



**Homeland
Security**

Science and Technology

U.S. Department of Homeland Security



System Assessment and Validation for Emergency Responders

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) Program to assist emergency responders making procurement decisions.

Located within the Science and Technology Directorate (S&T) of DHS, the SAVER Program conducts objective assessments and validations on commercial equipment and systems, and provides those results along with other relevant equipment information to the emergency response community in an operationally useful form. SAVER provides information on equipment that falls within the categories listed in the DHS Authorized Equipment List (AEL). The SAVER Program mission includes:

- Conducting impartial, practitioner-relevant, operationally oriented assessments and validations of emergency responder equipment;
- Providing information that enables decision makers and responders to better select, procure, use, and maintain emergency responder equipment.

Information provided by the SAVER Program will be shared nationally with the responder community, providing a life- and cost-saving asset to DHS, as well as to federal, state, and local responders.

The SAVER Program is supported by a network of technical agents who perform assessment and validation activities. Further, SAVER focuses primarily on two main questions for the emergency responder community: "What equipment is available?" and "How does it perform?"

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Highlight

Mechanical Chest Compression Devices (MCCD)

MCCD are automated cardiopulmonary resuscitation (CPR) machines that use either a mechanical piston or load-distributing band (LDB) to apply compressions to a patient's chest. MCCD are intended to be used as an adjunct to CPR as they take over the chest compressions for the emergency responder. CPR—manual and automated—is unlikely to restart the heart, but rather its purpose is to maintain a flow of oxygenated blood to vital organs, thereby extending the window of opportunity for successful resuscitation. Inconsistent compressions along with rescuer fatigue and interruptions for patient movement limit the effectiveness of manual CPR.

As a SAVER Program Technical Agent, the Center for Domestic Preparedness (CDP) conducted a comparative assessment of MCCD for the SAVER Program. Prior to the assessment, the CDP conducted a market survey in order to provide information on commercially available equipment, and produced the *Market Survey Report on Mechanical Chest Compression Devices*. A focus group was then conducted to identify equipment selection criteria for the assessment, determine evaluation criteria, and recommend assessment scenarios. The results can be found in the *Focus Group Recommendations on Mechanical Chest Compression Devices* report.

All reports in the series, including the *Assessment Report on Mechanical Chest Compression Devices*, will be located on the SAVER Web site (<https://www.rkb.us/SAVER>) as they become available.



Mechanical Chest Compression Device