

COMPARATIVE ANALYSIS OF COVID-19 MORTALITY IN SLOVENIA AND CROATIA

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INTRODUCTION

In late 2019, China reported a number of cases of pneumonia of unknown etymology, and in just a couple of months the COVID-19 pandemic caused by SARS-CoV-2 virus (coronavirus) began spreading across the world. The first case of SARS-Cov-2 infection in Croatia was reported on 25th February 2020, and until the 30th September 2021, as much as 406,398 cases and 8,638 deaths were reported. In Slovenia, the first case of coronavirus infection was reported on 4th March 2020 and until 30th September 2021, the total of 294,343 cases and 4,561 deaths were reported.

The paper discusses the COVID-19 mortality in Slovenia and Croatia. The aim of the paper is to determine similarities and differences in COVID-19 mortality trends, discuss the underlying causes, as well as the impact of this mortality on demographic development and life expectancy.

DATA AND METHODS

It is hypothesised that the unfavourable age structure of Slovenia and Croatia was a catalyst of the COVID-19 excess mortality. The authors will analyze and compare the daily/weekly number of cases, case fatality rate, the number of deaths by age and sex, and excess mortality in comparison to the 2015–2019 period in both countries. In the analyses the authors will use the official mortality data provided by the Croatian Bureau of Statistics, Croatian Institute of Public Health, Statistical Office of the Republic of Slovenia, European Centre for Disease Prevention and Control, and Human Mortality Database.

FINDINGS

Currently, Slovenia and Croatia are currently experiencing the fourth wave of COVID-19 epidemic. In the first wave, in both countries the number of infections and deaths per million inhabitants were comparatively low, primarily due to the lockdown. However, in the second wave (autumn 2020 and winter) the mortality increased significantly, and there was an evident excess mortality in comparison to the previous five-year period. In November 2020, excess mortality in Slovenia and Croatia was 91.6% and 45.0%, respectively, while in December 2020, it was 81.8% and 63.9%.

In spring 2021, there was a third wave of epidemic, and Croatia recorded a notable increase in the number of new cases and deaths. The analysis for the whole period analyzed shows that over 90.0% of deaths were recorded in the older age groups (65+), and there were certain differences in mortality between men and women, particularly in the age group 65–84. Comparison of the number of cases and deaths by age groups clearly show that the case fatality rate is much higher in older age groups.

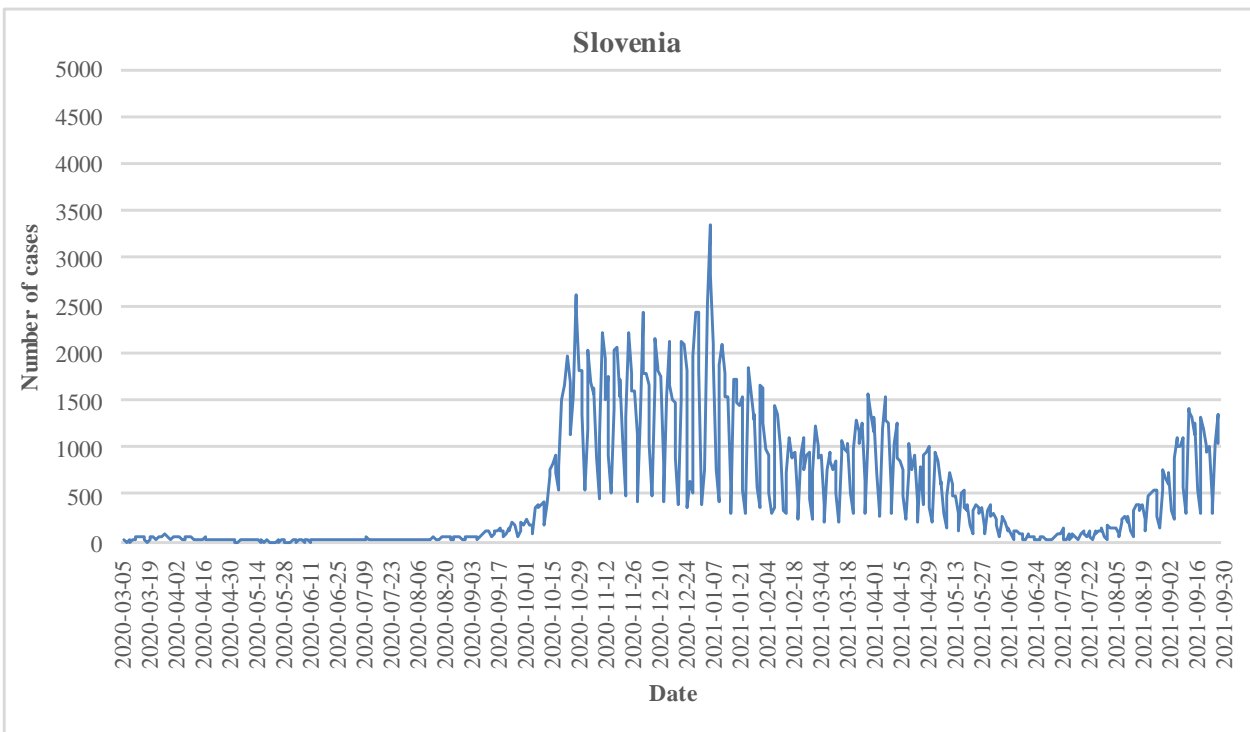


Figure 1 Daily number of new cases of COVID-19 in Slovenia from March 2020 to September 2021

