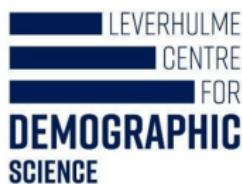


Life expectancy changes during the pandemic in low mortality countries

José Manuel Aburto



@jm_aburto

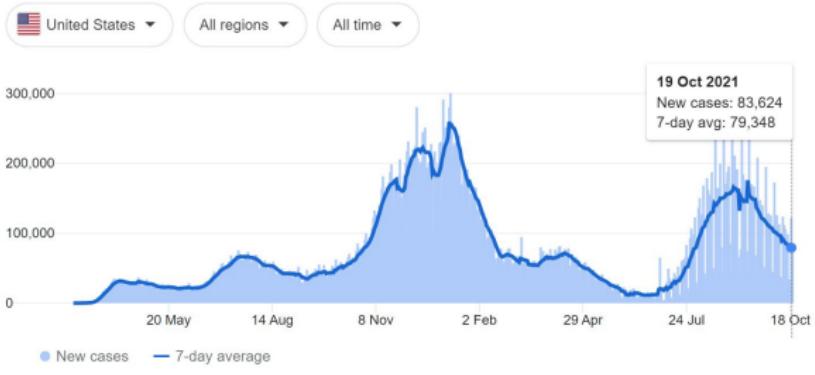


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Demography as a discipline to study structural social changes

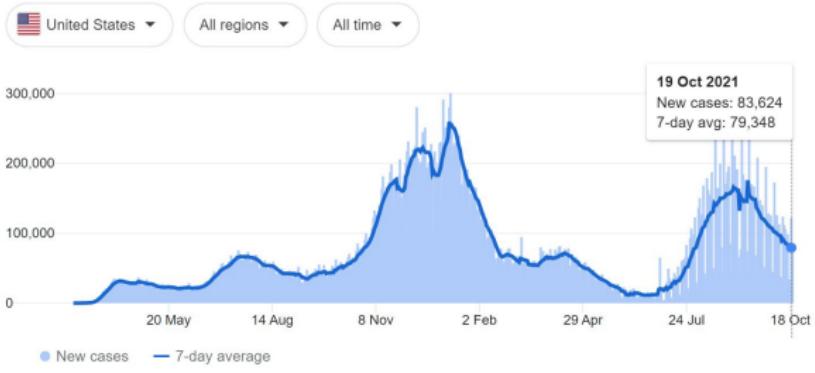
Demography during the COVID-19 pandemic

From [The New York Times](#) · Last updated: 10 hours ago



Demography during the COVID-19 pandemic

From [The New York Times](#) · Last updated: 10 hours ago



From Ronald Lee's *Demography abandons its core:*
Formal demography is in a coma. Perhaps we
should just let it die a natural death.

