In-hospital mortality in COVID-19 vs. pre-COVID-19 era in the Split-Dalmatia County, Croatia

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Background:
The COVID-19 pandemic marked 2020 with numerous consequences for the health of the population. Therefore, this study aimed to explore whether the COVID-19 pandemic affected in-hospital mortality.

Methods:
We employed a cross-sectional comparative study using two different time periods, pre-COVID-19 (2019 year) and COVID-19 era (2020 year) to explore possibilities of COVID-19 influences in-hospital mortality in Split-Dalmatia County, Croatia. The research used data from the national information system on hospitalizations from the Clinical Hospital Center Split, University Hospital Split. The indicators were statistically analyzed. The z-score test for two population proportions is used.

Results:
In 2020, there was a significantly higher in-hospital mortality compared to 2019 \( (z = 9.0827; \ p < 0.00001) \), which was supported by a significant increase in mortality from respiratory diseases according to the comparison of disease categories of International Statistical Classification of Diseases and Related Health Problems (ICD-10) \( (z = 9.0427; \ p < 0.00001) \). Within hospital departments, significantly higher mortality was in the Intensive Care Unit \( (z = 5.2763; \ p < 0.00001) \) and the Infectious Diseases Department \( (z = 9.6982; \ p < 0.00001) \). Among deaths in 2020 with confirmed COVID-19, there were significantly more positive among deaths from respiratory diseases \( (z = -17.4462; \ p < 0.00001) \). There was no difference in mortality rates between 2020 and 2019 by age.

Conclusions:
The results of the study indicate that COVID-19 has a contribution to hospital mortality. Given that the pandemic has not yet completed additional research, it will be necessary to obtain a more complete picture of the impact of COVID-19 on hospital mortality in Split-Dalmatia County, as well as in other regions and countries.

Key messages:
- The results of the study indicate that COVID-19 has a contribution to hospital mortality.
- Given that the pandemic has not yet completed additional research, it will be necessary to obtain a more complete picture of the impact of COVID-19 on hospital mortality.