Deaths among people aged 30–70 from non-communicable diseases (premature mortality)

Key points

- In 2016, non-communicable diseases were the cause of 41 million deaths (21 million among men and 20 million among women), or 71% of global deaths, including 15 million premature deaths (people aged 30—70).

- The risk of dying prematurely–from any of the four major non-communicable diseases (cardiovascular disease, cancer; diabetes; and chronic obstructive pulmonary disease) between ages 30–70 was 21.6% for men and 15% for women. The risk has decreased by 5 percentage points for men and by more than 3 percentage points for women–since 2000.–The risk of dying prematurely due to non-communicable diseases varies by region, with the highest rate reported in Oceania (excluding Australia and New Zealand), where it is as high as 33% among men and 25% among women, and the lowest level of risk in Australia and New Zealand, where it is around 10% for men and 7% for women.

- Gender differences in the risk of premature death due to–non-communicable diseases–also vary by region, with the largest gender gap in Europe and Northern America, where men are almost twice as likely to die prematurely as women, and the smallest in sub-Saharan Africa, where men and women have equal chances of dying prematurely from–non-communicable diseases.

- While men are less likely to use health services due to stereotypical notions of masculinity and other factors,[1] women may exhibit different, so-called "atypical", symptoms for certain non-communicable diseases than men, and consequently may have a delayed diagnosis and treatment.

- The Coronavirus-19 (COVID-19) pandemic has severely disrupted the delivery of prevention and treatment services for non-communicable diseases in many countries surveyed, notably for: hypertension in 53% of countries; diabetes and diabetes-related complications in 49% of countries; cancer in 42% of countries; and cardiovascular emergencies in 31% of countries.

Background

Non-communicable diseases, also known as chronic diseases, which tend to be of long duration, are the result of a combination of genetic, physiological, environmental and behavioural factors.[2] The disease burden from non-communicable diseases among adults, who are in the most economically productive age span, is rapidly increasing in developing countries due to ageing and health transitions.[3]

In developed countries, premature deaths due to non- communicable diseases are frequently associated with occupational risks or individual behaviours, including excessive alcohol consumption, obesity, and smoking, which leads to higher rates of death from lung cancer.

The incidence of some non-communicable diseases, such as diabetes and hypertensive heart disease, can be prevented or greatly reduced through the adoption of a healthy lifestyle, while other conditions, particularly cancers, cannot easily be prevented. However, early detection and modern treatment can greatly reduce mortality for many forms of cancer. WHO estimates that about 30% to 50% of cancers can be prevented with lifestyle modifications, such as eliminating tobacco use, being physically active and reducing exposure to carcinogens in the environment.[4]

Non-communicable diseases–threaten progress towards the achievement of target 3.4 of the 2030 Agenda for Sustainable Development,[5] to reduce premature deaths from non-communicable diseases by one-third by 2030, as well as towards the overarching Goal of the 2030 Agenda, Goal 1, to end poverty in all its forms everywhere.

It is predicted that the rapid rise in–non-communicable diseases–will impede poverty reduction initiatives in developing countries (and even in some developed countries) owing to the associated high health-care costs, loss of employment and reduced income. With household savings drained to pay for often lengthy and expensive medical treatments, millions are forced into poverty annually.[6]

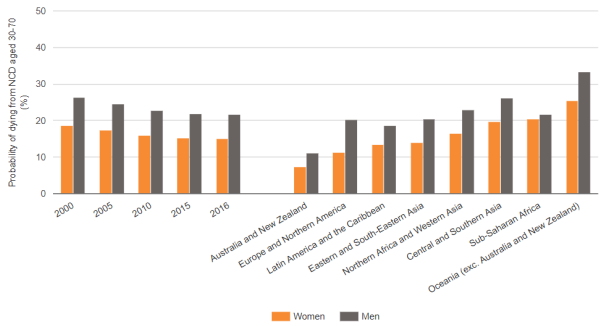
Current situation

In 2016, the probability of dying prematurely from any of the four major non-communicable diseases between ages 30–70 was 21.6% for men and 15% for women

In 2016, non-communicable diseases were the cause of 41 million deaths (21 million among men and 20 million among women), or 71% of global deaths,[7] including 15 million premature deaths (deaths between ages 30—70). Globally, the probability of dying prematurely from any of the four major–non-communicable diseases–(cardiovascular disease, cancer; diabetes; and chronic obstructive pulmonary disease) between ages 30–70 was 21.6% for men and 15% for women. Compared to 2000, those rates represented a significant reduction in the global death rate of 5 percentage points for men and–more than 3 percentage points for women, as well as a marginal decrease in the gender gap of 6.6 percentage points.

Progress in reducing premature deaths due to–non-communicable diseases–has slowed since 2010, partly due to a lack of success in addressing a number of risk factors. While tobacco use is steadily declining, obesity is on the rise, and global efforts to decrease alcohol consumption have stagnated and this harmful behaviour is increasing in some regions.[8]

Figure: Probability of dying from cardiovascular disease, cancer, diabetes or chronic respiratory disease between ages 30-70, by age: 2000-2016 (Percentage)



Source: World Health Organization (WHO), Global Health Estimates 2016 (https://www.who.int/healthinfo/global_burden_disease/en/).

Note: Regional values are for 2016: regions are presented in ascending order of mortality rates in women aged 30-70.

