Impact of a nationwide public campaign on delays and outcome in Swiss patients with acute coronary syndrome

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BACKGROUND
To improve the outcome in patients with acute coronary syndrome (ACS), public campaigns have been launched aimed at shortening presentation delays and allowing more efficient treatment. Their impact is uncertain.

METHODS
Pre-hospital delays and outcome in patients with ACS included in the Swiss National AMIS Plus registry were assessed prospectively before and after a nationwide multimedia campaign ('HELP') by the Swiss Heart Foundation in 2007. The campaign aimed at better awareness of symptoms, increasing knowledge in laymen of resuscitation and more rapid access to medical services. The primary study endpoint was the time between onset of symptoms and hospital admission. Secondary endpoints were successful out-of-hospital resuscitation, symptoms upon admission, and outcome.

RESULTS
Between January 2005 and December 2008, 8906 ACS patients (61% ST-segment elevation myocardial infarction (STEMI), 39% non-ST-segment elevation myocardial infarction/unstable angina pectoris (NSTEMI/UAP), mean age 65 ± 13 years, 75% males) admitted within 24 hours after onset of symptoms were enrolled. The median pre-hospital delay was reduced from 197 minutes during the pre-intervention period to 180 minutes during the post-intervention period (reduction 10% (95% confidence interval (CI) 6-14%); P < 0.001), in STEMI (reduction 10% (95% CI 5-14%); P < 0.001) and NSTEMI patients (reduction 11% (95% CI 4-17%); P = 0.001), due to pronounced effects in males (reduction 12% (95% CI 7-16%); P < 0.001) and in patients ≤75 years (reduction 12% (95% CI 8-16%); P < 0.001). Out-of-hospital resuscitation increased (odds ratio (OR) 1.26 (95% CI 1.06-1.54); P = 0.02). Overall outcome remained unchanged, however, the rate of re-infarction showed a decrease (OR 0.58 (95% CI 0.36-0.91); P = 0.021).

CONCLUSIONS
After a nationwide educational campaign, shorter pre-hospital delays were observed, and more patients were able to be treated promptly. These results may be useful in planning future health strategies to improve management and outcome of patients with ACS, especially in female and elderly patients.