

The improvement of the ratio of ambulance use in patients with ST elevation myocardial infarction- a city based multicenter program

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OBJECTIVE: Ambulance plays a critical role in early recognition and treatment of ST-elevation myocardial infarction (STEMI). This study aimed to improve the ratio of ambulance use of patients with ST elevation myocardial infarction in Kaohsiung city using continuous quality improvement methods. **METHODS:** A multidisciplinary team among Kaohsiung Veterans General hospital, fire bureau and department of health, Kaohsiung city government was organized since Oct 2012. All patients with STEMI in Kaohsiung city were enrolled from Jan 2012 to Dec 2015. The ratio of ambulance use is defined as STEMI patients received ambulance transfer via Kaohsiung city fire bridge 119 systems. The problem solving quality improvement method was used in this project. The key interventions include establishing STEMI mnemonic phrase, filming STEMI advertisement video, using internet, broadcast and television media and press conference, producing promotional materials and STEMI promotional activities. A P-value less than 0.05 was considered statistically significant. **RESULTS:** The total 3802 STEMI patients were enrolled in this study. These patients were divided into pre-interventional phase (N=972, Jan to Dec, 2012), interventional phase (N=979, Jan to Dec 2013) and post-interventional phase (N=1851, Jan 2014 to Nov 2015). The ratio of ambulance use of patients with STEMI increased from 12% in pre-interventional phase, to 13% in interventional phase and further to 18% in post-interventional phase (p less than 0.05). **CONCLUSIONS:** This 4-year city based multicenter study demonstrates continuous quality improvement method can improve the ratio of ambulance use of patients with ST elevation myocardial infarction in Kaohsiung city, Taiwan.