

UN targets top killers

International summit considers how to stem the rise in non-communicable diseases.

BY DECLAN BUTLER

When heads of state and health ministers gather in New York next week for the first United Nations (UN) high-level summit on non-communicable disease (NCD), they will be presented with some jaw-dropping statistics. According to UN reports released before the meeting, NCDs such as cardiovascular disease and cancer killed 36 million people in 2008, accounting for 63% of all deaths. Although NCDs are often mistakenly thought of as diseases of affluence, more than 80% of the NCD deaths occurred in low- and middle-income countries (see 'Total deaths'). By 2030, says the UN, the global annual toll of NCD will rise to 52 million deaths.

Total death statistics also suggest that apart from in the poorest countries in Africa, NCDs kill many more people than communicable diseases such as AIDS, malaria, tuberculosis or meningitis. This has led a growing number of health campaigners to demand global action on what they describe as an 'epidemic' of NCD. The summit has been promoted in particular by the NCD Alliance, an advocacy group launched in 2009 by four disease federations, including the World Heart Foundation in Geneva. The alliance campaigns for increasing support for research into NCD, strengthening health systems and reducing tobacco use, salt intake and other NCD risk factors.

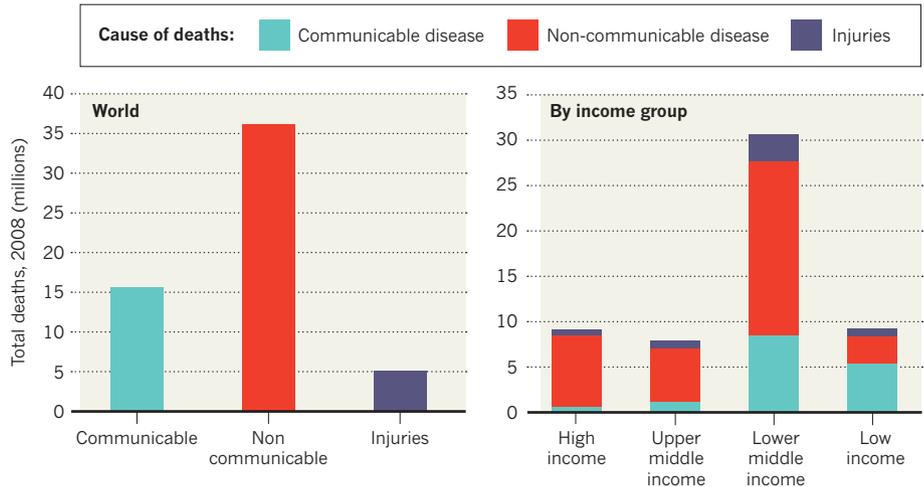
Ann Keeling, chair of the alliance and chief executive of the International Diabetes Federation in Brussels, says that whatever the outcome of the summit, the effort is "already a success" because it has put NCD high on the international political agenda.

But claims of an NCD epidemic could be missing a big part of the global picture. The predicted increases in total deaths are very real, but are not down to any sudden new disease risk, says Colin Mathers, coordinator of mortality and disease-burden statistics at the World Health Organization in Geneva. Almost all the extra deaths will stem from a current bulge in the number of young people in poorer countries, who will grow more susceptible to NCDs as they age. "It is not that the risk of disease for a given age is rising, but that there are more people," says Mathers.

And alarm over NCD can obscure the fact that infectious diseases still account for more years of life lost in many of the lower and middle-income countries,

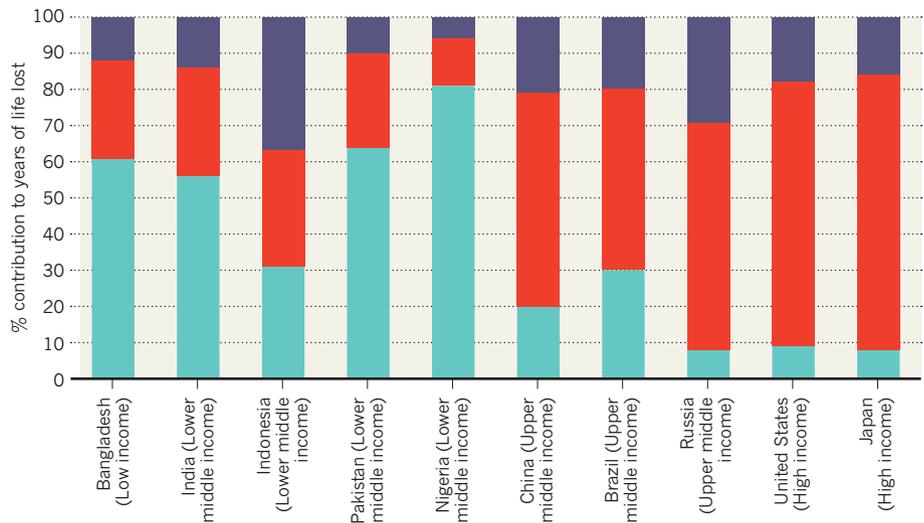
TOTAL DEATHS

Non-communicable disease (NCD) surpassed communicable disease as the greatest cause of all deaths in 2008, in all income groups except low-income countries. Middle-income countries have made progress against communicable disease in recent years, but a population bulge of young people, as well as increasing longevity, mean that more people have been exposed to NCD.



