A NATIONWIDE SURVEY OF EMERGENCY MEDICAL SERVICES STANDARDS OF CARE FOR CARDIAC ARREST - VARIABILITY AMONGST AMERICA'S LARGEST URBAN SYSTEMS

ACC Moderated Poster Contributions
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Authors: Jeffrey Michael Goodloe, David Lehrfeld, Kathleen Schrank, University of Oklahoma School of Community Medicine, Tulsa, OK, USA, University of Texas Southwestern Medical Center, Dallas, TX, USA

Background: Prehospital care for cardiac arrest (CA) impacts morbidity and mortality. Variability in emergency medical services (EMS) standards for CA management exists among large urban EMS systems related to each other and to the 2010 International Liaison Committee on Resuscitation/American Heart Association (ILCOR/AHA) guidelines. This study describes CA care standards in mid-2011 in thirty-four of the largest EMS systems in the United States.

Methods: Medical directors of study participating systems, representing EMS responsible for care of over 50 million Americans, were polled June 15 - August 15, 2011 utilizing a standardized internet-based survey platform.

Results: Over sixty variables were presented to thirty-four medical directors responding (100% survey population participated). Among myriad responses, fourteen (42%) initiate cardiopulmonary resuscitation (CPR) at 30 compressions to 2 ventilations consistent with ILCOR/AHA guidelines. Seven (21%) initiate continuous chest compressions at start of CPR. Nine (26%) begin chest compressions only during the first 2-3 minutes, with passive oxygenation by oxygen mask (six; 18%) or no oxygen (three; 9%). Airway management following non-invasive oxygenation and ventilation by endotracheal intubation occurs in twelve systems (35%), while six (18%) use supraglottic devices. Fourteen (42%) allow paramedics to decide endotracheal or supraglottic device placement. Thirty systems (88%) use continuous waveform capnography. Initial approach to non-EMS witnessed ventricular fibrillation is chest compression prior to first defibrillation in thirty systems (88%). Eighteen systems (52%) escalate defibrillation energy, with four systems (12%) utilizing dual sequential defibrillation. Twenty (59%) initiate therapeutic hypothermia.

Conclusion: Wide variability in CA care standards exists in America's largest urban EMS systems, with many current practices promoting more continuity in chest compressions than specified by 2010 ILCOR/AHA guidelines. Endotracheal intubation, a past mainstay of CA airway management, is de-emphasized. Immediate defibrillation of non-EMS witnessed ventricular fibrillation is uncommon.