



CHANHASSEN FIRE DEPARTMENT

EMS Operations

EleGARD – Heads Up CPR

Chanhassen Fire is the first department in Carver County to add the EleGARD to our EMS care package. This enhances our current cardiac response model. We currently utilize the ResQPOD/igel combination for airway (outside of the COVID restrictions) along with AED and LUCAS deployment. Adding the EleGARD as part of the "Bundle of Care" will enhance our cardiac outcomes and bring Chanhassen in-line with other area fire/rescue departments who provide the elevated bundle of care to their communities.



The EleGARD is a patient placement device that allows for elevated CPR, which raises the head, heart and thorax in a timed sequence to increase cerebral and coronary perfusion while significantly decreasing intracranial pressure. This reduces the chance of a brain concussion with every compression.

We currently have two LUCAS-3 (automated CPR) devices, one on our dedicated rescue engine (E13) and one on our frontline engine (rotates among other fleet). The EleGARD device integrates with the LUCAS to provide the automated CPR in an elevated manner, increasing the oxygen-rich blood flow to the brain.



The Data

Head-up CPR with our LUCAS, and a ResQPOD, can restore cardiocerebral circulation to near-normal levels. The potential for injuries associated with CPR in the flat position, like concussive pressure, is reduced and may improve long-term survival rates. ~ Keith Lurie, MD – University of Minnesota Cardiologist

Edina Fire Department's EMS Chief, Ryan Quinn, a resident in Chanhassen, is a strong believer in the EleGARD and bundle of care. Edina has fully implemented the EleGARD in their cardiac response. He shared these thoughts, "We send dozens of people in hundreds of thousands of dollar trucks to the rare house fire for the possibility of saving a life. Whereas, cardiac arrests are a known opportunity to put resources towards that #1 goal. For years we have not seen any increases in cardiac arrest survival rates, and now we are at the front end of doing just that; not only increasing ROSC, but also improving neurologically intact survivors. I firmly believe that using the 'Bundle of Care' in Chan will increase the cardiac survival rates."



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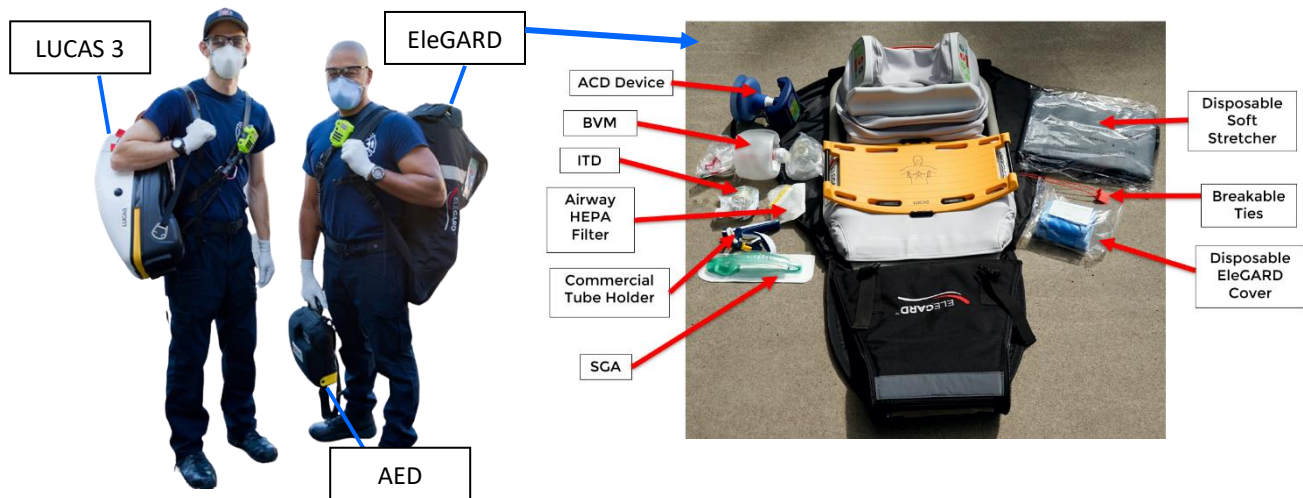
A collection of data of 272 cardiac arrests since April of 2019 was evaluated, focusing on rapid deployment of the "BLS Bundle of Care." When the bundle of care can be implemented within 10 minutes of the 911 call, the results are impressive.

The chart below compares the National CARES Data Registry data to data collected by Elevated CPR. The data is out-of-hospital, witnessed cardiac arrests that present with a shockable rhythm (also known as Utstein criteria).

	ROSC	Survival to Discharge	Survival w/Good Neuro Function
2019 CARES Results ¹	53%	33%	29.5%
EleGARD Results (w/i 10 mn)	92%	50%	42%

*ROSC: Return of Spontaneous Circulation

¹ CARES – Cardiac Arrest Registry to Enhance Survival: <https://mycares.net/>



The Costs

The Chanhassen Fire Department Relief Association fully funded the purchase of the EleGARD, disposable covers, and other materials that go with the kit; totaling just shy of \$7,000. We are looking at funding options to purchase another one to go with our second LUCAS device on our frontline engine.

Additional Resources

All of the EleGARD training videos can be found on the [Advanced CPR Solutions](#) YouTube channel.