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Session Title: Poster Session A

Session Time: Wednesday, May 5, 12:30 pm (Pacific Time)

Session Location: Exhibit Hall (Sapphire I-P)

Impact of 24x7 In-Hospital Interventional Cardiologist on Door-to-Balloon Time in ST-Segment Elevation Myocardial Infarction Patients During Regular and Off Hours: The Aurora St. Luke's STEMI Protocol

Category: Acute Coronary Syndromes, Myocardial Infarction, Thrombectomy and Vulnerable Plaque

Authors: M. Fuad Jan, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States; Abdul-Moiz Hafiz, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States; Naoyo Mori, Center for Urban Population Hlth, Univ Wisconsin-Milwaukee, United States; Anthony C. DeFranco, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States; Angela Schlemm, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States; Anjan Gupta, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States; Suhail Allaqaband, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States; Tanvir Bajwa, ACS, Aurora Sinai/St. Luke's Med Cntrs, Univ Wisconsin Sch Med Public Hlth-MCC, United States

Background: Round-the-clock primary percutaneous coronary intervention for ST-segment elevation myocardial infarction (STEMI) patients is not available at most medical centers. Admission during off hours is associated with higher door-to-balloon time and mortality. We examined the effect of a 7-day, 24-hour (24x7) in-hospital cardiac catheterization lab program on door-to-balloon time in patients presenting with STEMI during off vs. regular hours.

Methods: A total of 611 consecutive patients (median age 60 years; female 30.3%; 59.4% regular hours and 40.6% off hours) with STEMI presented during the study period of April 1, 2004 to June 30, 2009. All STEMI patients underwent primary percutaneous coronary intervention. Door-to-balloon time was compared during regular hours (weekdays 7:30 AM-7:30 PM) and off hours (weekends, holidays and 7:30 PM-7:30 AM weeknights).

Results: Median door-to-balloon time following implementation of the 24x7 STEMI protocol was 55 minutes (interquartile range 43-71 min) with 89% of patients reperfused within the <90 min goal recommended by the American College of Cardiology. No difference between door-to-balloon times during regular vs. off hours was noted (Figure). In the five years since the

protocol's inception, a significantly greater number of STEMI patients (89%) were revascularized within the guideline-suggested 90 minutes during both on and off hours. In-hospital mortality was similar in the two groups (on hours=16.3% vs. off hours=15.7%; p=0.952).

Conclusion: An on-site, 24x7 interventional physician eliminates longer door-to-balloon time associated with off hours presentation and reduces mortality in patients who present off hours.

Author Disclosures:
M. Fuad Jan: This author has nothing to disclose.
Abdul-Moiz Hafiz: This author has nothing to disclose.
Naoyo Mori: This author has nothing to disclose.
Anthony C. DeFranco: This author has nothing to disclose.
Angela Schlemm: This author has nothing to disclose.
Anjan Gupta: This author has nothing to disclose.
Suhail Allaqaband: This author has nothing to disclose.
Tanvir Bajwa: This author has nothing to disclose.