

Country data and graphics illustrating risk by nation available. See notes to editors section

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Most nations falling short of UN targets to cut premature deaths from chronic diseases

People in the UK, US and China have a higher risk of dying early from conditions like cancer, heart disease and stroke than people in Italy, France, South Korea and Australia.

These are the findings of the most detailed global analysis of deaths from so-called non-communicable disease (NCDs) – chronic conditions including cancer, cardiovascular disease, chronic respiratory disease, and diabetes.

The research, led by Imperial College London, World Health Organization and NCD Alliance, reveals that a 30-year-old woman in the UK has a 9 per cent chance of dying from four key NCDs – cancer, cardiovascular disease (which includes heart disease and stroke), chronic respiratory disease and diabetes – before her 70th birthday, compared to a 12 per cent chance for a woman living in the US, and 6 per cent for a woman living in Japan. Meanwhile a 30-year-old man living in the UK has a 13 per cent chance of dying from an NCD before age 70, compared to 11 per cent for a man living in Switzerland, and 18 per cent for a man living in the US.

The analysis, published today in *The Lancet*, also revealed the majority of the world's nations – including the UK, US and China – look likely to fall short of the United Nations (UN) target for reducing the number of premature deaths from NCDs.

Professor Majid Ezzati, from Imperial's School of Public Health, who led the study, said: "Non-communicable diseases are the main cause of premature death for most countries. Poverty, uncontrolled marketing of alcohol and tobacco by multinational industries, and weak health care systems are making chronic diseases a larger danger to human health than traditional foes such as bacteria and viruses."

Too many people dying too soon

Non-communicable diseases kill nearly 41 million people a year, making up seven out of ten deaths globally, 17 million of these deaths are classed as premature (i.e. before the age of 70).

The new research is published ahead of a key UN meeting on NCDs next week. In 2015, the UN set the goal of a one-third reduction in premature deaths (between the ages of 30 and 70 years) from four key NCDs – cancer, cardiovascular disease, chronic respiratory disease, and diabetes – by the year 2030.

The group behind this research, who are collectively known as NCD Countdown 2030, warn that their findings suggest the UN target will be missed in all but 35 nations for women and 30 nations for men.

The study also reveals men and women in most countries around the world have a higher risk of dying prematurely from NCDs than from infectious diseases such as malaria or HIV.

US, UK and China falling short

The researchers analysed data on deaths from NCDs for more than 180 nations. Their findings revealed the lowest risks of dying early from NCDs were seen in high income countries, especially in South Korea, Japan, Switzerland and Australia.

But other high-income countries are lagging behind the leaders, including the UK (which ranks 17th for men, 27th for women), the US (53rd for men, 44th for women) and China (80th for men, 76th for women).

Overall, women in South Korea, Japan, Spain and Switzerland were least likely to die prematurely from the four key NCDs. The countries with the lowest risk for men were Iceland, Switzerland, Sweden and Norway.

In contrast, men in central Asia (Mongolia, Kazakhstan) and eastern Europe (Russia, Belarus) were among the most likely to die from the four key NCDs before the age of 70. For women, parts of sub-Saharan Africa (Sierra Leone, Côte d'Ivoire), Guyana, Afghanistan, Yemen and Papua New Guinea were among those with the greatest risk of premature death from the four key NCDs.

The study reveals that only 35 countries are on track to meet the UN target for women and only 30 countries for men.

Some of those countries on track to meet the UN target for both men and women include Denmark, New Zealand, Norway and South Korea, as well as Brazil, Iran and some of the high-risk eastern European countries. By comparison, the UK, Australia, France, Germany, India and China will fail to hit the target for both sexes.

The authors say if NCD deaths decline slightly faster in a further 50 countries (for women) and 35 countries (for men), they too would achieve the target.

According to the analysis, the situation is deteriorating or stagnating in 15 countries for women, including the US, and 24 for men.