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The region with highest risk of premature death due to non-communicable diseases, both for women and men, was Oceania (excluding Australia and New Zealand), but the largest gender gap was recorded in Europe and Northern America

In 2016, the highest risk of premature death from non-communicable diseases was in countries in Oceania (excluding Australia and New Zealand), where this probability was 33% (one in three) among men and 25% (one in four) among women. The lowest risk was reported in Australia and New Zealand, where it was around 10% for men and 7% for women. The gender gap between women and men was least marked in sub-Saharan Africa, where the probability of premature death due was almost the same for both sexes (21% for men and 20% for women). The largest gender gap was in Europe and Northern America, where men were almost twice as likely as women to die between ages 30–70 from non-communicable diseases (20% for men and 11% for women) (see figure).

Multiple factors influence the risk of mortality from non-communicable diseases

Biological differences between men and women are contributing factors in variations in the mortality rates related to cancers of the reproductive organs (for example, cervical, breast, prostate and testicular cancers). Death rates may also be influenced by levels of access to diagnosis and treatment: cervical cancer rates are reported at higher rates in low-income countries with poor access to health services[9]–as well as by significant inequities in access to quality preventative services through primary health care.

Overall, premature mortality caused by non-communicable diseases continues to be disproportionately concentrated in the most socially disadvantaged countries, with fluctuations in premature mortality rates, in particular among women within and across regions–(see figure).[10]

In many countries, owing to stereotypical ideas about masculinity and other factors, men are less likely to use health services. Women, however, who tend to use health-care services to a greater degree, may exhibit different symptoms for some non-communicable diseases than men and may experience delayed diagnosis and treatment. For example, symptoms for coronary heart disease reported among women, including back pain, nausea or fatigue, may be considered "atypical", leading to underdiagnosis and undertreatment.[11]

For many non-communicable diseases, death rates are driven by exposure to major modifiable risk factors, including: tobacco use; the harmful use of alcohol; unhealthy diet; and physical inactivity, which increases the risk of obesity. All of these risky behaviours vary by sex, with men generally adopting unhealthier lifestyles and taking greater risks than women.

In a health emergency such as the COVID-19 pandemic, patients with pre-existing conditions such as hypertension and diabetes, have become more vulnerable and at higher risk of dying, not only because they are more susceptible to the virus, but because of the prioritization of medical resources directed towards caring for patients with the disease.

In a rapid assessment survey of service delivery for non-communicable diseases conducted by WHO in 2020, results confirmed that the prevention and treatment services have been severely disrupted by the pandemic.[12] More than half (53%) of the countries surveyed have partially or completely disrupted services for hypertension treatment; 49% for treatment for diabetes and diabetes-related complications; 42% for cancer treatment; and 31% for cardiovascular emergencies.[13]

Since people with underlying health conditions, in particular the four major non-communicable diseases, are at higher risk of contracting COVID-19, it is critical that efforts to address the burden of these diseases in the global community be reinforced[14] and that these efforts are gender and culturally sensitive and targeted to at risk populations.

About the data

Definitions

- Premature mortality: Probability of people aged 30–70 dying from the following four non-communicable diseases: cardiovascular disease; cancer; diabetes; or chronic respiratory disease. Measuring the risk of dying from these four major causes is important in the assessment of the extent of the socioeconomic burden from premature mortality–due**–to non-communicable diseases in a population.**

Coverage

- Women and men aged 30-70.

Availability

- Around 70 countries have consistent high-quality data and 40 countries have data of lower quality. All countries are classified according to regional groupings under the Sustainable Development Goals (SDGs) indicators framework.[15] The World Health Organization (WHO) calculates estimates for all WHO member States with a population over 90,000 (184 countries).

Footnotes

1. World Health Organization (WHO), The men's health gap: men must be included in the global health equity agenda, WHO online bulletin, March 2014.

2. WHO, Non-communicable diseases fact sheet, June 2018.

3. WHO, Global Health Observatory, "Probability of dying between age 30 and exact age 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease", World Health Data Platform.

4. WHO, Cancer prevention.

5. General Assembly resolution 70/1, "Transforming our World: The 2030 Agenda for Sustainable Development", adopted 25 September 2015.

6. WHO, Non-communicable diseases fact sheet, 1 June 2018.

7. WHO, Disease burden and mortality estimates, 2000–2016, Geneva, 2018.

8. WHO, World Health Statistics 2020: Monitoring Health for the SDGs, Geneva, 2020.

9. Denny, L., de Sanjose, S., Mutebi, M., Anderson, B.O., Kim, J., Jeronimo, J. et al., "Interventions to close the divide for women with breast and cervical cancer between low-income and middle-income countries and high-income countries", Lancet, February 2017.

10. WHO, World Health Statistics 2020: Monitoring Health for the SDGs, Geneva, 2020.

11. Mehta, L.S., Beckie, T.M., DeVon, H.A., Grines, C.L., Krumholz, H.M., Johnson, M.N. et al., "Acute myocardial infarction in women: a scientific statement from the American Heart Association", Circulation, March 2016.

12. WHO, The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment, Geneva, 2020.

13. WHO, "COVID-19 significantly impacts health services for noncommunicable diseases", press release, 1 June 2020.

14. WHO, World Health Statistics 2020: Monitoring Health for the SDGs, Geneva, 2020.

15. Regional groupings under the Sustainable Development Goals (SDGs) indicators framework.