

In Life Expectancy Gains Cohort Mortality Forecasts Indicate Signs of Deceleration

The rate of life expectancy growth in high-income countries may slow down over time, particularly due to a slower pace of [mortality](#) improvement at very young ages.



Study

Advancements in public [health](#), medical science, and socioeconomic structure have significantly increased life expectancy in high-income countries over the past century. However, it has become a topic of ongoing debate whether this increasing trend will persist in the future or slow down over time.

Many studies estimating human lifespan have considered a period life expectancy approach, which is a synthetic measure reflecting the average [mortality risk](#) observed within a specific calendar year. This approach may help assess adverse mortality trends, but it cannot provide conclusive evidence on longevity trends.

The cohort life expectancy approach, on the other hand, captures the actual survival experience of a specific group of people born in the same period, offering a direct measure of [longevity](#).

To predict the near-future trend in human longevity, researchers from the Max Planck Institute for Demographic Research, INED, and the University of Wisconsin-Madison recently estimated cohort life expectancy for generations born between 1939 and 2000 in high-income countries using multiple mortality [forecasting models](#).

The researchers estimated cohort life expectancy for currently living generations in 23 high-income, low-mortality countries using six distinct models that forecasted age-specific mortality rates. Specifically, the researchers focused on generations born between 1939 and 2000, using data from the [Human Mortality Database](#).

Furthermore, they conducted an age-decomposition analysis (which quantifies the contribution of different age groups to changes in cohort [life expectancy](#) over time) to identify the major contributors to the forecasted cohort life expectancy trends.

Results

The study findings across all [forecasting models](#) revealed a deceleration in life expectancy growth in generations born between 1939 and 2000.

Regarding previous trends in [longevity](#), the study reported an average pace of improvement of about 0.46 years per birth cohort between 1900 and 1938, meaning that each successive generation during that period lived longer than the previous one. This roughly corresponds to life expectancy increasing from about 62 years for those born in 1900 to around 80 years for those born in 1938, although the paper does not report these exact figures.

Such dramatic improvement in life expectancy over a few years appeared to decline by 37% to 52% for generations born between 1939 and 2000, depending on the methods used for forecasting. Under an [optimistic scenario](#) where the previously observed steady improvement in life expectancy remains unchanged, people born in 1980 could expect to achieve the milestone of a cohort life expectancy of 100 years.

However, the current findings indicated a different scenario where none of the [generations](#) analyzed in the study are expected to achieve this milestone.

The rapid decline in the infant mortality rate in the early 20th century, which was due to advancements in medical science, improvements in sanitation, and a higher standard of living, was found to contribute significantly to the robust life expectancy gains. In the late 20th century, [infant](#) and child mortality rates were already extremely low, leading to a slower pace of mortality improvement at very young ages. This pattern is strongly associated with the recent deceleration in life expectancy growth.

According to the [study findings](#), over half of the forecasted deceleration in life expectancy is attributed to mortality trends among individuals under the age of 5. At the same time, more than two-thirds are explained by mortality trends among individuals under 20.

As discussed by the researchers, improving mortality at middle age may lead to substantial gains in life expectancy. Similarly, advancements in clinical practices that specifically address the underlying causes of age-related mortality, as well as improvements in behavioral risk factors, may significantly delay the onset of [aging](#) in humans. However, the current findings suggest that, at least for currently living generations, even significant improvements in mortality rate are unlikely to reverse the forecasted deceleration in life expectancy.

Existing research highlights a decline in period life expectancy in the United States and other developed countries, reflecting deeper economic and social factors that highlight the complex interplay between societal conditions and [health outcomes](#).

The current study's findings indicate that this decline is not only a period phenomenon but also a generation-level phenomenon, which a combination of biological and social determinants can [influence](#). Collectively, these findings indicate a broader decline in the rate of growth in human longevity.

Conclusion

The study findings provide meaningful insights for [policymakers](#) preparing for the future. However, it is worth mentioning that unpredictable or unexpected events, such as future pandemics or epidemics, dramatic changes in social or economic structure, or medical breakthroughs, can significantly alter the forecasted mortality trends as well as the rate of life expectancy growth.

Since the study focuses on populations rather than individuals, the observed long-term decline in life expectancy growth may influence people's approach to saving, retirement, and [long-term care](#). While the authors emphasize broader policy implications, such as the need for governments to adapt social and health systems, both governments and individuals may need to adjust their expectations and plans for the decades ahead.

Source:

<https://www.news-medical.net/news/20251031/Life-expectancy-gains-are-slowng.aspx>