

# Recent Gains in Life Expectancy Reversed by the Covid-19 Pandemic

LCDS meeting February 15 2021





# Estimating the burden of the COVID-19 pandemic on mortality, life expectancy and lifespan inequality in England and Wales: a population-level analysis

Jose Manuel Aburto <sup>1,2</sup> Ridhi Kashyap <sup>1</sup> Jonas Schöley <sup>2</sup> Colin Angus <sup>3</sup>  
John Ermisch <sup>1</sup> Melinda C Mills <sup>1</sup> Jennifer Beam Dowd <sup>1</sup>



# Estimating the burden of the COVID-19 pandemic on mortality, life expectancy and lifespan inequality in England and Wales: a population-level analysis

Jose Manuel Aburto ,<sup>1,2</sup> Ridhi Kashyap ,<sup>1</sup> Jonas Schöley ,<sup>2</sup> Colin Angus ,<sup>3</sup>  
John Ermisch ,<sup>1</sup> Melinda C Mills ,<sup>1</sup> Jennifer Beam Dowd <sup>1</sup>

**To document the cumulative burden of the pandemic on life expectancy in a cross-national, comparative perspective.**

## Life expectancy at birth ( $e_0$ )

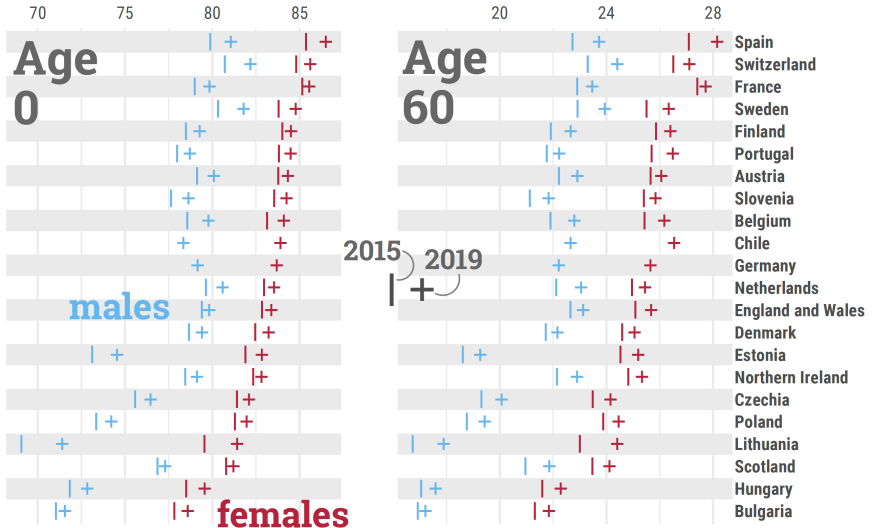
Average number of years a cohort of newborns would live if they were to experience the death rates in a given year.

## Life expectancy at birth ( $e_0$ )

Average number of years a cohort of newborns would live if they were to experience the death rates in a given year.

- ▶ Widely-used metric of pop health and **longevity**.
- ▶ **Unaffected** by population structure.
- ▶ Enables **comparisons**.
- ▶ Can be **decomposed** by age and CoD.

# Life expectancy levels



# Contributions of this study

## Contributions of this study

- ▶ **Harmonization** of data by age and sex for 23 countries.



## Contributions of this study

- ▶ **Harmonization** of data by age and sex for 23 countries.
- ▶ Report life expectancy for **2019** and **2020**.

## Contributions of this study

- ▶ **Harmonization** of data by age and sex for 23 countries.
- ▶ Report life expectancy for **2019** and **2020**.
- ▶ **Quantify**  $e_0$  losses during the pandemic.

