Presentation Abstract

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Title: Mode of Hospital Arrival in ST-Elevation Myocardial Infarction: Ethnic and Language Differences in an Urban STEMI Receiving Center

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Abstract: **Background:**

Regional systems of care improve reperfusion times and survival for patients with ST-segment elevation myocardial infarction (STEMI) because patients are rapidly transported to specialized centers for primary percutaneous coronary intervention (PCI). The characteristics and outcomes of patients who do not take advantage of these systems of care have not been well-studied.

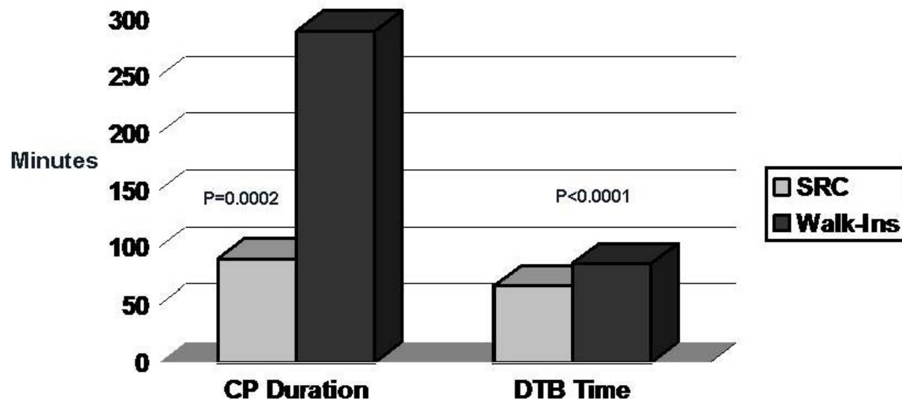
Objectives: The objective was to determine the clinical and demographical differences between patients with STEMI who self-presented to the Emergency Department compared to those who were transported by Emergency Medical Services (EMS).

Methods: The clinical and demographic data for 232 consecutive patients undergoing primary PCI at an urban STEMI receiving center (SRC) were stratified by treatment within the SRC system versus after self-presentation (Walk-in) with STEMI. Comparisons between groups were performed using the *t* test for continuous data and chi-square or Fischer exact test for categorical data.

Results: 125 patients presented in the SRC system, and 107 patients walked in. Hispanic patients presented more often as a Walk-in than within the SRC system

(51% versus 30%, p<0.001) and patients in the Walk-In group were twice as likely to be non-English speaking (41% versus 20%, p<0.001). Black patients were more often in the SRC group (28.8% versus 11.2%, p <0.01). Walk-in patients had longer symptom duration (290 minutes versus 90 minutes in the SRC group, p=0.002), and longer door to balloon times (86 minutes versus 66 minutes, p<0.001).

Conclusion: At an urban STEMI receiving center, Hispanic and non-English speaking patients are more likely to self-present, and they may not benefit from regionalized care. Patients who self-presented had longer total ischemic and reperfusion times, measures which contribute to worse outcomes after acute MI. These differences have complex roots and should be addressed in future public health initiatives.



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