

## Dr. Levon Vartanian, Medical Director



Dr. Levon Vartanian serves as the EMS Medical Director for Cypress Creek EMS (CCEMS) in northern Harris County, a position which he has held and cherished since October 1, 1998. CCEMS serves as the 911 EMS provider for an area of 177 square miles with an estimated population of more than 550,000.

Levon Vartanian began his career in emergency services two decades ago in 1989 when he began working for Galveston EMS. He worked in the field as both an EMT-Basic and EMT-Paramedic in Galveston from 1989 until 1990. During that time, he pursued his bachelor's degree in biology at Baylor University in Waco, Texas. Upon obtaining his baccalaureate degree he was accepted into medical school at the University of Texas Health Science Center in Houston. Throughout medical school, Dr. Vartanian continued to work part-time for Galveston EMS until he earned his medical degree in 1994. He then entered an emergency medicine residency in Little Rock, Arkansas. Upon becoming a board certified emergency physician in 1996, Dr. Vartanian returned home to Houston and began working in the emergency department at Houston Northwest Medical Center.

When Dr. Vartanian began his practice at Houston Northwest Medical Center, it became immediately apparent to all EMS providers that delivered patients to him, that he truly cared about what was happening on the streets. Two short years later, Cypress Creek EMS approached Dr. Vartanian about becoming the medical director. No one had any idea where his leadership would take them.

Dr. Vartanian immediately and aggressively transformed the protocols that Cypress Creek EMS providers operated under, to his own. He was also provided with an EMS response vehicle to keep in touch with the providers on the “front line.” Soon, it became commonplace to see “Dr. V”, as he is affectionately known, arrive on scene and offer any assistance he could, often turning each scene into a learning experience for his staff.

Cypress Creek EMS is comprised of a hierarchy of EMS providers, ranging from volunteer EMTs to the advanced level “Paramedic III” providers that are authorized to administer whole blood, use Point of Care Ultra Sound, perform rapid sequence induction to restore breathing and other special procedures. Every provider at the Paramedic II level and above is personally certified by Dr. Vartanian to operate under his medical direction following a rigorous oral scenario exam. This exam may consist of one patient scenario that lasts an hour, or as many as two or three scenarios that can take up to five hours to complete. A paramedic is not released as a paramedic in the Cypress Creek EMS system until Dr. Vartanian is satisfied with their competence and ability to provide the highest standard of care, further exemplifying his commitment to his community. His meticulous nature and attention to detail ensures that his staff serves the public above and beyond expectations.

At Cypress Creek EMS, the Charles R. Hooks Education Center is a landmark. It is here that Dr. Vartanian takes on a tremendous leadership role in education as well. He insists on being actively involved with the many clinical education programs Cypress Creek EMS offers. From basic new member orientation to advanced level airway management to tactical medical operational support, he is integral to the program’s development and administration.

Dr. Vartanian is no stranger to adversity and scrutiny. In April of 2004, he followed the research and changed CCEMS protocols for cardiac arrest to reflect a CPR-before-defibrillation approach in the setting of an un-witnessed cardiac arrest. Dr. Vartanian like many others in his profession agreed this would provide the best possible outcome for his patients. This was not without media attention, however. In a manner in which only he could, Dr. Vartanian expertly and eloquently explained the science behind his decisions and once again demonstrated his leadership in emergency medicine.

Dr. Vartanian has instituted many progressive treatment modalities and devices in the best interest of his patients. His search to exceed the highest pre-hospital standard of care can be witnessed through the various procedures and protocols he has implemented. Under his direction Cypress Creek EMS has instituted continuous positive airway pressure (CPAP) for acute congestive heart failure and the EZ-IO intraosseous device was put into place for tibial access in the pediatric patient and both tibial and humeral head access on adults. This is for patients where a normal IV is not possible. He was also instrumental in starting the Excited Delirium protocol, one of the first in the State of Texas using Ketamine for agitated patient protection and led the negotiations to begin the administration of whole blood in the prehospital setting in collaboration with trauma surgeons at the Texas Medical Center. CCEMS and its partner Harris County ESD 48 Fire/EMS were the first ground EMS systems in the country to carry whole blood in the field 24/7/365.

Dr. V's passion for emergency medicine and patient care can also be witnessed in his tireless efforts in the design and implementation of Cypress Creek EMS's STEMI program. Through his leadership, CCEMS developed a protocol to get heart attack patients to the cath lab quicker. The protocol has been copied around the state and country. In 2018 and again in 2019, CCEMS was recognized by the American Heart Association with its highest honor, the **Gold Plus Award for heart attack care**.



### 2019 Gold Plus Award for Severe Heart Attack Care

Dr. Vartanian continues to push his clinical staff to seek aggressive therapies to improve cardiac arrest survival rates as well. After all, CCEMS was founded in 1975 because of a neighbor who died from a heart attack waiting on an ambulance and the quest to improve chances of survival have driven CCEMS and Dr. Vartanian to continually innovate. Dr. V was the first medical director in Texas to institute use of the ResQPOD, an impedance threshold device for use in cardiac arrest. Subsequently, Cypress Creek EMS obtained the first successful resuscitation using the ResQPod in Texas, and the first ever successful resuscitation using the ResQPOD with a bag-valve-mask device anywhere. In addition, his oversight has led to the use of the Lucas Chest Compression System, improving the quality of care through providing consistent and effective chest compressions and increasing the return of spontaneous circulation (ROSC) rate. Right after FDA approval of the Lucas Device, CCEMS was one of four EMS systems in the country that deployed the device immediately.

He has also implemented the use of induced hypothermia to help preserve the neurological integrity of post resuscitation patients and pushing CCEMS to become one of the first services in Texas to incorporate its use.

Dr. Vartanian knows each and every paramedic that works under his license by name and always celebrates their accomplishments. He loves to give his paramedics accolades in front of the emergency department staff. His constant praise and constructive feedback instills tremendous admiration by his staff and makes him approachable to all. He is known for taking the time to address even the smallest of questions and his wealth of knowledge is an invaluable resource to his crews. Dr. Vartanian provokes his staff to develop a strong sense of self confidence and insatiable desire for continued education.

Today, Dr. Vartanian continues to nurture and holds the EMS community with whom he works very close to him, with Cypress Creek EMS at the forefront. Every system he has put in place at Cypress Creek EMS continues to receive his ever-present mentoring and monitoring.

Dr. Vartanian has been an icon in the EMS community in and around the Houston and Galveston areas for more than twenty years. As the Medical Director for Cypress Creek EMS he has displayed a level of caring, empathy, leadership and innovation that is unsurpassed in any region within Texas. His overwhelming dedication to his community, emergency medicine and prehospital care has garnered national attention.