

THE GROWING THREAT OF NON-COMMUNICABLE DISEASES IN MALAYSIA

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BACKGROUND

Tackling NCDs is a recognized global priority, with the Sustainable Developmental Goal 3.4.1 monitoring the probability of dying from NCDs among those age 30 to 70 years of age¹. Noncommunicable diseases (NCDs), including heart disease, stroke, cancer, diabetes and chronic lung disease, are collectively responsible for 74% of all deaths worldwide. More than three-quarters of all NCD deaths, and 86% of the 17 million people who died prematurely, or before reaching 70 years of age, occur in low- and middle-income countries². The aim of this study is to determine the trend of probability of dying from NCDs in Malaysia.



METHODS

Mortality data from 2017 to 2021 was obtained from Department of Statistics Malaysia. Mortality from NCDs included deaths due cardiovascular diseases, diabetes, cancers and chronic respiratory diseases, among those 30 to 70 years of age. The mortality counts included in this study includes medically certified deaths as well as non-medically certified deaths, with estimation of cause of deaths carried out using Cause Specific Mortality Fraction (CSMF) from Verbal Autopsy.

Probability of dying was determine using life table approach, based on methodology accepted methodology for SDG reporting.

$${}_5M_x = \frac{\text{Total deaths from four NCD causes between exact age } x \text{ and exact age } x + 5}{\text{Total population between exact age } x \text{ and exact age } x + 5}$$

$${}_5q_x = \frac{{}_5M_x * 5}{1 + {}_5M_x * 2.5}$$

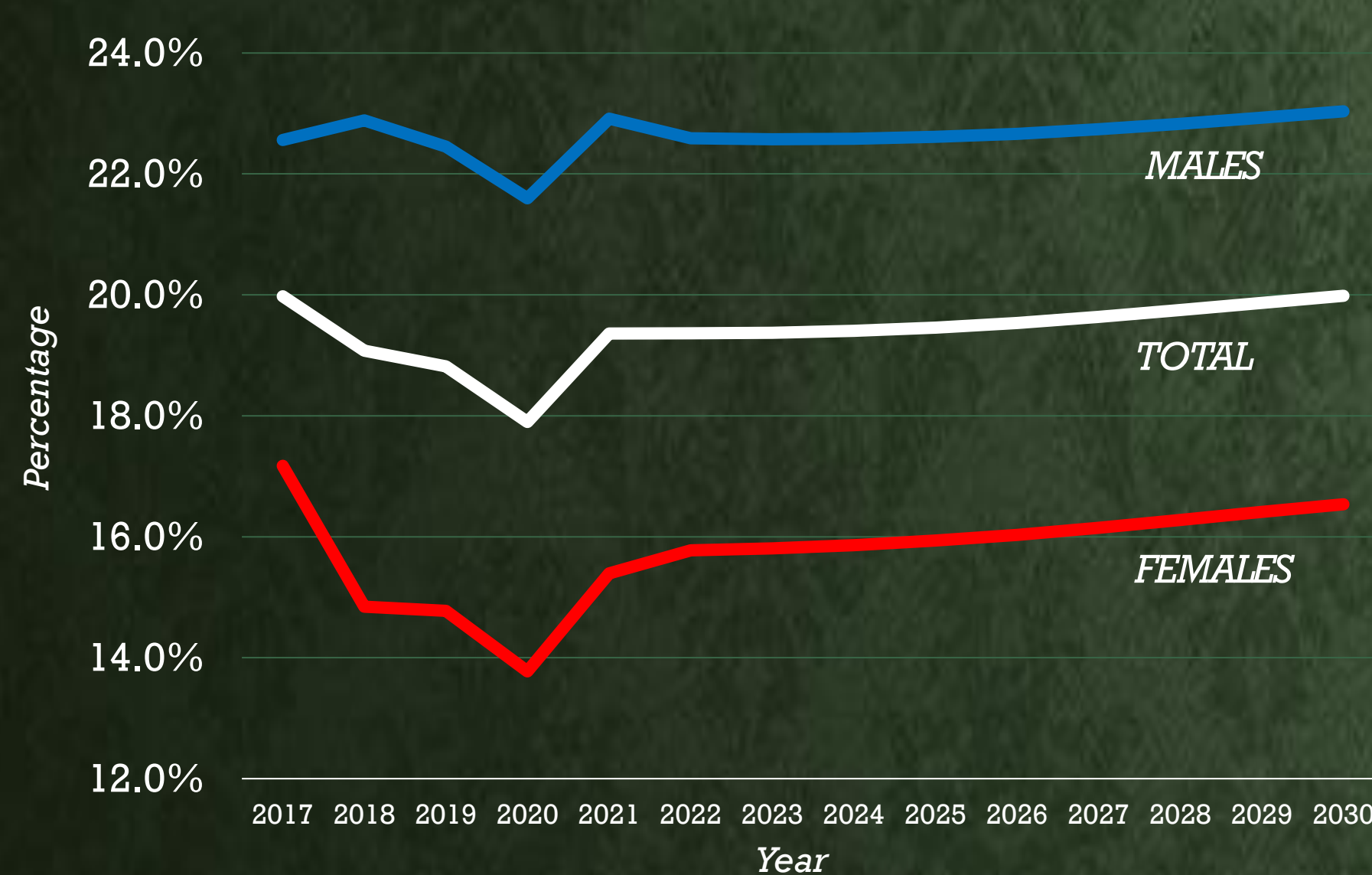
$${}_{40}q_{30} = 1 - \prod_{x=30}^{69} (1 - {}_5q_x)$$

