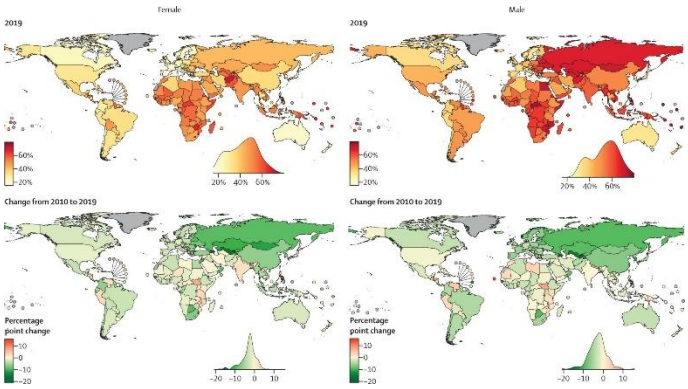
Global Gains against Chronic Diseases are Stalling Revealed by Researchers

A group of researchers quantified the changes in non-communicable disease (NCD) mortality from 2010 to 2019 across 185 countries, attributing these changes to specific causes and age groups compared with the period from 2001 to 2010.



Study

This analysis utilized the World Health Organization (WHO) Global Health Estimates 2021 for 185 countries, grouped into eight reporting regions by the Non-Communicable Disease Risk Factor Collaboration (NCD-RisC).

The primary outcome was the unconditional probability of dying from an NCD between birth and age 80 years, calculated using age-specific mortality rates and life tables; by construction, it is independent of the population's age structure and competing causes of death. Changes were defined as simple differences between 2010 and 2019, and between 2001 and 2010, without assuming linear trends.

For cause- and age-specific attribution, the authors analyzed 63 countries (51 with high-quality death certification and 12 large countries per region) and decomposed changes across 20 mutually exclusive cause groups using the Horiuchi method of decomposition.

Analyses were sex-specific and conducted in the R programming language (R), version 4.4.2. The broader 0 to 80-year window and all-NCD cause set were used to complement SDG target 3.4, which focuses on ages 30–70 years and four causes (cancers, cardiovascular diseases, chronic respiratory diseases, and diabetes).

The 2020–2021 period was excluded because Coronavirus Disease 2019 (COVID-19) and policy responses altered NCD mortality patterns globally.

The authors also benchmarked each country's performance against the best-performing country in its region (such as South Korea, Moldova, Denmark, Mongolia, Colombia, Kazakhstan, and Chile) to identify gaps by cause and age.

Full 95 percent uncertainty intervals are reported in the paper's appendix. The authors caution that many low- and middle-income countries have low- or very-low-quality mortality datav, which increases uncertainty about the precise magnitude of change.

Findings

From 2010 to 2019, the probability of dying from an NCD before age 80 fell in 152 of 185 countries for females (82%) and in 147 of 185 for males (79%). All high-income Western countries saw declines; Denmark led for both sexes, while the United States of America (USA) had the smallest drop.

Among the largest countries elsewhere, China, Egypt, Nigeria, Russia, and Brazil experienced declines, whereas India and Papua New Guinea saw increases.

Statistically distinct decreases, whose 95% UIs excluded zero, appeared in 29% of countries for females and 39% for males. Regionally, the largest reductions were among females in Central Asia, the Middle East, and North Africa, and for males in Central and Eastern Europe. Pacific Island nations had the smallest declines, despite having high starting levels.

Compared with 2001–2010, about half of the countries (45% for females and 43% for males) showed smaller declines or reversals during 2010–2019. This trend was observed in many high-income Western nations, Latin America and the Caribbean, East and Southeast Asia, and for females in South Asia. By contrast, central and eastern Europe, as well as parts of central Asia, the Middle East, and North Africa, showed decadal improvement. A single disease rarely drove performance; multiple causes and age groups combined to shape the change.

Cause-specific decomposition showed circulatory diseases dominated improvements. In 62% of 63 cause-analysis countries for females and 60% for males, ischemic heart disease was the largest single contributor, lowering overall NCD death probability by as much as 7.9 percentage points; stroke ranked second, particularly in central and eastern Europe.

Across various cancers, favorable contributions were observed in colorectal, cervical, stomach, breast, and prostate cancers. Trachea, bronchus, and lung cancer were pivotal: Mortality declined for males in 92% of countries and made the most significant male contribution in high-income western settings; for females, patterns were mixed, with increases in parts of central and eastern Europe and several high-income countries. COPD contributed favourably in some countries, though patterns varied widely, contrasting with the generally declining trends in lung cancer.

Not all signals were positive. Pancreatic and liver cancers and neuropsychiatric conditions, including Alzheimer's disease and other dementias and alcohol use disorders, contributed unfavorably in many countries, dampening progress.

Diabetes (including chronic kidney disease due to diabetes) showed highly heterogeneous effects - improving outcomes in some high-income and East Asian countries but increasingly offsetting gains elsewhere.

Age patterns mattered, as changes at ages 65 years and older made the largest contributions, either up or down, because death rates are highest at older ages. Where older-age mortality failed to decline, national probabilities stagnated or rose, accompanied by setbacks in working-age populations.

Conclusion

Across most countries, NCD mortality declined in the 2010s, but the momentum weakened compared to the 2000s. The authors suggest this slowdown reflects a plateau in coverage of

proven interventions, fiscal constraints following the late-2000s global recession, and widening health inequalities.

Progress depended on broad gains, especially in ischemic heart disease and stroke, tempered by rising burdens from neuropsychiatric conditions, pancreatic and liver cancers, and diabetes. They call for a "learning health-system" approach that continually monitors interventions, benchmarks performance, and evaluates policies in real time, alongside sustaining tobacco and metabolic risk control, strengthening primary and specialty care, and expanding death registration and cause certification.

These changes could reduce premature deaths among working-age adults and allow more older adults to live in good health.

Source:

https://www.news-medical.net/news/20250915/Researchers-reveal-why-global-gains-against-chronic-diseases-are-stalling.aspx