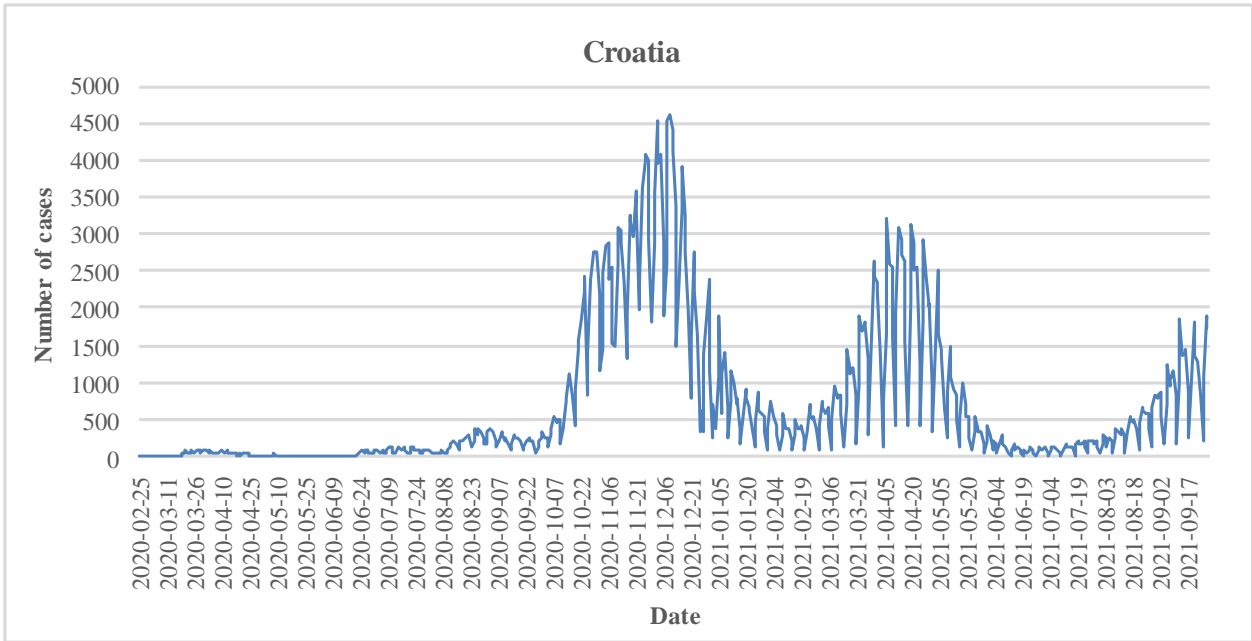


Figure 2 Daily number of new cases of COVID-19 in Croatia from February 2020 to September 2021

