

Advanced EMS Treatment and Survival after Cardiac Arrest
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Abstract

Successful cardiac arrest management requires the simultaneous coordination of a number of advanced treatments. In order to improve this process and related patient outcomes, Greenville County Emergency Medical Services (GCEMS) implemented multiple protocol and training changes between 2011 and May 2012. Changes included the introduction of streamlined guidelines and treatment processes, increased scope of care for paramedics, shift to an evidence-based training program, and introduction of an annual survivor ceremony. These modifications simultaneously targeted both the professionalism of paramedics and EMS system culture. Impact of the new cardiac arrest management program was assessed at both the individual and population health levels.

The purpose of this retrospective study was to examine the efficacy of the systematic and cultural changes put into place by GCEMS. With the cooperation of Greenville Health System, we examined patient outcomes and records to analyze and assess the effectiveness of the new practices and guidelines. Key outcome measures such as patient neurological status, hospital readmission frequency, and cost measures were used to evaluate the impact of these changes. Adult, non-traumatic out of hospital cardiac arrest victims terminated in the field or transported to a Greenville Health System hospital between January 1, 2010 to December 31, 2010 (pre-intervention period) or June 1, 2012 to May 31, 2013 (post-intervention period) were included in the study. No data from 2011 was analyzed; this period was the transitional phase during which the treatment protocol changes were being implemented.