

Abstract 3

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Title: Impact of "Team Focused CPR" Protocol on Out of Hospital Cardiac Arrest Survival

Background:

Despite funding for public education programs and local efforts to promote awareness of cardiac pulmonary resuscitation (CPR), cardiac arrest continues to be one of the most lethal health problems worldwide. In the United States alone, more than 300,000 persons experience an out-of-hospital cardiac arrest (OHCA) each year and less than 10% survive. Emergency Medical Services (EMS) has historically focused its efforts to treat patients while transporting them to the Emergency Department. The American Heart Association (AHA) has put new emphasis on the timely and effective delivery of cardiac arrest interventions by bystanders and EMS on scene. In July of 2013, Randolph County, in central North Carolina with a population under 200,000, implemented the Team Focused CPR protocol with an emphasis of administering on scene timely interventions for patients in cardiac arrest. The protocol differed from previous directives in that EMS would now stay on scene with the patient until the return of spontaneous circulation (ROSC) or until efforts were deemed futile.

Methods:

Data was collected on all OHCA cases from Randolph county EMS from June 30, 2012 to June 30, 2014. Survival and ROSC rates for the year prior to the institution of the Team Focused CPR protocol were compared with rates for the year following implementation (n=38).

Results:

A Fisher's exact test between proportions of survivors before and after Team Focused implementation showed a significantly higher proportion of patients surviving to discharge post implementation (15.8%) compared to the prior period (3.0%; $p = .025$). More patients achieved ROSC in the Team Focused group (68.8%) compared to the period prior (32.4%), this difference was statistically significant, $X^2 (1, N = 53) = 6.0$; $p = .014$.

Conclusion:

The introduction of the Team Focused CPR protocol in Randolph County, North Carolina improved ROSC and OHCA survival rates. Although results were statistically significant, the limited sample size, pre-post design, and need for replication warrant cautious interpretation. These results have possibly profound, life-saving implications.