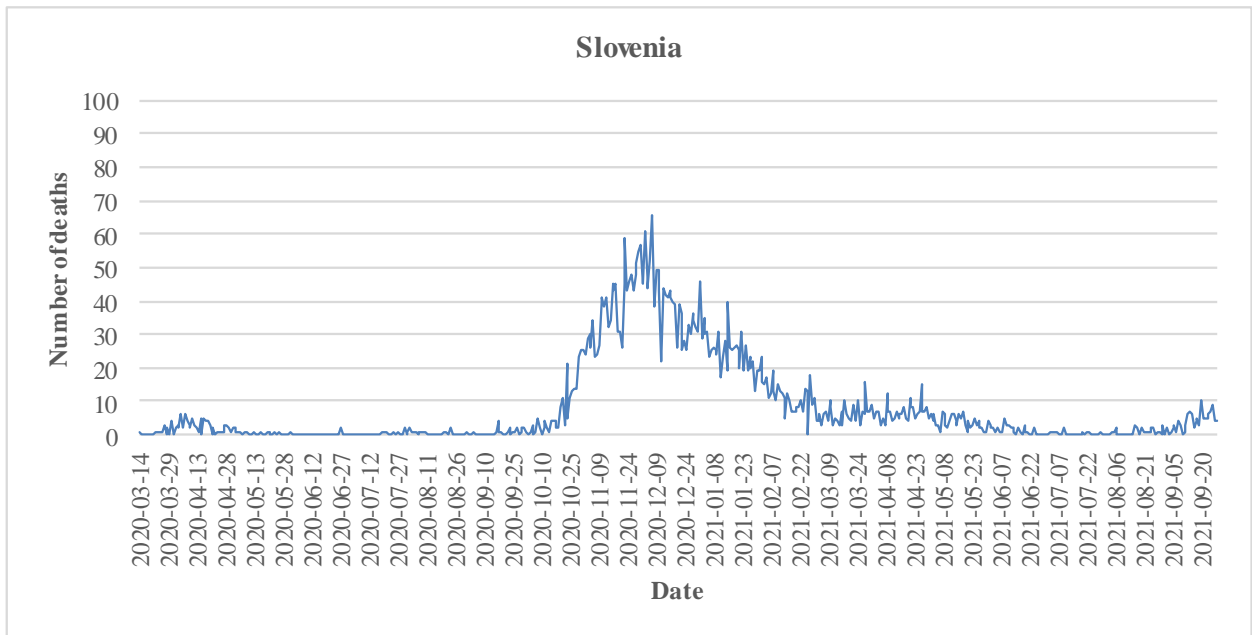


Figure 3 Daily number of deaths from COVID-19 in Slovenia from March 2020 to September 2021

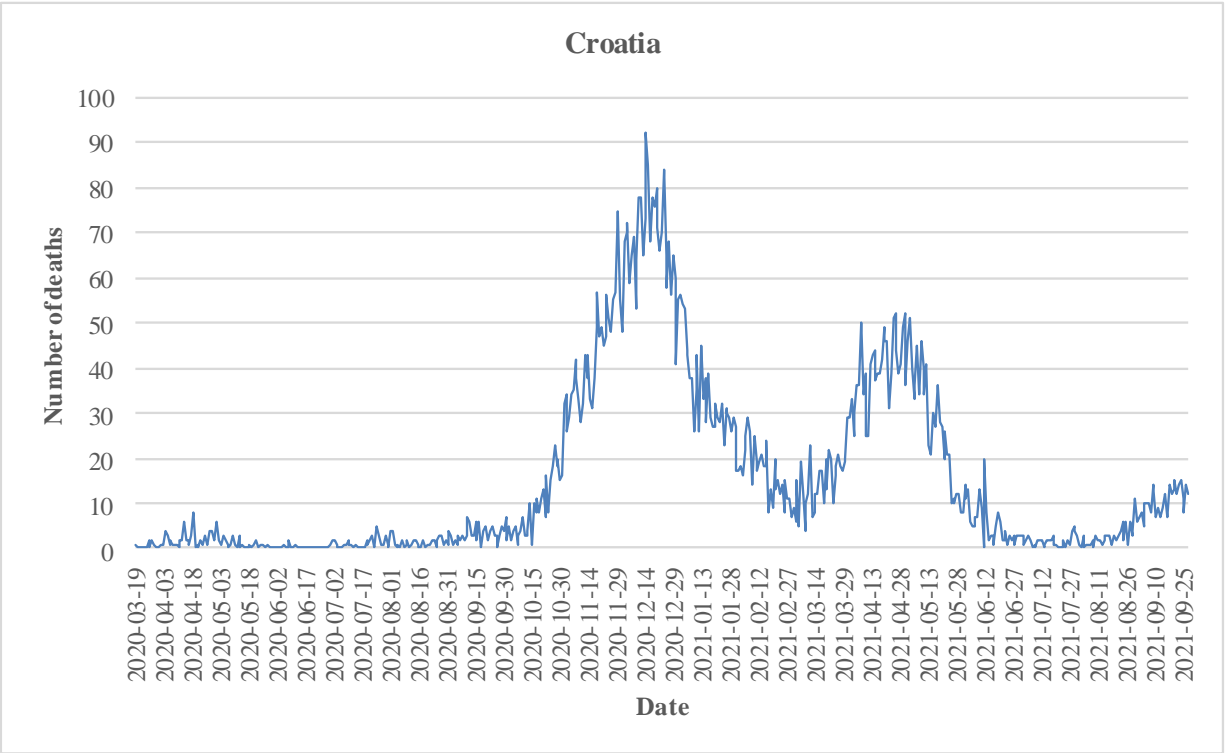


Figure 4 Daily number of deaths from COVID-19 in Croatia from March 2020 to September 2021

By early October 2021, the share of fully vaccinated persons reached 52% in Slovenia and 40% in Croatia, and the additional 4.7% were partially vaccinated in Slovenia and 5.4 in Croatia, which is notably lower than the EU average (64% and 4.1%, respectively). The existing researches show that by the end of the third wave, the excess mortality caused by COVID-19 has lowered the life expectancy by several months. One of the reasons for lower vaccination rates in both countries is a significant lack of trust in government. Since both countries are at the beginning of the fourth wave, it remains to be seen whether the vaccination will reduce the case fatality rate in comparison to the second wave which occurred a year ago.

Keywords: COVID-19, Slovenia, Croatia, excess mortality, age-specific death rates, case fatality rate