

Stalling improvements in cardiovascular disease rates since 2010 could cost the UK £54bn between 2020 and 2029

June 29 2022



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New research published today suggests that the slowdown in improvements in cardiovascular diseases like heart disease and stroke

seen in England and Wales since 2010 could cost £54 billion in health and social care costs.

Between 2020 and 2029, this could mean some £13 billion in NHS healthcare costs, £1.5 billion in social care costs, £8 billion in the value of informal care and £32 billion in the value of lost "quality adjusted life years" (QALYs).

Before 2010, cardiovascular disease rates were getting better every year. After 2010, improvements stalled.

One of the authors of the study, Dr. Brendan Collins, said, "This modeling reinforces that 'what is good for the heart is good for the brain'—meaning that if we reduce the risk of cardiovascular diseases like [heart disease](#) and stroke, we also reduce the future prevalence of dementia, so it is not simply the case that preventing disease now means that health and social care costs are higher in future; a healthier population saves money across the life course."

Evidence suggests that COVID-19 is a risk factor for new cardiovascular disease, and existing cardiovascular disease can mean worse outcomes with COVID-19 infection. This means it is more important than ever to refocus on preventing cardiovascular disease and getting back on a positive trajectory where cardiovascular disease rates are falling year on year, something that has happened in other parts of the world.

The study authors recommend interventions including measures to reduce poverty, improving diet through a healthier food system, tobacco control, and increasing exercise to help reduce the incidence of cardiovascular disease.

This study, published in *PLOS ONE*, was a collaboration between University of Liverpool, with colleagues from the Institute for Fiscal

Studies, University College London, Imperial College London, as well as Universities of Helsinki, Gdansk, Bristol, and Cambridge.

Prof Eric Brunner, lead investigator of the study at UCL, said, "Our modeling work using official UK data highlights the increasing pressure, year on year, in the social care system for older people. Financial resources and trained personnel are both in short supply. Poorer people and their families are most vulnerable to the growing gap between supply and need, as they are unable to pay for social care."

The study used the IMPACT Better Ageing Model (IMPACT BAM) a [mathematical model](#) which looks at the relationship between cardiovascular disease, disability, and dementia based on data from the English Longitudinal Study of Ageing, which has been linked with NHS Hospital Episode Statistics for England.

This is the first academic paper to link these data in this way, to understand about the relationship between aging, cardiovascular disease, disability, dementia and NHS costs, social care resource use, and health related quality of life and QALYs. In the future, this model may be used to look at the impact of specific interventions to prevent [cardiovascular disease](#) and dementia.

More information: Brendan Collins et al, What will the cardiovascular disease slowdown cost? Modelling the impact of CVD trends on dementia, disability, and economic costs in England and Wales from 2020–2029, *PLOS ONE* (2022). [DOI: 10.1371/journal.pone.0268766](https://doi.org/10.1371/journal.pone.0268766)

Provided by University of Liverpool

Citation: Stalling improvements in cardiovascular disease rates since 2010 could cost the UK

£54bn between 2020 and 2029 (2022, June 29) retrieved 23 April 2024 from
<https://medicalxpress.com/news/2022-06-stalling-cardiovascular-disease-uk-54bn.html>

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