Excess deaths

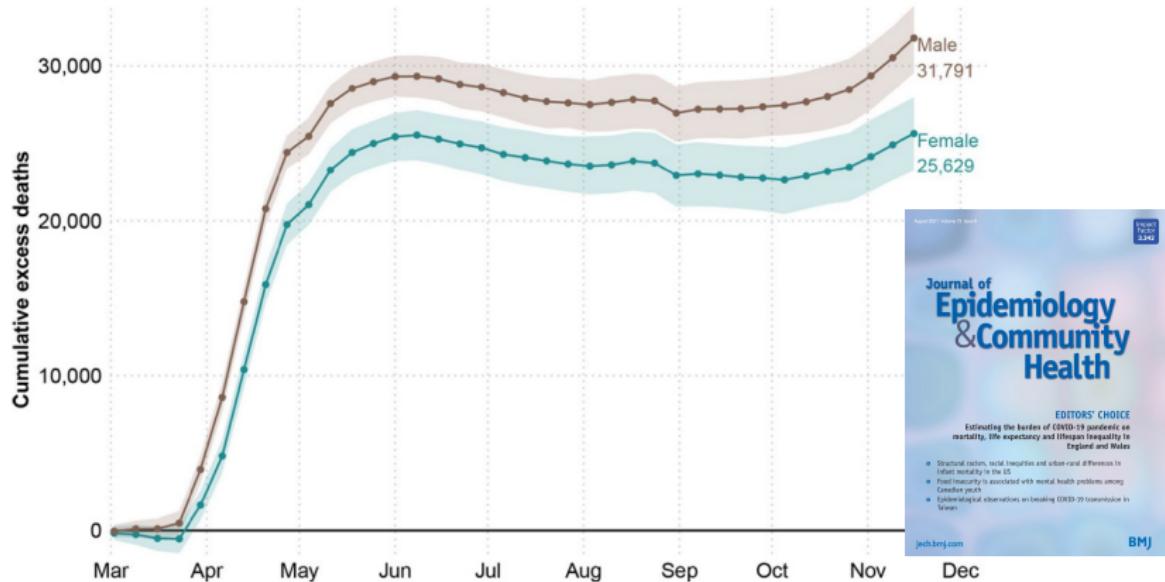


Figure 1 Cumulative excess deaths in England and Wales through the COVID-19 pandemic weeks 10–47 of 2020 by sex. Shaded areas represent 95% prediction intervals. Excess deaths are defined as the total observed deaths subtracting the estimated baseline death count.

Excess deaths by age

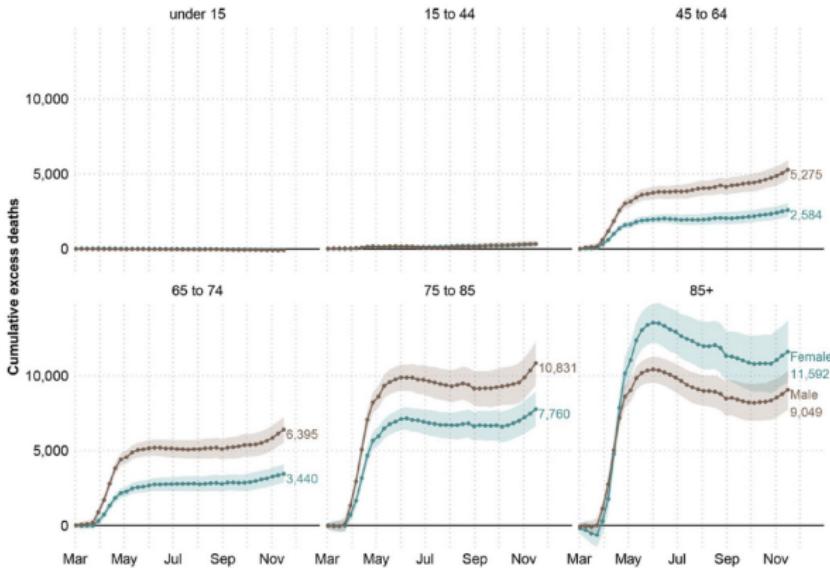


Figure 2 Cumulative excess deaths in England and Wales through the COVID-19 pandemic weeks 10–47 of 2020 by sex and age groups. Shaded areas represent 95% prediction intervals. Excess deaths are defined as the total observed deaths subtracting the estimated baseline mortality.

Excess deaths overcome some limitations:

- ▶ Different testing strategies.
- ▶ Coding practices.
- ▶ Potential undercounting.
- ▶ Accounts for population age-structure.
- ▶ Accounts for population change.

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BUT, it is very difficult to make comparisons.

Demographer's perspective

We need to go beyond excess deaths and country-specific analyses and focus on the pressing issue of revealing the impacts of the pandemic on life expectancy in a cross-national perspective.

What is life expectancy?

What is life expectancy?

Average number of years a **synthetic** cohort of newborns would live if they were to experience the death rates observed in a given period throughout their lifespan

Why life expectancy?

Why life expectancy?

- ▶ Widely used metric of population health.
- ▶ Comparable across countries and over time.
- ▶ Summarizes mortality in a given year.
- ▶ Decomposable with demographic methods.

