/o.
- ❑ Estimated drive time to closest ECPR center is < 20 min.
- ❑ The patient has **NONE** of the following conditions:
  - ❖ On hospice care or has OOH-DNR
  - ❖ Unable to care for self at baseline or lives in a nursing/care facility
  - ❖ Known severe congestive heart failure (CHF)
  - ❖ Known severe kidney disease (ESRD and/or receiving dialysis)
  - ❖ Known severe liver disease (cirrhosis, jaundice, ascites, awaiting transplant)
  - ❖ Severe lung disease (uses home oxygen, COPD, pulmonary fibrosis, etc.)
  - ❖ Cancer (unless known to be in remission)

ALL ANSWERS "YES" (no exclusion criteria)

- Contact BioTel as soon as possible after completing the checklist to alert of an eligible ECPR candidate.
- Continue on-scene resuscitation for a total of 15 minutes[5] from first compressions by BioTel EMS personnel
  - If ROSC is achieved sooner, refer to CARDIAC ARREST – POST-ROSC CARE CPG
- Initiate compressions with LUCAS device before transport

- Transport to the nearest ECPR center[6,7]
- Contact BioTel en route with an updated ETA
- Provide structured handoff[8] after ED arrival

ANY ANSWER "NO"

NOT an ECPR Candidate

- Continue care per CARDIAC ARREST – GENERAL CPG

(c) 2025 UTSW/Parkland/BioTel

CARDIAC ARREST – ECPR (ADULT), cont.

Special Considerations:

1. To benefit a patient in cardiac arrest, the ECPR process must be initiated within a strict timeframe. EMS should focus on keeping on-scene time under 20 minutes.
2. ON-SCENE high-quality cardiac arrest resuscitation is still the #1 priority.
3. For patients who are SLIGHTLY outside of inclusion criteria parameters, consider contacting a BioTel medical control physician to discuss whether ECPR might be appropriate.
   - Examples: healthy 71 y/o patient, transport time 21 min, etc.
4. During resuscitation of possible ECPR candidates, crews should prepare the patient for transport by the 15-minute mark by ensuring the following steps have been taken:
   - Ventilation (by BVM or advanced airway) with ETCO2 monitoring ongoing
   - IV/IO access established
   - Defibrillation performed, if indicated
     - Including Vector Change and/or Dual Sequential Defibrillation for persistent shockable rhythms per CARDIAC ARREST – GENERAL CPG
   - **Epinephrine** and **Amiodarone** have been administered per CARDIAC ARREST – GENERAL CPG (if indicated)
   - A LUCAS device is in place
     - Patients who do not fit inside the LUCAS device are NOT candidates for ECPR.
5. Providing 15 minutes of on-scene resuscitation balances the possibility of ROSC in the field with the potential benefit of transporting for ECPR with ongoing compressions.
6. As of 07/01/2025, the following facilities are approved destinations for ECPR:
   - Baylor University Medical Center – 3305 Worth St, Dallas, TX 75246
   - Medical City Plano – 3901 W 15th St, Plano, TX 75075
   - Parkland Hospital – 5200 Harry Hines Blvd, Dallas, TX 75235
   - Texas Health Presbyterian Hospital Dallas – 8200 Walnut Hill Ln, Dallas, TX 75231
   - UT Southwestern Clements University Hospital – 1943 Record Crossing Rd, Dallas, TX 75235
7. If ROSC is achieved before or during transport for an eligible or activated ECPR patient, the patient should STILL be transported to an ECPR center for further care.
8. Use the ECPR handoff script template on the next page to provide report to ED personnel.

(Continued on the next page)

(c) 2025 UTSW/Parkland/BioTel

CARDIAC ARREST – ECPR (ADULT), cont

ECPR Handoff Script

This is a/an **age-** year-old **gender** coming from **location**,

Estimated time of initial arrest is: **XX:XX**,

Arrest was witnessed by **family, bystander, etc.**,

There **was or was not** bystander CPR,

*(AED was placed by bystanders and advised **shock/no shock**)*

On our arrival the initial rhythm was **rhythm**,

Current rhythm is: **rhythm**,

Current airway is: **BVM, i-gel, ETT, etc.**,

We have **IV/IO** access,

They have received:

____ Epinephrine

____ Amiodarone

____ Defibrillations

____ Double Sequential Defibrillations

Initial end-tidal was: _____,

Most current end-tidal is: _____,

Total time we have been doing CPR is: _____ minutes,

Pertinent medical is history is: _____,

Additional information as pertinent:

- Any period of ROSC
- Any CPR-induced consciousness
- Pertinent Rhythm changes

(c) 2025 UTSW/Parkland/BioTel