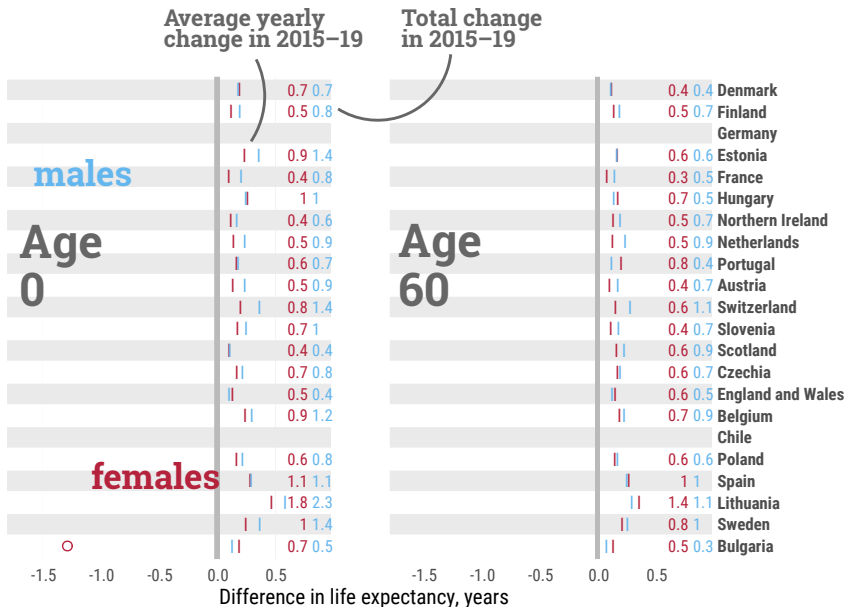
## Contributions of this study

- ▶ **Harmonization** of data by age and sex for 23 countries.
- ▶ Report life expectancy for **2019** and **2020**.
- ▶ **Quantify**  $e_0$  losses during the pandemic.
- ▶ Disentangle the **ages** that contributed to these losses.

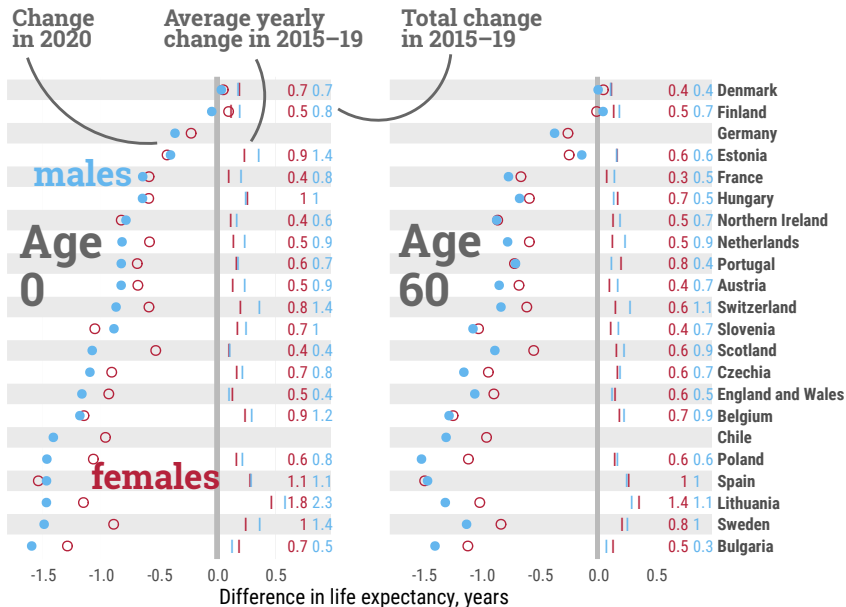
## Contributions of this study

- ▶ **Harmonization** of data by age and sex for 23 countries.
- ▶ Report life expectancy for **2019** and **2020**.
- ▶ **Quantify**  $e_0$  losses during the pandemic.
- ▶ Disentangle the **ages** that contributed to these losses.
- ▶ For 13 countries, linked attributable losses to **COVID-19**.

