



Quality of Care and Outcomes Assessment

OUTCOMES OF THE IMPLEMENTATION OF A MYOCARDIAL INFARCTION SYSTEM OF CARE IN A LARGE BRAZILIAN URBAN AREA

Poster Contributions

Poster Sessions, Expo North

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Background: Creating evidence-based systems of care for acute myocardial infarction (AMI) aims to optimize patient care, from early diagnosis to appropriate treatment in optimal time frames, in accordance to current guidelines.

Objective: To evaluate the effects of an AMI System of Care in a large metropolitan area in Brazil, and its impact on the number of admissions, hospital mortality, access to high complexity medical care and treatment costs.

Methods: The AMI System of Care was established in Belo Horizonte in 2010-2011 to increase access for patients of the public health system to the optimal therapy recommended by guidelines. Teams members of emergency units were trained to a flowchart systematic care and these units were equipped with a tele-electrocardiography system. Primary endpoints of this retrospective observational study were the number of hospitalizations due to AMI and AMI hospital mortality rate, from 2009 to 2011.

Results: The city's population in 2009 was 2.452.617. During the study period, 294 professionals were trained and 1496 ECGs were transmitted from emergency units: 563 (37.6%) to coronary care units and 933 (62.4%) to the online diagnoses network. There was a significant decrease in hospital mortality (12.3% in 2009 vs. 9.3% in 2010 vs. 7.1% in 2011, $p < 0.001$), while the number of admissions for AMI remained stable (1113 in 2009 vs. 1358 in 2011, $p = \text{NS}$). There was a significant increase in the average cost of hospitalization (R\$ 2480 \pm 4054 in 2009 vs. R\$ 3501 \pm 3202 in 2011, $p < 0.001$), in the proportion of admissions involving intensive care (32.4% in 2009 vs. 66.1% in 2011, $p < 0.001$) and admissions to high complexity units (47.0% vs. 69.6%, $p < 0.001$). Among the patients admitted to intensive care units, mortality reduction was even more substantial (19.7% in 2009 vs. 7.8% in 2011, $p < 0.001$), and a significant decrease in hospital days (14.4 \pm 14.4 in 2009 vs. 12.7 \pm 10.0 in 2011, $p = 0.022$) was observed.

Conclusions: Implementation of the AMI System of Care resulted in easier access to appropriate treatment and, consequently, reduction in hospital mortality from AMI in a large Brazilian urban area. There was also an increase of costs, reflecting the wider access to high complexity medical care.