

## Optimization of Therapeutic Strategies for ST-Elevation Acute Myocardial Infarction: the Impact of a Territorial Network on Reperfusion Therapy and Mortality

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### Abstract

**Objective:** To assess the clinical impact of a regional network for the treatment of ST-segment elevation myocardial infarction (STEMI).

**Methods:** All patients with STEMI (n=1,823) admitted to any of the hospitals of a 1-million inhabitants area during the year 2002 (n=858), i.e. before the network was implemented, and in 2004 (n=965), year of full implementation of the network, were enrolled in this study. The primary evaluation was in-hospital mortality. Secondary outcomes included the incidence of major adverse cardiac and cerebrovascular events (MACCE), defined as death, myocardial infarction, stroke, and coronary revascularisation procedures over 1-year follow-up.

**Results:** Between 2002 and 2004, there was a major change in reperfusion strategy: primary angioplasty increased from 20.2% to 65.6% (p<.001), fibrinolytic therapy decreased from 38.2% to 10.7% (p<.001), and the rate of patients not undergoing reperfusion was reduced from 41.6% to 23.7% (p<.001). In-hospital mortality decreased from 17.0% to 12.3% (p=.008), and this reduction was sustained at 1-year follow-up (23.9% in 2002 and 18.8% in 2004, p=.009). Similarly, the 1-year incidence of all MACCE was reduced from 39.5% in 2002 to 34.3% in 2004 (p=.01).

**Conclusions:** Organization of a territorial network for STEMI is associated with increased rates of reperfusion therapy and reduction of in-hospital and 1-year mortality.