

It is without reservation that I would like to nominate the MCHD providers (see below) who cared for a critically ill toddler who initially called 911 for seizures. The crew arrived to find the patient in significant respiratory distress secondary to status epilepticus due to a known underlying complex seizure disorder secondary to a rare genetic disorder. Upon arrival, the seizures had terminated. Oxygen via bag valve mask, nasopharyngeal airway placement, and suctioning occurred immediately due to initial hypoxia and tachypnea and the patient was initially stable but somnolent. The parents requested no further help by the crew. The EMS - MCHD crew put into place protocols to assess the infant and determined that toddler should be transported to the hospital for further care due to somnolence. Enroute, the patient's respiratory effort declined. As preparation for intubation (due to impending respiratory failure) was in process, the child continued to decompensate rapidly, progressing into cardiac arrest with an initial cardiac rhythm of pulseless ventricular tachycardia. Following the providers' initiation of manual CPR, epinephrine administration, two defibrillations, insertion of intraosseous access, and supraglottic airway insertion (iGel), the patient's cardiac rhythm converted to a narrow complex tachycardia with a pulse. Point-of-care ultrasound was also utilized to confirm the return of spontaneous circulation. The patient was transported emergently to a local emergency department, during which time the patient was closely monitored to ensure adequate oxygenation, ventilation, and perfusion. Care was transferred without further incident. The high-level of care that was provided in these crucial early minutes were critical to deliver this child to the specialists and subspecialists required. Maintaining this critical link in the chain of survival has allowed the patient to start their recovery. It is my opinion that had this crew left as the family wished and not insisted on transporting this toddler to the hospital, the child would have likely died from cardiac arrest. It was the efforts of this team and prompt defibrillation that saved the toddler's life. In addition, unlike most EMS cases, the prehospital life-saving efforts did not end at the emergency department. Upon arrival to our hospital, physicians were unclear if a full cardiac arrest and arrhythmia had occurred. As a result of MCHD's robust cardiac clinical quality focus, the rhythm strips and information from the resuscitation were shared directly with physicians that are part of the Pediatric Cardiovascular Genetics Arrhythmia Program at Texas Children's Hospital. This vital data immediately alerted the medical team to the seriousness of the cardiac arrest and aided in guiding medical management decisions. The patient was ultimately discharged, and the final outcome reflects a true medical "system of care" spanning from 911 activation to hospital discharge. The medical team and I, appreciate and want to acknowledge the stellar EMS care provided by the entire MCHD team. The rate of survival after cardiac arrest is a dismal 8%. These differences and teams like MCHD are helping save lives and make a difference in outcomes.

Dr. Christina Miyake is the Director of Cardiovascular Genetics Program at Texas Children's Hospital in Houston. What she would like for EMS personnel to take away from this case is that this toddler has a very rare disease, with only 14 known cases worldwide. So, it is very important for EMS to know that "seizures" are not always seizures and to think about arrhythmias.