

PRESS RELEASE

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Singapore achieves public health success in cardiovascular diseases and smoking control, challenges in mental health and injuries remain

The ASEAN special series in the Lancet Public Health also highlighted that injuries from self-harm and falls, and mental health concerns are a worrying trend, with self-harm and falls accounting for almost 70% of all injury deaths, and mental disorders exerting a disproportionately high burden of health among youth aged 10-14 years.

Singapore has achieved exceptional public health successes while confronting emerging challenges, according to a series of four new studies published in the Lancet Public Health. Jointly led by the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) and the Institute for Health Metrics and Evaluation (IHME), University of Washington School of Medicine, this special series is the first of its kind research focused on injuries, cardiovascular disease (CVD), smoking prevalence, and mental health burden in the ASEAN region.

“The findings present a nuanced picture of Singapore’s health progress. While we’ve made remarkable strides in areas like cardiovascular care and tobacco control, the growing burden of mental health conditions and injuries, particularly self-harm and falls, calls for urgent and sustained attention,” said lead author Dr Marie Ng, Associate Professor, NUS Medicine, and Affiliate Associate Professor at IHME.

Lowest Cardiovascular Disease prevalence and mortality rate

Singapore has demonstrated impressive progress in cardiovascular diseases (CVD) prevention and management. In 2021, age-standardised prevalence rate of CVDs stood at 4,579.5 per 100,000 population and age-standardised mortality rate stood at 75.8 per 100,000— both the lowest in the ASEAN region and below the global average. The country recorded a 19.8% reduction in age-standardised prevalence rate and a 72.4% decrease in age-standardised CVD mortality from 1990 to 2021. However, driven by an ageing population and lifestyle shift, the number of CVD cases has increased by nearly 200% in the last 30 years. In 2021, over 385,000 people in Singapore were affected by cardiovascular diseases.

“Singapore’s low cardiovascular mortality rate is a testament to decades of investment in prevention, early diagnosis, and high-quality cardiac care,” said Dr Nicholas Chew, Department of Cardiology, National University Heart Centre, Singapore (NUHCS), a senior author on the paper. “But the threat remains, we cannot be complacent. We need to continue focusing on modifiable risk factors like obesity, hypertension, high cholesterol, diabetes, and smoking, and ensure that our population stays heart-healthy as we age.”

Ischemic heart disease and stroke remain the top contributors to Singapore’s cardiovascular burden, responsible for approximately 199,000 cases. Metabolic and lifestyle-related risk factors, including high blood pressure, high LDL cholesterol, diabetes, and tobacco use, and obesity continue to pose significant challenges, underscoring the need for sustained preventive healthcare efforts. View the paper on cardiovascular disease [here](#).

Tobacco Control: Regional Leadership in Reducing Smoking

Singapore has recorded one of the lowest smoking prevalence rates in ASEAN. In 2021, the age-standardised smoking prevalence among males aged 15 and above was 20.2%, significantly lower than the ASEAN average of 48.4%. Among females, prevalence stood at 6.56%, which is higher than the regional female average of 4.47%, and ranked the fourth highest in the region.

Since 1990, Singapore has achieved notable reductions:

- A 29.2% reduction in smoking prevalence among males aged 15 and older
- A 32.3% reduction among females aged 15 and older
- A 55.0% decrease in smoking among male youths aged 10–14
- A 45.1% decrease among female youths aged 10–14

Singapore also recorded the lowest smoking-attributable male death rate across ASEAN, at 69.4 deaths per 100,000 males. The proportion of all-cause deaths attributable to smoking dropped by 47.2% between 1990 and 2021. The top causes of death attributable to smoking in Singapore are lung cancer, ischemic heart disease and lower respiratory infections.

“Singapore’s success in reducing smoking rates highlights the power of sustained, evidence-based policy,” added A/Prof Marie Ng. “But across ASEAN, the burden of tobacco remains high. This study underscores the urgent need for coordinated regional action to protect future generations from preventable harm.”

Robust public health measures, such as raising the minimum legal age for tobacco purchase to 20 years, comprehensive smoke-free laws, and high tobacco taxation, have been critical to this success. Continued vigilance is needed to address emerging threats like electronic nicotine delivery systems (ENDS) and to sustain reductions in youth smoking rates. View the paper on smoking [here](#).

Low injury mortality rate but self-harm and falls remain a concern

Singapore records the lowest overall injury mortality rate in ASEAN. The country has achieved remarkable success in reducing the burden of road injuries in the last 30

years. However, self-harm and falls remain major public health concerns. In 2021, self-harm accounted for 47% of all injury deaths in Singapore, with the highest burden among males aged 20–24 years, mirroring trends in other high-income countries. Youth and young adults are especially prone to self-harm.

