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April 26, 2016

To: All professionals in the EMS System for Metropolitan Oklahoma City and Tulsa

From: Jeffrey M. Goodloe, MD, NRP, FACEP
Medical Director

Re: New Data: Cardiac Arrest Survival for 2014 = 38.6%

I am pleased to share that the cardiac arrest outcomes analysis has now been completed for Calendar Year 2014. As many of you well know, we chose to rapidly accelerate the Office of the Medical Director's cardiac arrest resuscitation analysis program in 2013, highlighting individual case analysis using the CodeStat software platform. The data that is sent by you from the LifePak monitor/defibrillators after each cardiac arrest encounter results in our ability to give you meaningful feedback about chest compression rates, fraction of time in which chest compressions occurred, and ventilation rates. In the instances of defibrillation, we are able to accurately depict both pre and post-shock pauses. All of these elements of resuscitation care have been directly linked to improving outcomes. All of these individual cases have resulted in a much more detailed picture of what is actually occurring on the streets in the EMS System for Metropolitan OKC and Tulsa. Many thanks to Howard Reed, formerly with the Office of the Medical Director, for initiating the individual feedback reports and now to Matt Cox in my office for continuing those reports and for getting us back on track in yearly analysis. You can expect that Calendar Year 2015 cardiac arrest outcomes data will be released in the early fall of this year and we will be on track for 2016 data release in the 2017 Spring.

Now, for the 2014 results:

The international consensus reporting method (known as the Utstein analysis) is to look specifically at the outcomes for patients with a non-EMS witnessed collapse of cardiac etiology, that received bystander CPR of some type, and that were found in a shockable dysrhythmia on first EMS contact. This can be either via AED "shock advised" interpretation or paramedic interpretation of ventricular fibrillation/pulseless ventricular tachycardia.

In 2014, in our EMS system, there were 1382 resuscitations attempted. 843 (61%) of those were determined to be due to an acute cardiac event. Of the 843 such acute cardiac events, 326 (39%) were heard or visualized by a bystander. Of the 326 bystander witnessed victims, 203 (62%) received some form of bystander CPR. I believe this is an all-time high in our cities and reflects the value of both emergency medical dispatcher real-time phone instruction as well as community CPR training efforts. In those 203 situations in which the victim was witnessed, having an acute cardiac event cause of their cardiac arrest, and with bystander CPR, 88 (43%) were found in a shockable rhythm on initial EMS contact. This shows the benefit of CPR, keeping the heart in a shockable state.



So, with that rationale explained, 34 of the 88 persons as described survived to hospital discharge. This gives our official Calendar Year 2014 cardiac arrest survival rate of 38.6%! Even more impressive, over 85% of those survivors have been evaluated as neurologically intact enough to resume meaningful and productive lives!

This is excellent. The national sudden cardiac arrest survival average used to be only 6.8% for decades and with diligent efforts, we have seen that essentially double in the last 3-5 years to a nationwide average today of approximately 13.6%. That acknowledged, our EMS system is essentially creating a three fold increase in sudden cardiac arrest survival for Oklahomans in the metropolitan OKC and Tulsa areas as compared to the national average. These are good places to be when life is on the line.

I am very, very proud of the over 4,200 dispatchers, EMTs, EMT-Advanceds, and Paramedics that comprise our EMS system. This data also reflects a very heartening increase in survival from Calendar Year 2013's 30.8% rate and back much closer to the historic high of 42.6% survival that we achieved in Calendar Year 2012.

Please keep up the inspiring work!

Dr. G