IMPLEMENTATION OF A PRE-HOSPITAL 12-LEAD ECG PROGRAM FOR THE TREATMENT OF STEMI PATIENTS IN THE CITY OF CHICAGO: LESSONS LEARNED FROM THE STROKE SYSTEM OF CARE

Poster Contributions
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Authors: Atman P Shah, Eric Beck, Weber Joe, Leslee Stein-Spencer, Stephen Archer, Shyam Prabhakaran, Ken Pearlman, Richard Feldman, Kathleen O’Neill, Art Miller, Alex Meixner, Eddie Markul, Yanina Purim-Shem-Tov, Adhir Shroff, Gary L. Schaer, University of Chicago, Chicago, IL, USA, Rush University, Chicago, IL, USA

Background: Creation of a prehospital (PH) program of care necessitates cooperation between multiple stakeholders. The City of Chicago Fire Department (CFD) adopted a PH stroke system of care (SSC) in March 2011. In May 2012, CFD launched a PH 12-lead electrocardiogram (ECG) program designed to transport patients with acute ST-segment elevation myocardial infarction (STEMI) to hospitals capable of performing primary percutaneous coronary intervention (pPCI). This project sought to identify lessons learned from the initiation of the SSC that proved instrumental in developing the PH 12-lead ECG program.

Methods: The Chicago chapter of the American Heart Association, the Chicago EMS System Medical Directors, and CFD leadership were involved in the development of the SSC. Their experiences with the SSC were instrumental and they were polled for the lessons they felt were most instructive in establishing a PH 12-lead ECG program and a comprehensive STEMI system of care.

Results: Four lessons proved critical. One, SSC was initiated based on novel Illinois (IL) EMS legislation that created a SSC via a regional stroke advisory committee. Prior attempts to perform PH STEMI triage to PCI capable hospitals had been controversial and politically challenging, necessitating legislation. Two, IL law permits EMS diversion at certain hospital-specific thresholds. A key SSC policy deters time critical stroke patients from being diverted. If the nearest stroke center was on bypass, the patient could be taken to another center only if the 2nd center was < 5 minutes away. This policy helped avoid diversion of patients with PH STEMI recognition. Third, close cooperation between hospitals, EMS system leadership and providers, municipal fire departments, physicians, and regulators was crucial for planning, implementation, and data collection. Lastly, the importance of empowering EMS to identify a time critical patient population in the PH setting through education and triage protocols translated well for STEMI patients.

Conclusions: Lessons learned from implementation of a PH SSC facilitated implementation of a PH 12-lead ECG program and a comprehensive STEMI system of care for the City of Chicago in May 2012.