With Singapore's rapidly ageing population where 1 in 4 Singaporean citizens will be aged 65 and above by 2030, falls have emerged as a growing concern. Falls accounted for 22% of all injury deaths and were the second leading cause of injury death after self-harm. In addition to causing mortality, falls resulted in the burden of disability. Over the past 30 years, there has been limited progress in reducing this burden, particularly among women.

"While Singapore has made tremendous progress in reducing the overall burden of injuries, these findings highlight that self-harm and falls remain deeply concerning. The disproportionately high number of deaths from self-harm, particularly among young men, is a stark reminder that mental health must remain a national priority. At the same time, the growing impact of falls signals the need to strengthen prevention strategies for our ageing population," said Dr Yee Wei Lim, Department of Medicine, NUS Medicine, a senior author on this paper.

View the paper on injuries [here](#).

Mental Health: A Growing Priority

Mental health conditions are one of the top 5 disease burden in Singapore. In 2021, age-standardised prevalence of mental disorders was estimated at 12.8% among males and 11.7% among females. Anxiety and depressive disorders were the most common, affecting approximately 185,000 and 144,000 individuals respectively.

Mental disorder exerted a disproportionately high burden of health among youth aged 10-14 years. Moreover, consistent with regional trends, an ageing population is contributing to a rising number of mental disorder cases.

"There is a significant but often invisible toll that mental disorders take on individuals, especially among young people in Singapore. The data reinforces what we see at schools and clinically that mental health challenges often emerge early in life and, if unaddressed, can lead to years of lost potential. Investing in early intervention, community support, and destigmatising help-seeking behaviours is not just beneficial — it's essential," said Professor Alina Rodriguez, Department of Psychological Medicine, NUS Medicine, a collaborator on this paper.

View the paper on mental health [here](#).

A Call for Holistic Public Health Action

The findings from this special series reinforce Singapore's notable achievements in public health while underscoring the need for renewed focus in key areas — including injury prevention, mental health support, cardiovascular risk reduction, and tobacco control amid emerging challenges.

“With an ageing population, burden of cardiovascular diseases, mental disorders, and falls will remain key health challenges in Singapore requiring thoughtful, long-term strategies. At the same time, younger generations are navigating unprecedented social and technological shifts that threaten their mental and well-being, and increase their vulnerability of self-harm. A holistic, life-course approach to health promotion, disease prevention, and mental well-being will be critical to sustaining and improving the nation’s health outcomes,” added A/Prof Marie Ng.

This research is part of the Global Burden of Disease, Injuries, and Risk Factors Study (GBD) 2021 led by the Institute for Health Metrics and Evaluation, University of Washington. The GBD is the most comprehensive assessment of health, which includes granular estimates of burden across all age groups, sexes, and locations, as well as risk factors for 204 countries and territories from 1990 to 2021. The findings from this special ASEAN series was based on an analysis of data from 1990 to 2021 by age, sex, and location across all ASEAN countries: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

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About National University of Singapore (NUS)

The National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education, research, and entrepreneurship, with a focus on Asian perspectives and expertise. We have 16 colleges, faculties, and schools across three campuses in Singapore, with more than 40,000 students from 100 countries enriching our vibrant and diverse campus community. We have also established more than 20 NUS Overseas Colleges entrepreneurial hubs around the world.

Our multidisciplinary and real-world approach to education, research and entrepreneurship enables us to work closely with industry, governments, and academia to address crucial and complex issues relevant to Asia and the world. Researchers in our faculties, research centres of excellence, corporate labs and more than 30 university-level research institutes focus on themes that include energy; environmental and urban sustainability; treatment and prevention of diseases; active ageing; advanced materials; risk management and resilience of financial systems; Asian studies; and Smart Nation capabilities such as artificial intelligence, data science, operations research, and cybersecurity.

For more information on NUS, please visit <http://www.nus.edu.sg/>

About the NUS Yong Loo Lin School of Medicine (NUS Medicine)

The NUS Yong Loo Lin School of Medicine is Singapore's first and largest medical school. Our enduring mission centres on nurturing highly competent, values-driven, and inspired healthcare professionals to transform the practice of medicine and improve health around the world.

Through a dynamic and future-oriented five-year curriculum that is inter-disciplinary and inter-professional in nature, our students undergo a holistic learning experience that exposes them to multiple facets of healthcare and prepares them to become visionary leaders and compassionate doctors and nurses of tomorrow. Since the School's founding in 1905, more than 12,000 graduates have passed through our doors.

In our pursuit of health for all, our strategic research programmes focus on innovative, cutting-edge biomedical research with collaborators around the world to deliver high impact solutions to benefit human lives.

The School is the oldest institution of higher learning in the National University of Singapore and a founding institutional member of the National University Health System. It is one of the leading medical schools in Asia and ranks among the best in the world (Times Higher Education World University Rankings 2025 by subject and the Quacquarelli Symonds (QS) World University Rankings by subject 2025).

For more information about NUS Medicine, please visit <https://medicine.nus.edu.sg/>