The trend of probability of dying from NCDs was forecasted to 2030 using regression models.

RESULTS

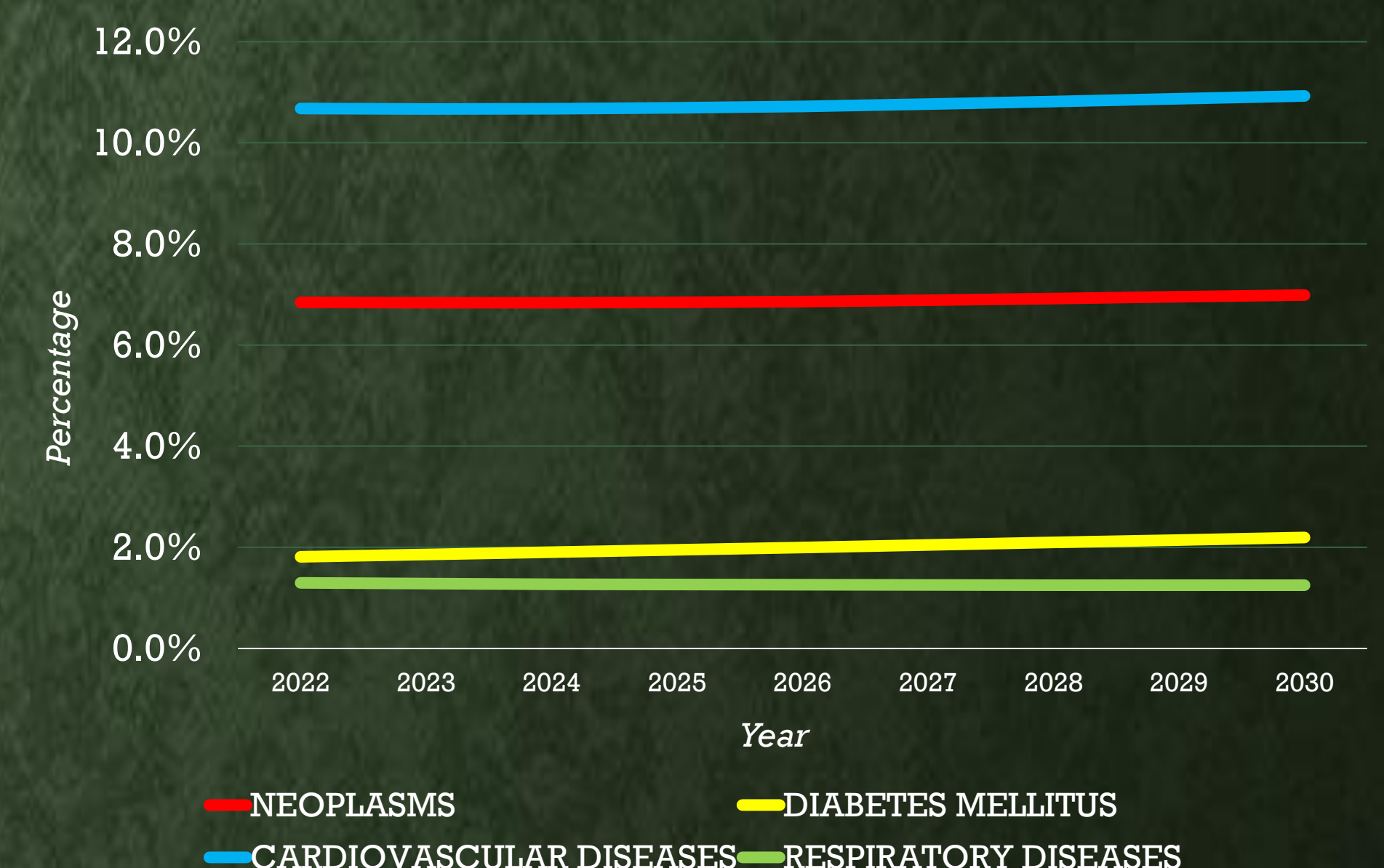
The probability of dying from NCDs was seen to have a decline from 2017 to 2019, from 20.0% to 18.8%, with a sharp drop due to the COVID-19 pandemic. The rates were seen to rebound to 19.4% in 2021. Despite the decline, the probability of dying from NCDs is expected to rise in the following years, to 19.4% in 2025, and 20.0% by 2030, driven by increases seen in cancer and diabetes deaths, as well as a high and sustained figures expected in cardiovascular deaths.

