M. MECHANICAL CPR

1. PURPOSE

Mechanical CPR (mCPR) devices perform chest compressions at a consistent and reliable rate and depth, never fatigue, and are not susceptible to other human factors that degrade resuscitation quality. Additionally, the use of an mCPR device while transporting an in-progress resuscitation allows for effective CPR and increases safety by allowing clinicians to be restrained during transport.

2. PRESENTATION

Patients in cardiac arrest who have an established resuscitation in progress

3. INDICATION

a) Active cardiac arrest resuscitation
b) Applied in a standby mode for transport to any patient
    (1) who achieves ROSC, OR
    (2) who clinicians believe will progress to cardiac arrest

4. CONTRAINDICATION

Patients who have not yet reached their 13th birthday

5. PROCEDURE:

a) Application of an mCPR device may not begin until after two 2-minute cycles of manual chest compressions.
b) Any mCPR device must be applied in a manner that limits any break in compressions to less than 10 seconds.
c) The 10-second breaks for device application must only occur around a normal 2-minute compression interval and simultaneously while performing rhythm interpretation and defibrillation.
d) Apply the mCPR device according to manufacturer instructions, keeping in mind that minimizing breaks in compressions to less than 10 seconds may require that an mCPR device be applied over two or more 2-minute cycles of chest compressions.
e) Once applied, devices must be used in accordance with manufacturer recommendations, but the goal should be to limit breaks in compressions as little as possible. This goal can be accomplished by:
    (1) Only pausing the mCPR device for rhythm interpretation
    (2) Pausing only long enough to identify the rhythm, and then starting again
    (3) Delivering defibrillations while chest compressions are in progress
f) An mCPR device (if available) should be applied in a standby mode for transport to any patient who achieves ROSC or patients who clinicians believe will progress to cardiac arrest.

6. PRECAUTIONS

Application of an mCPR device shall not cause delays in assessing for a shockable rhythm or the initiation of manual CPR.

7. INITIAL TRAINING

The jurisdictional medical director must certify that personnel have received a locally-approved training program prior to implementation.

8. ONGOING DEMONSTRATION OF PROFICIENCY

The jurisdictional medical director must reaffirm that EMSOP clinicians have received annual training with the mCPR device.