

# **Faltering survival improvements at young-middle ages in high-income English-speaking countries: period and cohort analyses**

Sergey Timonin, David A. Leon, Emily Banks, Tim Adair, Vladimir Canudas-Romo

## **ABSTRACT**

### **Background**

Slowing longevity improvements in high-income countries (HICs) have been reported before the Covid-19 pandemic. We quantify trends in longevity measures in six high-income English-speaking countries (Australia, Canada, Ireland, New Zealand, UK, USA) - including by age, sex, period, cohort and major cause - and compare them with other (HICs).

### **Data and methods**

All-cause mortality data from the Human Mortality Database (1970-2021) and cause-specific death counts from the WHO Mortality Database (2017-19), disaggregated by sex, age group and major cause of death, were used. Trends in longevity measures (period life expectancy at birth, 0-50 years, and at age 50 years) and lifespan inequality were estimated for 1970-2021. The contribution of causes of death was measured by calculating life-years lost and decomposing differences in life expectancy between each Anglophone country and the average for other HICs in the pre-pandemic period. The impact of differential cohort survival on current differences in longevity was assessed by calculating the gap in truncated cross-sectional average length of life.

### **Results**

Having improved consistently, life expectancy in all English-speaking countries except Ireland stalled in the pre-pandemic decade, mainly due to stagnating or increasing mortality at young-middle ages. Relative to other HICs, those born in Anglophone countries since the 1970s experienced relative mortality disadvantage, largely attributable to injuries, including suicides, substance-related and cardiovascular mortality. In contrast, older cohorts enjoyed advantages for females in Australia and Canada and for males in all Anglophone countries except the USA.

### **Conclusions**

The striking disadvantage of young adults in English-speaking countries relative to other HICs should be seen as an emerging and avoidable threat to efforts to improve health equity. Population health policies should be adapted to meet this challenge. Post-pandemic mortality and life expectancy trends in Anglophone countries require further monitoring.