Probability of Dying from NCDs for total population, males and females from 2017 - 2030



	Total	Males	Females
2017	19.98%	22.56%	17.17%
2018	19.08%	22.88%	14.84%
2019	18.82%	22.45%	14.78%
2020	17.90%	21.60%	13.77%
2021	19.36%	22.91%	15.39%
2025	19.46%	22.61%	15.94%
2030	19.99%	23.03%	16.54%

Probability of Dying from NCDs by Disease Group, from 2017 - 2030



DISCUSSION

The probability of dying from NCDs between the age of 30 to 70 in Malaysia remains high, and expected to rise in the coming years. Malaysia reports a higher rate compared to our neighbors Thailand (13.7%) and Singapore (9.5%), but still lower compared to Indonesia (24.8%) and Philippines (24.5%).

The increased probability of dying from NCD among the younger age group highlights the urgent need to strengthen the health screening programs in Malaysia. Focus needs to be given to the working age group, through workplace interventions, to combat this rising problem. Action must be focused towards cost effective interventions³. Priority needs to be given to tobacco control, as well as salt reduction, promotion of health diet and physical activity, reduction of harmful consumption of alcohol as well as ensuring access to essential drugs and healthcare to reverse the trend of NCD mortality in Malaysia.

CONCLUSION

Even though there has been much work done locally as well as internationally to frame the challenges and solutions to combat NCD in Malaysia, but implementation processes and their applicability remain challenging⁴. NCD responses need to be adapted to local contexts, to maximize the benefit as well as ensure a healthy population and reduce the rising risk of mortality from NCD among the young and productive adults in Malaysia.

REFERENCE

1. NCD Alliance Briefing Paper: Tackling Non-Communicable Diseases to Enhance Sustainable Development https://ncdalliance.org/sites/default/files/NCD%20Alliance%20-%20NCDs%20and%20Sustainable%20Development%20Brief_0.pdf
2. World Health Organization. Non-Communicable Diseases. https://www.who.int/health-topics/noncommunicable-diseases#tab=tab_1
3. Beaglehole R, Bonita R, Horton R, Adams C, Alleyne G, Asaria P, Baugh V, Bekedam H, Billo N, Casswell S, Cecchini M. Priority actions for the non-communicable disease crisis. The lancet. 2011 Apr 23;377(9775):1438-47.
4. Heller O, Somerville C, Suggs LS, Lachat S, Piper J, Aya Pastrana N, Correia JC, Miranda JJ, Beran D. The process of prioritization of non-communicable diseases in the global health policy arena. Health policy and planning. 2019 Jun 1;34(5):370-83.