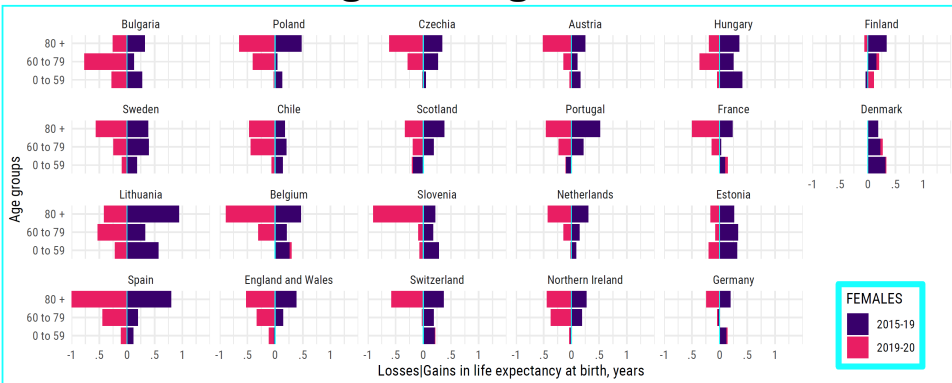
# Context before the pandemic



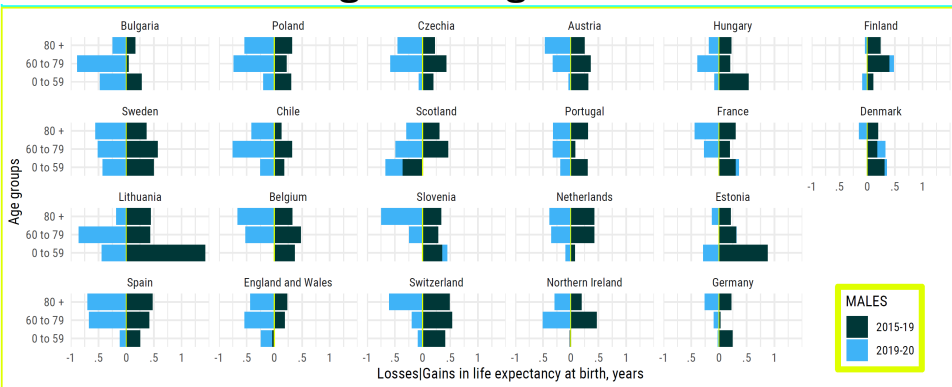
# Context during the pandemic



# Ages driving losses



# Ages driving losses

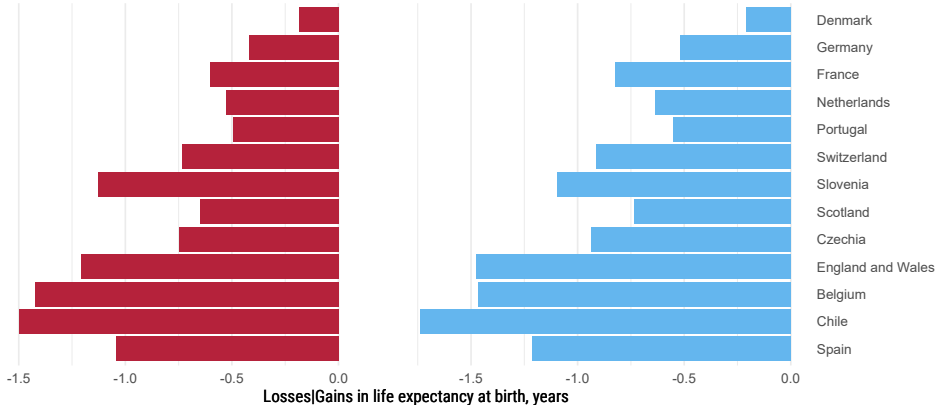




# COVID-19 attributable losses

females

males



## Conclusions

- ▶ The COVID-19 pandemic halted longevity improvements in 2020.

## Conclusions

- ▶ The COVID-19 pandemic halted longevity improvements in 2020.
- ▶ Most countries experienced substantial losses in  $e_0$ .

## Conclusions

- ▶ The COVID-19 pandemic halted longevity improvements in 2020.
- ▶ Most countries experienced substantial losses in  $e_0$ .
- ▶ Mostly attributed to mortality above age 60 and to COVID-19 deaths.

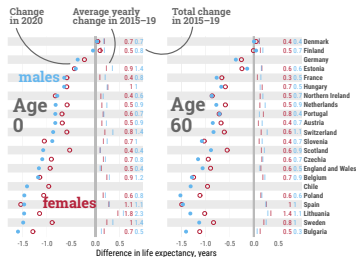
## Conclusions

- ▶ The COVID-19 pandemic halted longevity improvements in 2020.
- ▶ Most countries experienced substantial losses in  $e_0$ .
- ▶ Mostly attributed to mortality above age 60 and to COVID-19 deaths.
- ▶ More efforts are needed to report timely data.

## Conclusions

- ▶ The COVID-19 pandemic halted longevity improvements in 2020.
- ▶ Most countries experienced substantial losses in  $e_0$ .
- ▶ Mostly attributed to mortality above age 60 and to COVID-19 deaths.
- ▶ More efforts are needed to report timely data.
- ▶ The recovery of life expectancy in the short-term remains uncertain.

# Recent Gains in Life Expectancy Reversed by the Covid-19 Pandemic



José Manuel Aburto, Jonas Schöley, Luyin Zhang,  
Ilya Kashnitsky, Charles Rahal, Trifon Missov,  
Melinda Mills, Jenn B. Dowd, Ridhi Kashyap