Challenges for timely life expectancy estimates

Challenges for timely life expectancy estimates

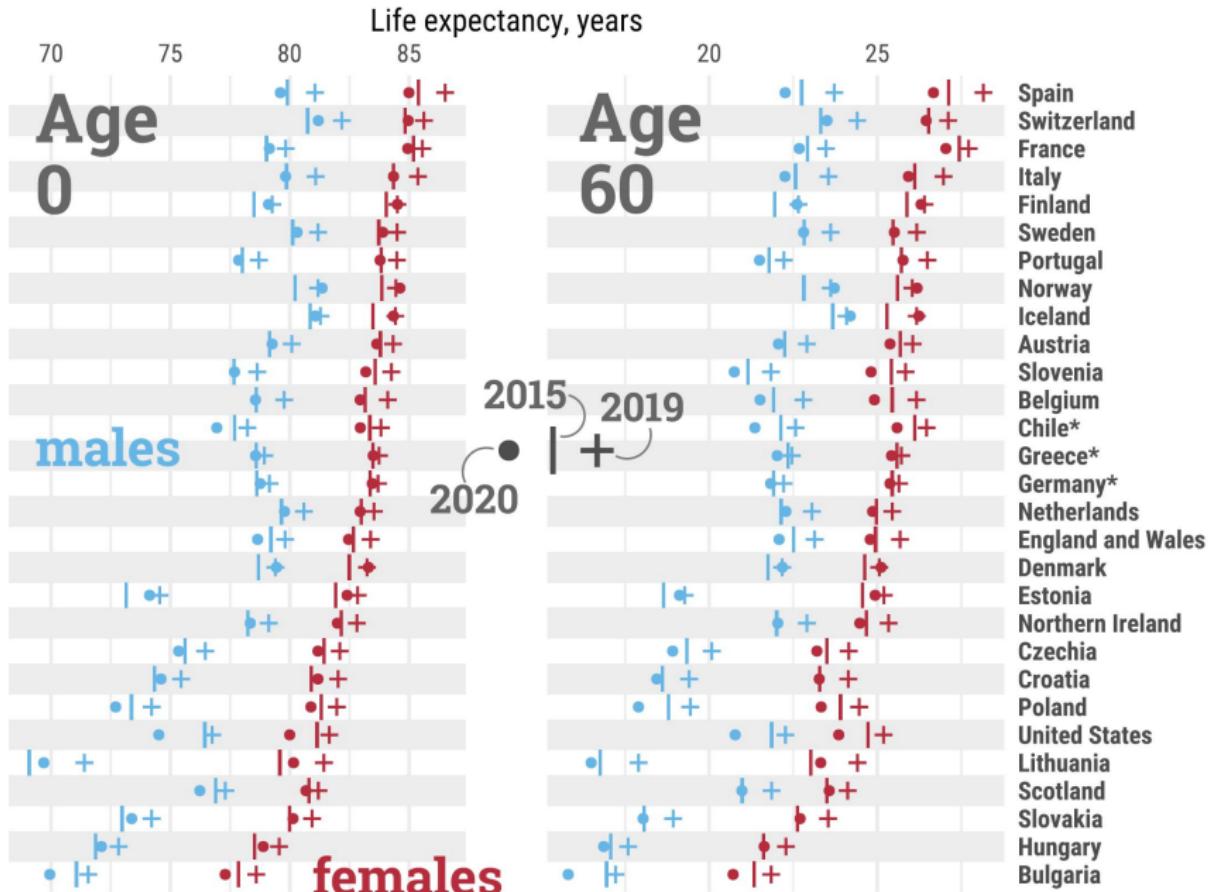
- ▶ Timely all-cause mortality data.
- ▶ High quality coverage.
- ▶ Disaggregates by age and sex (minimum).
- ▶ Population estimates.

