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Lifestyle changes could save S'pore $650m in healthcare costs: Study

Diabetes, hypertension, stroke, heart disease projected to spike among older adults by 2050

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If Singaporeans made sustained and long-term changes to their lifestyles, the Republic could save up to $650 million in direct healthcare costs by 2050.

This is according to a recently published modelling study that looked into how changing the way they live over 30 years could affect the health and healthcare spending of Singapore's Chinese, Malay and Indian ethnic groups.

It simulated the effects of ageing over 30 years, and showed that the prevalence of diabetes, hypertension, stroke and heart disease is projected to increase sharply among older adults by 2050.

This increase, coupled with the development of more advanced treatments, will propel the demand for healthcare and healthcare infrastructure, potentially driving medical inflation and overall expenditure.

The study also showed that cost savings would arise due to people not experiencing significant changes in their chronic health issues – such as high blood pressure – as they age, and not so much because the lifestyle interventions led to widespread improvements in health outcomes or extended lifespans.

Only a small group – approximately 3 per cent to 7 per cent of older adults – would see improvements in their chronic disease status, live longer, and enjoy more disability-free years.

The study, led by researchers from NUS' Saw Swee Hock School of Public Health, is one of the first to quantify the long-term health and economic impact of behavioural change across different ethnic groups in Singapore's ageing population.

Titled Disease Burden, Lifetime Healthcare Cost And Long-term Intervention Impact Projections Among Older Adults In Singapore, it was published in the journal Nature Aging in July.

The modelling study used data from the Singapore Multi-Ethnic Cohort (MEC) health study, which was designed to study ethnic differences in chronic disease risk, and consisted of 47 per cent Chinese, 26 per cent Malay and 27 per cent Indian participants.

The 14,465 participants, aged between 21 and 94, were recruited between January 2004 and November 2010, and followed up on between January 2011 and December 2016.

The MEC was then reweighted to reflect older adults in Singapore in 2020, allowing the researchers to model long-term health trajectories and ethnic disparities in Singapore.

The researchers modelled intervention scenarios aligned with Singapore's national preventative care initiative Healthier SG, focusing on improved blood pressure management, increased physical activity, sodium reduction and a combined intervention using all three strategies.

Implementing all four interventions could lead to the projected savings by 2050.

Assistant Professor Cynthia Chen, the study's principal investigator, said it provided a clearer picture of how lifestyle interventions can influence long-term health and healthcare spending in Singapore, without markedly extending life.

The projected lifetime healthcare expenditure is the highest among Indians ($120,000), followed by the Chinese ($97,000) and Malays ($90,000).

The lifetime healthcare costs are the highest in Indians due to prevalent chronic diseases and the lowest in Malays due to a shorter life expectancy.

The researchers showed that while Malay and Indian older adults are projected to have a higher prevalence of chronic diseases and disabilities than Chinese older adults in Singapore, they stand to benefit most from sustained preventative strategies and targeted lifestyle programmes.

The lifestyle interventions are projected to moderate the rise of chronic disease burdens and healthcare costs, while only marginally extending life and disability-free life years for a small group.

"We realised it was because there's this very strong effect of ageing. Generally, as people age, they are already at a higher risk of getting all these conditions," Prof Chen said.

"If you look at the National Population Health Survey, you don't actually see a reduction in chronic diseases like hypertension and diabetes, despite the fact that the Health Promotion Board, in the last 10 years, has done a lot of work, such as (introducing) the National Steps Challenge."

However, the Government is now looking at getting older adults to do more muscle strengthening exercises, instead of counting their steps, she said.

Where sodium consumption is concerned, about 90 per cent of Singaporeans still exceed the recommended daily sodium intake, she added.

Actions are needed to address poor management of chronic diseases such as hypertension, lack of strengthening activities or high-sodium diets and to reduce disparities, the paper said.

Lifestyle interventions may produce more benefits for society if they are initiated at younger ages, providing a greater opportunity to delay or prevent hypertension and diabetes, according to the study.

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STRONG EFFECT OF AGEING

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ASSISTANT PROFESSOR CYNTHIA CHEN, the study's principal investigator, who explained that ageing puts people at a higher risk of getting chronic diseases.

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