NOR-CAL EMS	05-0306	Adult - Mechanical Chest Compression Devices

Nor-Cal EMS Policy & Procedure Manual	BLS/ALS Protocols
Effective Date: 1/01/2021	Next Revision: 1/01/2024
Approval: Jeffrey Kepple MD – MEDICAL DIRECTOR	SIGNATURE ON FILE

Authority:

California Health and Safety Code Division 2.5, California Code of Regulations, Title 22, Division 9

Purpose

The purpose of this policy is to describe the use of the Nor-Cal EMS approved mechanical CPR devices in the prehospital setting for non-traumatic cardiac arrests in patients that are 18 years of age and older.

Nor-Cal EMS approved automatic CPR devices are the following:

1. Zoll Auto-Pulse
2. Physio-Control Lucas Device

General

1. Each agency in Nor-Cal EMS needs to apply for permission to utilize a mechanical CPR device.
2. Training: Quarterly training and skills competency sign off.
3. Nor-Cal EMS shall have sole discretion on device approval which will be determined on an individual basis.
4. Each Nor-Cal EMS approved CPR device requires specific training standards, skills and competencies approved by the Nor-Cal EMS supplied by their provider agency.
    A. A copy of the proposed initial and ingoing training program, including the anticipated number of personnel to be trained on the use of the device.
5. Only EMS providers that are trained and qualified in the use of such devices may operate or monitor them.
6. The EMS provider agency must provide yearly training and then send the attestation documents and training rooster to Nor-Cal EMS.
7. Plan for notifying the appropriate allied agencies and hospitals of the device(s) use prior to implementation.
8. EMS personnel may utilize an approved mechanical CPR device for patients in cardiac arrest under the following circumstances:
    A. They are employed (volunteer and paid) by and on duty with an EMS provider agency approved by Nor-Cal EMS.
    B. They have successfully completed the approved training prior to utilizing the device.
    C. They follow the indications, contraindications and device application procedure indicated in the Nor-Cal EMS pulseless arrest treatment protocol.
    D. The EMT-B who operated the device needs to accompany the patient during transport.
9. Each application of these devices needs to be reviewed by the provider agency.
    A. The metrics need to be monitored and reported to Nor-Cal EMS on a quarterly basis.
    B. If the metrics are not met, then remediation needs to take place.
    C. Any device suspected of malfunctioning, that may have adversely affected patient care needs to be reported to Nor-Cal EMS, their supervisor, the receiving facility and the device manufacturer.
    D. Contained in the PCR in addition, to the normal recorded data, the report shall include specific information related to the use of the device:
        a. Time of the patient collapse.
        b. Was the cardiac arrest witnessed?
        c. Was bystander CPR performed?
        d. Total time of manual CPR prior to the device application.
        e. Time of the device application.
        f. Total time it took to apply the device.

g. Total time device use.
h. Did the patient receive AED or defibrillation shocks?
i. Did the patient experience return of spontaneous circulations (ROSC) in the prehospital setting or hospital?

10. Emergency Medical Responder (EMR) may assist only in the application/placing the patient in the device.
11. The Emergency Medical Responder (EMR) cannot operate/run the approved mechanical CPR device.
12. The approved EMT-B or higher trained and qualified EMS provider must be present to operate the device.

Zoll Auto-Pulse	**Physio-Control Lucas Device**
Indications: 1. Non-traumatic cardiac arrest in patients 18 years of age and older. 2. Use only in cases in which manual CPR would be indicated. **Contraindications:** 1. Traumatic injuries/arrest 2. Pediatric patients 3. Pregnant patients 4. Recent sternum surgery 5. Oxygen rich or flammable environments 6. Device does not fit the patient **Use:** 1. Patient shall receive at a minimum 3 full cycles of manual CPR prior to its application. 2. There needs to be at least 3 providers including Fire and/or EMS. 3. This device may not be used or monitored by untrained EMS providers. 4. Follow the manufacturers guidelines for use or the Nor-Cal EMS approved training from your provider agency. 5. If the device does not function properly, or if there is reason to believe the device is not working effectively, discontinue operation and proceed with manual chest compressions. 6. The application of the device needs to coincide with normal pauses in manual CPR. 7. To maintain coronary perfusion pressure and cerebral perfusion pressure there should never be more than a 10 second pause in chest compressions during the application of the device. This needs to be a staged application of the CPR device with a total pause of no greater than 15 seconds.	**Indications:** 1. Non-traumatic cardiac arrest in patients 18 years of age and older. 2. Use only in cases in which manual CPR would be indicated. **Contraindications:** 1. Traumatic injuries/arrest 2. Pediatric patients 3. Pregnant patients 4. Recent sternum surgery 5. Device does not fit the patient **Use:** 1. Patient shall receive at a minimum 3 full cycles of manual CPR prior to its application. 2. There needs to be at least 3 providers including Fire and/or EMS. 3. This device may not be used or monitored by untrained EMS providers. 4. Follow the manufacturers guidelines for use or the Nor-Cal EMS approved training from your provider agency. 5. If the device does not function properly, or if there is reason to believe the device is not working effectively, discontinue operation and proceed with manual chest compressions. 6. The application of the device needs to coincide with normal pauses in manual CPR. 7. To maintain coronary perfusion pressure and cerebral perfusion pressure there should never be more than a 10 second pause in chest compressions during the application of the device. This needs to be a staged application of the CPR device with a total pause of no greater than 15 seconds.