

Strippoli E¹, Zengarini N¹, Di Girolamo C², Bartolini L³, Aversa C¹, Costa G¹

1) Epidemiology Unit, ASL TO3 Piedmont Region, Grugliasco (TO), Italy; 2) Health and Social Care Agency, Emilia-Romagna Region, Bologna (BO), Italy; 3) Epidemiology Unit, Azienda USL-IRCCS di Reggio Emilia, Reggio Emilia (RE), Italy

BACKGROUND

- In Italy, during 2020 there were more than 75,000 excess deaths compared to the average expected mortality in 2015-2019
- Evidence shows a **greater burden of disease and mortality** attributable to COVID-19 among **disadvantaged populations**

AIM: To analyse the **trend of social inequalities in mortality** during the first pandemic year in Piedmont and Emilia-Romagna using **data from Administrative Population Registries (APR)** and statistical databases

MATERIALS AND METHODS

2011 Census

Educational
qualification

Administrative Population Registries

Selection of the **resident population aged ≥ 65 (every year)**
All-causes mortality (2015-2020)

- Monthly:
- Standardized Mortality Rates (SMR)
 - Relative Index of Inequalities (RII)**
 - Slope Index of Inequalities (SII)**

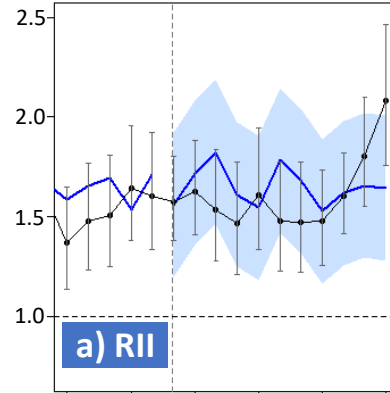
Adjusted by age, stratified by gender and region

From March 2020 were forecasted using data from 2015-2019 with Holt-Winters (HW) method and compared to the observed values in the same period

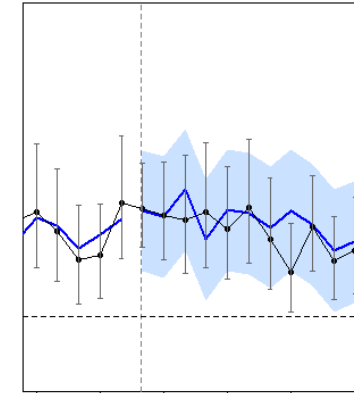
RESULTS

The **excess of SMR was confirmed** in both regions during the two main pandemic waves (March-April and October-December 2020)
Absolute inequalities increased among men and women

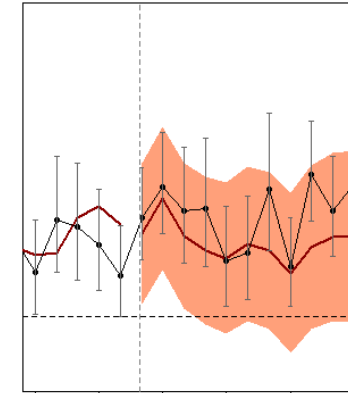
Piedmont Men



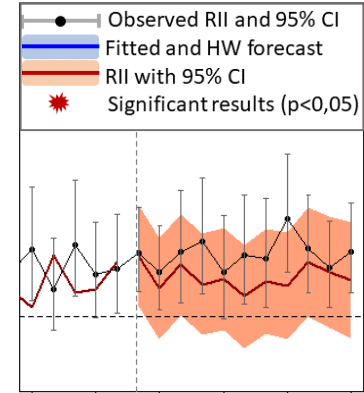
Emilia-Romagna Men



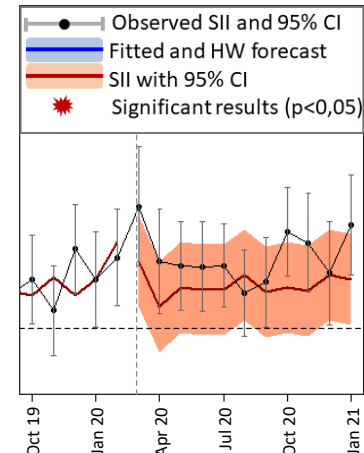
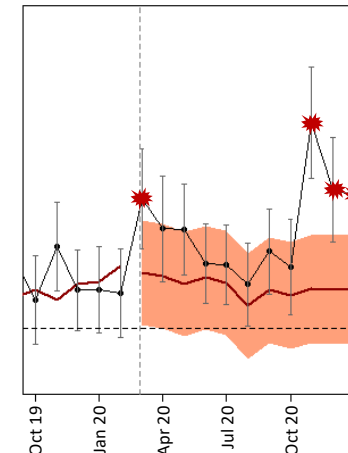
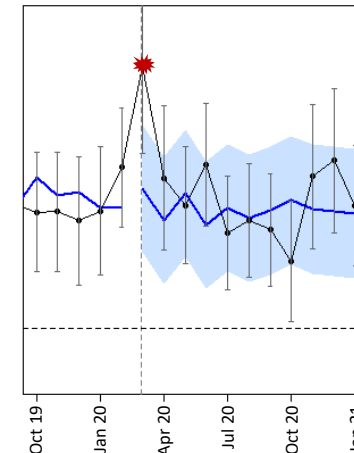
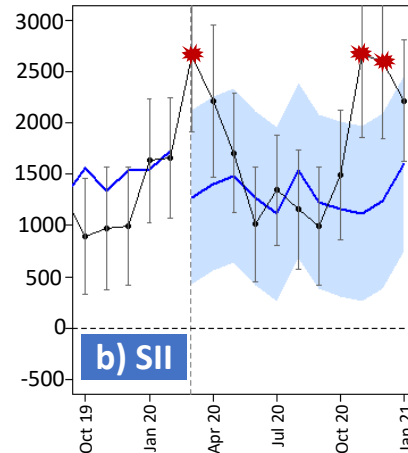
Piedmont Women



Emilia-Romagna Women



a) RII



b) SII

Table 1: Observed, fitted and Holt-Winter (HW) forecast of a) the Relative Index of Inequality (RII) and b) Slope Index of Inequalities (SII) in overall mortality

DISCUSSION AND CONCLUSIONS

- The impact of the pandemic on the inequalities in overall mortality was **in relative terms** of the **same size of other mechanisms of unequal health**
- Further analyses are needed to explore the underlying mechanisms (i.e. cause-specific mortality, access to health services)
- Administrative data**, linked with **Census data**, are a **reliable source** for timely **monitoring health inequalities**