Katie Dain, from the NCD Alliance, said: "We are sleepwalking into a sick future because of severely inadequate progress on non-communicable diseases. Post the UN High Level Meeting, NCD Countdown 2030 will assist in holding governments and donors accountable and help to ensure that the opportunity before us next week to renew, reinforce, and enhance commitments to reducing the burden of NCDs, translates the rhetoric into reality."

Solutions to help countries reduce deaths

Professor Ezzati explained: "While much of the world is falling short of the UN target to alleviate the burden of chronic diseases, dozens of countries could meet this goal with modest acceleration of already-favourable trends. This requires national governments and international donors to invest in the right set of policies."

Professor Ezzati added: "Treatment of hypertension and controlling tobacco and alcohol use alone can prevent millions of deaths from cancer, heart disease, stroke and other NCDs. But there is also a need for affordable high-quality care to diagnose and treat chronic diseases as early as possible."

The team points out the findings are limited by the available data, citing major gaps in the completeness and accuracy of data in some countries. They explain that improving death registration in countries could improve accuracy.

James Bennett, the lead author of the study from the School of Public Health, said: "It's important that international aid agencies and governments are held to account for their commitments to global targets for health. Improving the quality of health data from countries will help us identify which countries are performing best in reducing deaths from chronic diseases, as well as those that need additional help."

Regional summaries (data from 2016)

World

For women, the highest levels of premature mortality from four key NCDs – cancer, cardiovascular disease, respiratory disease and diabetes – were seen in some African countries such as Sierra Leone and Cote d'Ivoire. In these countries, 30-year-old women had a one in three chance of dying from these diseases before their 70th birthday.

The lowest risks of premature death in women were in South Korea and Japan, at 5 to 6 per cent chance.

For men, the highest levels of premature death from the four key NCDs were seen in central Asia, Eastern Europe and some Pacific Islands, for example in Mongolia, Kazakhstan, Russia, and Fiji. In these countries, 30-year-old men had a more than a one in three chance of dying from these four diseases before their 70th birthday.

The lowest levels were in Iceland, Switzerland, Sweden and Norway, where men had a 10 to 11 per cent chance.

The UK

30-year-old women in the UK had a 9 per cent chance of dying from four key NCDs before their 70th birthday, placing them at 27th lowest risk in the world and 19th lowest among 40 countries in Europe.

30-year-old men in the UK had a 13 per cent chance of dying from four key NCDs before their 70th birthday, placing them at 17th lowest risk in the world and 9th lowest in Europe.

The chance of dying from the four key NCDs declined in the UK at the 74th fastest rate in the world for women, and the 27th fastest in Europe (relative to the starting level in 2015).

For men, the rate of decline in the UK was 45th in the world and 25th in Europe.

For European women, the highest levels of premature mortality from four key NCDs were seen in Moldova and Ukraine (17 per cent and 16 per cent). The lowest levels were in Spain and Switzerland, with risk of 6 per cent and 7 per cent.

For European men, the highest levels of premature mortality from four key NCDs were seen in Russia and Belarus (37 per cent and 35 per cent). The lowest levels were in Iceland and Switzerland, with risk of 10 per cent and 11 per cent.

The US

30-year-old women in the US had a 12 per cent chance of dying from four key NCDs before their 70th birthday, placing them at 44th lowest risk in the world but the highest among all high-income nations, and worse than Vietnam, Turkey and Panama. There has been a small increase in risk of death from these diseases among American women since 2010.

30-year-old men in the US had a 18 per cent chance of dying from four key NCDs before their 70th birthday, placing them at 53rd lowest risk in the world but the highest among all high-income nation, and worse than Liberia, Mexico and Angola. There has been virtually no change in the risk of death from these diseases among American men.

