



REGULATORY/ MEDICAL HEALTH SERVICES
EMERGENCY MEDICAL SERVICES

RICHARD SANCHEZ
DIRECTOR

STEVE THRONSON
DEPUTY AGENCY DIRECTOR
REGULATORY/MEDICAL SERVICES

DENISE FENNESSY
CHIEF OF OPERATIONS
REGULATORY/MEDICAL SERVICES

TAMMI McCONNELL MSN, RN
EMS ADMINISTRATOR

405 W FIFTH STREET, SUITE 301A
SANTA ANA, CALIFORNIA 92701
TELEPHONE: 714- 834-3500
FAX: 714- 834-3125

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TO: ORANGE COUNTY EMS DISTRIBUTION LIST
911 SERVICE PROVIDER COORDINATORS

FROM: SAM J. STRATTON, MD, MPH
MEDICAL DIRECTOR, ORANGE COUNTY EMS AGENCY

A handwritten signature in blue ink, appearing to read 'SJS', is positioned to the right of the 'FROM:' line.

SUBJECT: ADDITION OF AUTOMATIC CHEST COMPRESSION DEVICES FOR CPR TO
THE ALS INVENTORY FOR ORANGE COUNTY

Current standards for CPR emphasize the importance of continuous chest compressions without interruption as important for success in resuscitation. Interruption of chest compression during CPR stops any blood flow to the brain and heart, limiting the probability for someone surviving cardiac arrest with good neurological outcome.

Review of recent CPR cases in the field has revealed unavoidable interruptions that occur with manual methods for chest compression. These include:

1. Interruption of manual chest compression to initially load a cardiac arrest victim onto a gurney or stretcher.
2. Interruption of manual chest compression to move a cardiac arrest victim down stairs or into an elevator.
3. Interruption of manual chest compression to load a cardiac arrest victim into an ambulance.
4. Interruption of manual chest compression to unload a cardiac arrest victim from an ambulance.
5. Interruption of manual chest compression to transfer a cardiac arrest victim from the transport stretcher to a receiving hospital gurney.

Additionally, EMS personnel are placed at risk for serious injury while providing chest compressions during transport in an ambulance. Typically, EMS personnel must lean, stand, or kneel over the cardiac arrest victim to provide effective chest compression during ambulance transport. These positions taken to provide chest compression require that the rescuer travel poorly balanced and unrestrained in a fast moving ambulance. Sudden stops or crashes can

and have resulted in the rescuer being thrown forward with head and neck injury that resulted in permanent disability.

In Orange County, a pilot project has shown improved outcome (return of spontaneous circulation or ROSC) when automatic chest compression devices are placed early in the management of cardiac arrest. ROSC rates have been shown to range 50% better than the rest of the county where manual chest compression is used.

For the above three reasons, automatic chest compression devices for CPR have been added to the required Orange County advanced life support (ALS) inventory with the intent that the device be available before moving a cardiac arrest victim from the surface where CPR is initiated. Deployment of the automatic chest compression device is at the option of the ALS provider and does not necessarily need to be with each ALS unit, rather immediately available (for example deployed with responding battalion chiefs or supervisors).

Acknowledged is the cost burden for purchase of automatic chest compression devices and equipment. Therefore, it is understood that implementation of automatic chest compression devices will occur with budgeting cycles, but should be in service well before or on January 1, 2020.

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