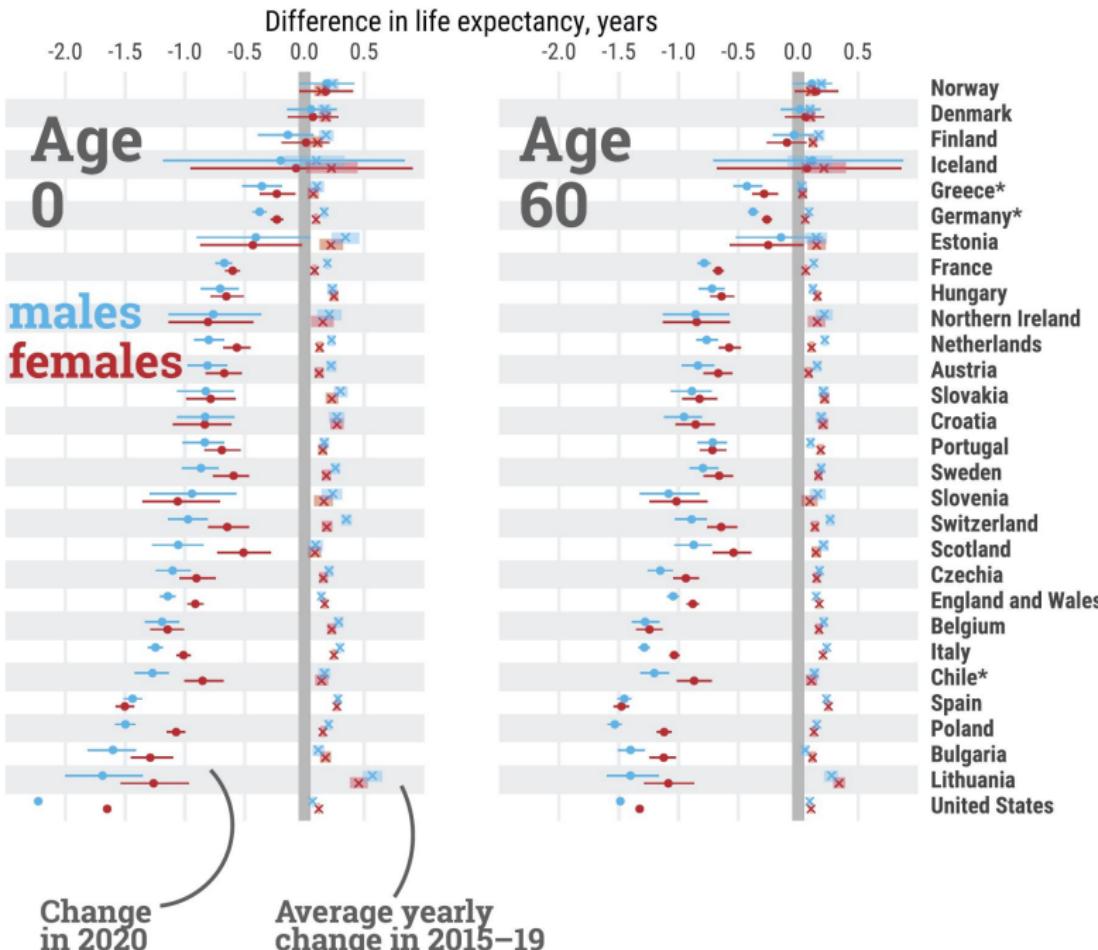


Original article

Quantifying impacts of the COVID-19 pandemic through life-expectancy losses: a population-level study of 29 countries

José Manuel Aburto  ^{1,2,3,4*}† Jonas Schöley  ^{3,4†} Ilya Kashnitsky  ³
Luyin Zhang  ^{1,5} Charles Rahal  ^{1,2}, Trifon I Missov  ³
Melinda C Mills  ^{1,2} Jennifer B Dowd  ^{1,2} and Ridhi Kashyap  ^{1,2†}



