

## Comparison of admissions for Acute Coronary Syndrome between 2020 and two control periods in Abruzzo

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### Background:

The coronavirus epidemic has put unprecedented strain on health services, threatening hospital capacity in facing such a high number of Covid-19 patients in need of treatment. The aim of this study is to compare the hospitalization rate for acute coronary syndrome (ACS) in the first nine months of 2020 with the same period of 2018 and 2019.

### Methods:

This is a retrospective study of hospital discharge records. The pathologies of interest were coded as follows: all the hospitalizations with main discharge diagnosis as ICD-9-CM 410.xx, 411.xx, 413.xx for Acute Coronary Syndrome (ACS); 410.xx was used in all diagnoses except in codes 410.7x or 410.9x for acute ST-elevation myocardial infarction (STEMI); 410.7x was used in all diagnoses except 410.9.x for acute non-STEMI. Hospitalization rate ratios (HRR) comparing the study period with each of the control periods were calculated using Poisson regression.

### Results:

During the study period there was a statistically significant decrease in hospitalizations for ACS both vs 2018 (HRR 0.80;95%CI 0.80-0.81;  $p < 0.001$ ) and vs 2019 (HRR 0.85;95%CI 0.84-0.86;  $p < 0.001$ ). A decrease also affected STEMI vs 2018 (HRR 0.91;95%CI 0.90-0.92;  $p < 0.001$ ) and vs 2019 (HRR 0.87;95%CI 0.86-0.88;  $p < 0.001$ ) and NSTEMI vs 2018 (HRR 0.76;95%CI 0.75-0.77;  $p < 0.001$ ) and vs 2019 (HRR 0.79;95%CI 0.78-0.80;  $p < 0.001$ ).

### Conclusions:

This report shows a significant decrease in ACS-related hospitalization rates across the Region during the study period. General out-of-hospital mortality need to be further investigated, as to focus on patients died of ACS without receiving adequate assistance from the emergency network.

### Key messages:

- Hospitalizations for acute coronary syndromes, STEMI and NSTEMI underwent a statistically significant decrease.
- During the pandemic, some health needs related to fatal emergencies were not met by the health services.