

☆ **Spotlight on Special Topics**

QUALITY AND OUTCOMES OF STEMI CARE IN MIDDLE INCOME COUNTRIES COMPARED TO HIGH INCOME COUNTRIES A META-ANALYSIS

Poster Contributions

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Background: Data on the treatment and outcomes of ST-segment elevation myocardial infarction (STEMI) care in middle-income countries (MIC) are scarce.

Methods: In this meta-analysis, we included prospective, national STEMI registries, from MIC, that enrolled patients between years 2000 and 2020 and were published in peer reviewed journals. A comparator group of large representative STEMI registries from the U.S. and European countries was used as a high income country (HIC) comparator. Country income category was defined according to the World Bank classification. Relevant publications were identified by searching MEDLINE, Embase, and Cochrane Libraries.

Results: Thirty-five registries representing 18 MIC countries (90,770 patients) and 5 registries representing HIC (51,278 patients) were included. The main results of the analysis are displayed in Table 1. As compared to HIC, in MIC: (1) prehospital delays were very long, particularly in lower-MIC; (2) the proportion of patients that did receive reperfusion therapy was low, only one third of patients received primary percutaneous intervention; (3) in-hospital mortality was 2% higher. A sub-group analysis comparing MIC registries before and after 2010 demonstrated only a modest improvement.

Conclusion: The quality and outcomes of STEMI care in MIC remains suboptimal. Significant systems of care improvements tailored to the MIC financial and cultural landscape will be required to meaningfully improve clinical outcomes.

Table 1. Quality and outcomes of STEMI care

Variable*	Lower-middle income countries	Upper-middle income countries	P value	All middle-income countries	High income-countries	P value
Symptoms onset to presentation (minutes)	472.47 [268.63, 676.31]	179.65 [153.19, 206.11]	0.01	283.65 [93.14, 201.53]	179.55 [135.69, 223.42]	< 0.001
No reperfusion	0.30 [0.17, 0.48]	0.32 [0.25, 0.41]	< 0.00001	0.32 [0.25, 0.40]	0.17 [0.07, 0.39]	< 0.00001
Thrombolytics	0.41 [0.35, 0.47]	0.25 [0.18, 0.33]	< 0.00001	0.29 [0.23, 0.36]	0.06 [0.01, 0.25]	< 0.00001
Primary PCI	0.21 [0.08, 0.46]	0.32 [0.23, 0.42]	< 0.00001	0.30 [0.21, 0.39]	0.67 [0.37, 0.88]	< 0.00001
PCI total	0.21 [0.05, 0.60]	0.51 [0.29, 0.73]	< 0.00001	0.42 [0.23, 0.62]	0.76 [0.62, 0.87]	< 0.00001
Door to needle (minutes)	94.20 [66.82, 121.58]	81.33 [71.49, 91.18]	0.76	83.73 [76.23, 91.23]	34.37 [26.29, 42.46]	< 0.001
Door to balloon (minutes)	-- *	140.82 [111.41, 170.23]	--	134.78 [105.85, 163.72]	74.96 [72.51, 77.41]	< 0.001
In-hospital mortality	0.07 [0.05, 0.09]	0.08 [0.07, 0.10]	0.75	0.08 [0.06, 0.10]	0.06 [0.05, 0.07]	< 0.00001

* The results are reported as proportion or mean with 95% confidence interval (CI).
P value less than 0.05 is statistically significant.
-- data not available.