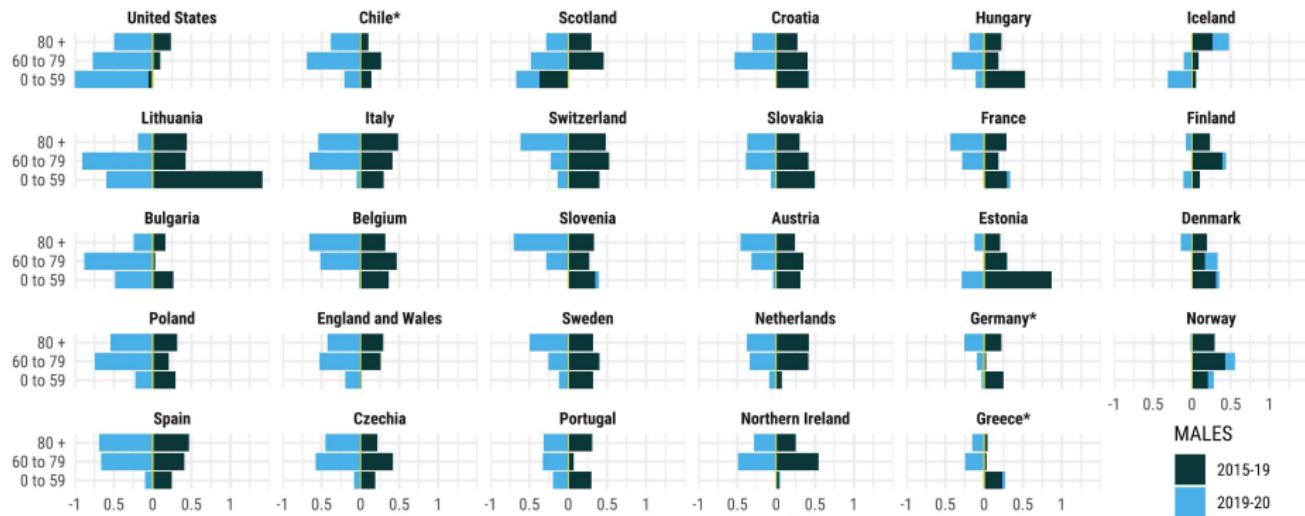


Historical context

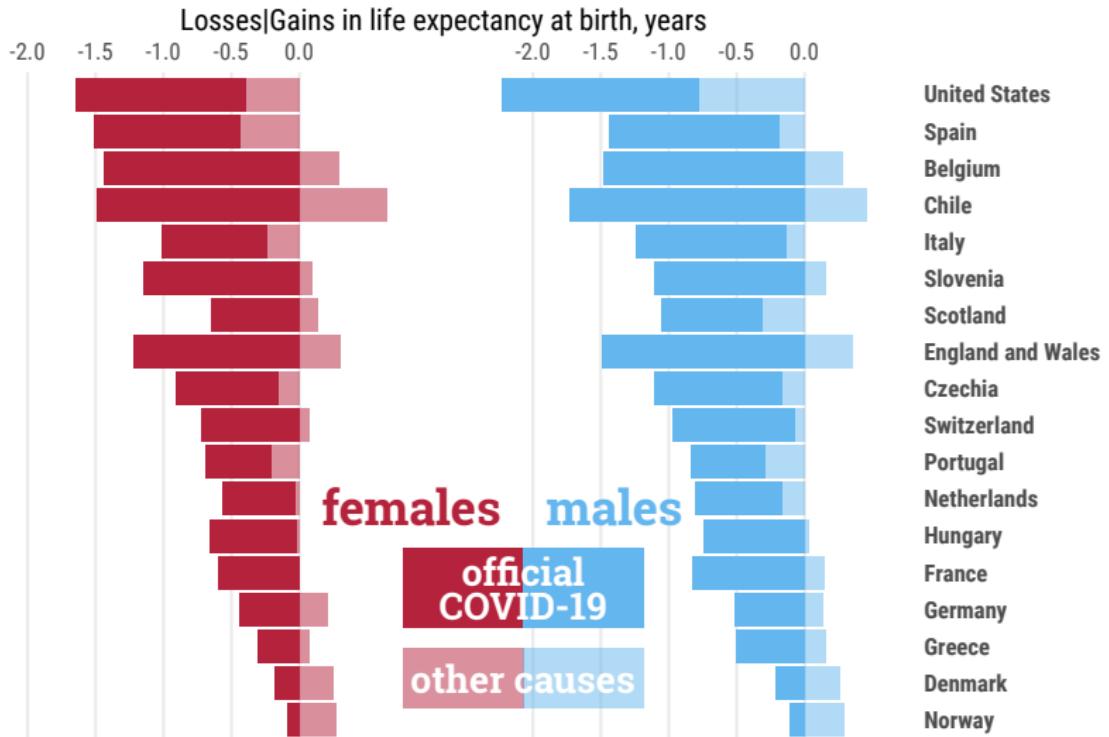
Age-specific contributions



Age-specific contributions



COVID-19 contribution



Key points

- Out of 29 countries analysed, 27 had losses.

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- ▶ Out of 29 countries analysed, 27 had losses.
- ▶ 11 countries for males and 8 among females > 1 year.
- ▶ Females from 15 countries and males from 10 ended up with lower life expectancy at birth in 2020 than in 2015.
- ▶ Losses in life expectancy were largely attributable to increased mortality above age 60 years and linked to official COVID-19 deaths.

Sex differences: males tend to have greater losses than females.

Sex differences: males tend to have greater losses than females.

