

**Impact of the COVID-19 pandemic on cohort life expectancy (Session: Rapi-Fire Talks)**

During the COVID-19 pandemic, period life expectancy at birth declined from 2019 to 2020 in most of the Western countries. Period life expectancy in the context of the COVID-19 pandemic has been useful to capture cross-sectionally the mortality burden of the pandemic. However, the long-term consequences on cohort life expectancy, a problem of fundamental importance for public policies, insurance and pensions industries, have been unexplored. The objective is to estimate the long-term changes in cohort life expectancy associated with the COVID-19 pandemic. A method to forecast cohort mortality and the cohort life expectancy of non-extinct cohorts is used: The future mortality trajectories for non-extinct cohorts are completed with the penalized composite link model (PCLM). The number of survivors from a given birth cohort at the age of truncation can be considered as a coarsely grouped death count not yet observed. The remaining deaths can be ungrouped (forecast) by age using the PCLM, and the cohort mortality can be completed. The method is applied to data pre- and post- the COVID-19 pandemic. Prediction intervals are computed via a bootstrapping procedure. Changes in cohort life expectancy due to the COVID-19 pandemic for 25 countries (*expected*) are estimated as the difference between expected cohort life expectancy using data up to and including 2019 and expected cohort life expectancy using data from 2022 onwards.

[Read the program](#)