Nations ranked by probability of dying from the four key NCDs – cancer, cardiovascular disease, respiratory disease and diabetes – between 30 and 70 years in 2016 for MEN (percentages to 1 decimal place):

Men

BEST	COUNTRY	Probability of dying between 30 and 70 years of age (%)
1	Iceland	9.9
2	Switzerland	10.6
3	Sweden	10.7
4	Norway	10.7
5	Bahrain	10.9
6	South Korea	10.9
7	Australia	11.0
8	Japan	11.2
9	Canada	11.5
10	New Zealand	11.6
13	Ireland	11.9
17	United Kingdom	12.9
53	United States of America	17.5
80	China	19.8

Men

WORST	COUNTRY	Probability of dying between 30 and 70 years of age (%)
1	Mongolia	38.8
2	Fiji	36.8
3	Kazakhstan	36.8
4	Turkmenistan	36.7
5	Russian Federation	36.5
6	Belarus	35.2
7	Ukraine	35.1
8	Georgia	34.9
9	Kiribati	34.4
10	North Korea	34.4

Nations ranked by probability of dying from the four key NCDs between 30 and 70 years in 2016 for WOMEN (percentages to 1 decimal place)

Women

BEST	COUNTRY	Probability of dying between 30 and 70 years of age (%)
1	South Korea	4.7
2	Japan	5.7
3	Spain	6.4
4	Switzerland	6.6
5	Singapore	6.9
6	Portugal	7.0
7	Italy	7.2
8	Australia	7.2
9	Finland	7.2
10	France	7.2
23	Ireland	8.7
27	United Kingdom	9.0
44	United States of America	11.8
76	China	14.1

Women

WORST COUNTRY	Probability of dying between 30 and 70 years of age (%)
1	Sierra Leone 32.6
2	Cote d'Ivoire 30.1
3	Guyana 28.8
4	Yemen 28.2
5	Afghanistan 27.7
6	Papua New Guinea 26.6
7	Mali 26.2
8	Lesotho 25.2
9	Haiti 25.0
10	Lao PDR 24.9

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1. 'NCD Countdown 2030: worldwide trends in non-communicable disease mortality and progress towards Sustainable Development Goal target 3.4' by NCD Countdown 2030 Collaborators is published in The Lancet.
2. Data visualisations, including maps and country-specific rankings, are available at: Under embargo: <http://ncdcountdown.org/TEMP-NCD2030/>
The website for visualisations after the embargo is lifted will be: <http://ncdcountdown.org/>
3. The UN Sustainable Development Goal Target 3.4 is to "by 2030 reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and wellbeing". The indicator used to track progress is the probability (i.e. risk) of dying between ages 30 and 70 from cardiovascular disease, cancer, diabetes, or chronic respiratory disease. Full details can be found online - <http://indicators.report/targets/3-4/>
4. Researchers used data on deaths from NCDs from the World Health Organization (WHO) Global Health Estimates 2016 - http://www.who.int/healthinfo/global_burden_disease/en/
5. Imperial College London is one of the world's leading universities. The College's 17,000 students and 8,000 staff are expanding the frontiers of knowledge in science, medicine, engineering and business, and translating their discoveries into benefits for our society. Founded in 1907, Imperial builds on a distinguished past – having pioneered penicillin, holography and fibre optics – to shape the future. Imperial researchers work across disciplines to improve health and wellbeing, understand the natural world, engineer novel solutions and lead the data revolution. This blend of academic

excellence and its real-world application feeds into Imperial's exceptional learning environment, where students participate in research to push the limits of their degrees.

Imperial is the UK's most international university, according to Times Higher Education, with academic ties to more than 150 countries. Reuters named the College as the UK's most innovative university because of its exceptional entrepreneurial culture and ties to industry.

www.imperial.ac.uk

6. About NCD Alliance: The NCD Alliance is a unique civil society network, uniting 2,000 organisations in more than 170 countries, dedicated to improving NCD prevention and control worldwide. Together with strategic partners including the World Health Organization, the United Nations, and governments, NCDA works on a global, regional and national level to bring a united civil society voice to the global campaign on NCDs.