But not everywhere

Life expectancy declines in Russia during the COVID-19 pandemic in 2020

JOSÉ MANUEL ABURTO^{‡,*†}, JONAS SCHÖLEY^{*,†}, ILYA KASHNITSKY^{*,§}, RIDHI KASHYAP^{‡,*†}

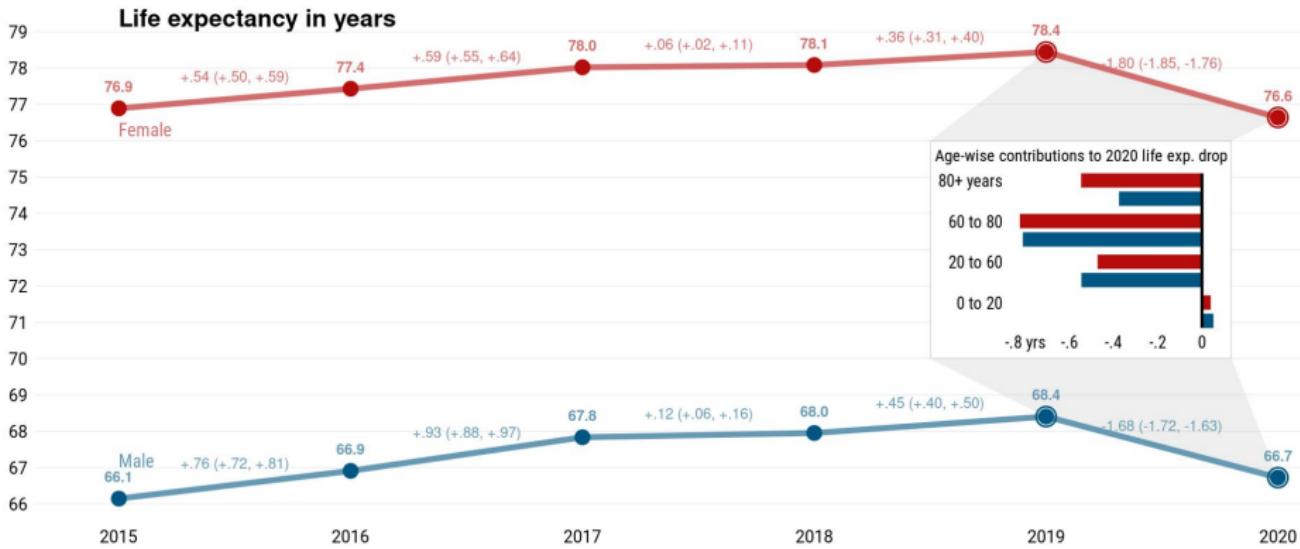
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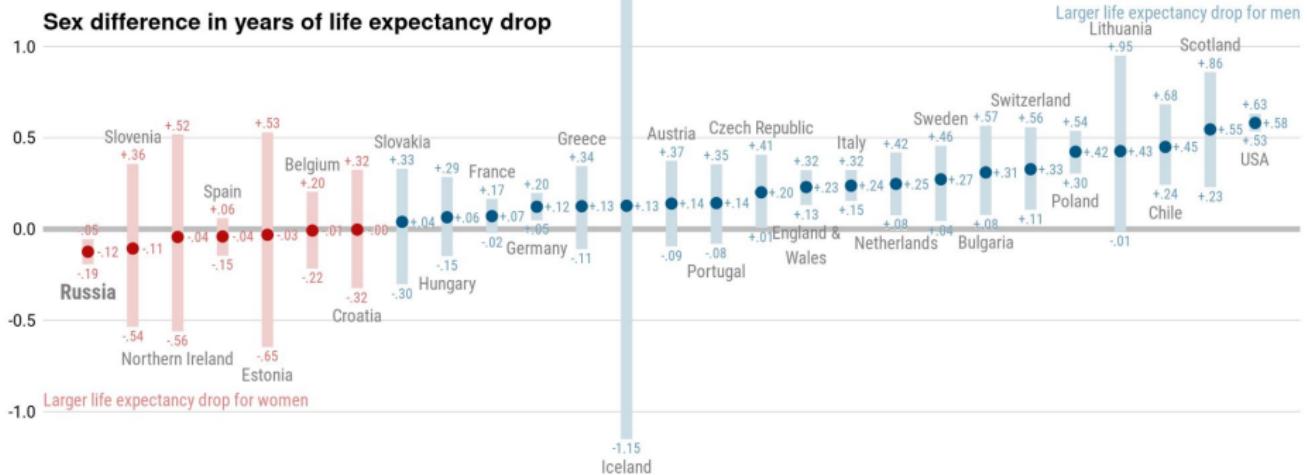
[†]*Max Planck Institute for Demographic Research, Rostock*

All authors contributed equally to this work

Russia



Russia



Future prospects (short, medium, long term)

Future prospects (short, medium, long term)

Subnational variation

Future prospects (short, medium, long term)

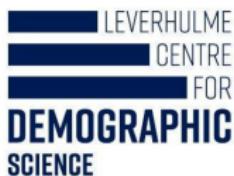
Subnational variation

Causes of death

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