YEARS OF LIFE LOST

When mortality data are viewed in terms of 'years of life lost' rather than total deaths, the effect of NCD in lower-income countries becomes far less pronounced, with communicable diseases becoming more important. This chart shows the ten most-populous countries in 2004, accounting for about two-thirds of the world population.



because they often strike younger adults and children (see 'Years of life lost').

A lesser factor contributing to the rise in NCD deaths is that life expectancy in most low- and middle-income countries has risen spectacularly in recent decades, catching up with, and sometimes surpassing, those of higher income countries (see go.nature.com/idsgd1).

The probability of someone aged 15 dying before they are 60 — the '45q15' indicator — has likewise plummeted globally (see

'Premature death'). As a result, many more people are living long enough to develop NCD. Indeed, many indicators overlook the fact that global health is actually improving overall. Many Latin American countries that only a few decades ago were clawing their way out of poverty now have levels of health approaching those of Europe just 20 years ago, for example.

The exact trajectory that NCD will take in poorer countries over the next few decades is still an "open question", says Mathers. As

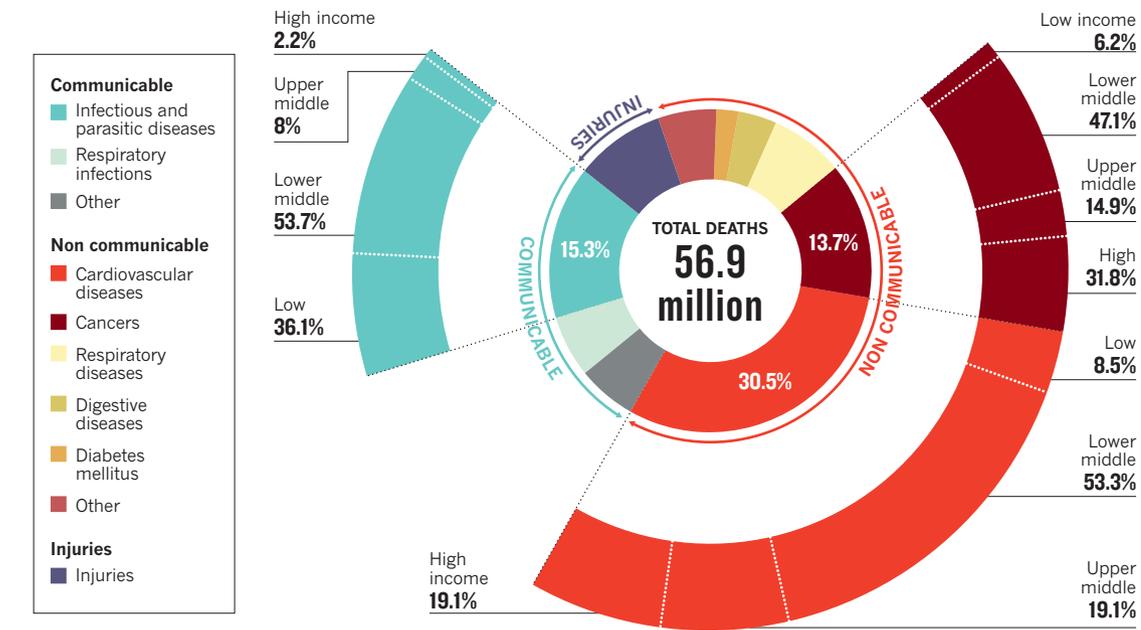
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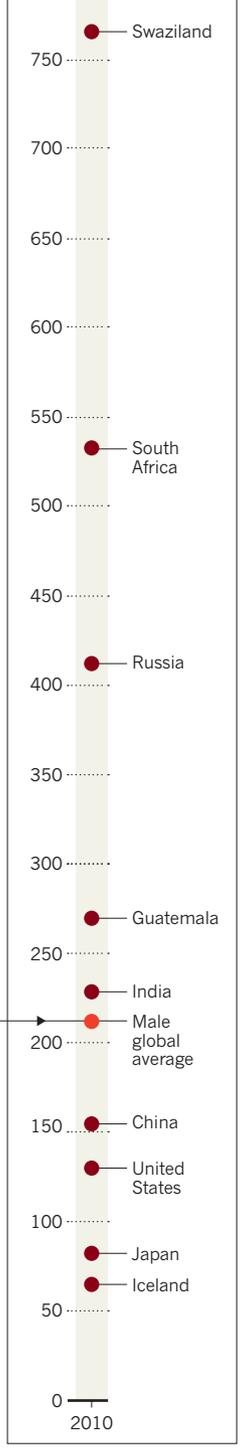
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DEATHS BY CAUSE

Cardiovascular diseases are the world's biggest killer, taking more than 17 million lives in 2008. As with cancer and infectious disease, lower-middle-income countries account for about half of the toll. But the remaining deaths from NCD are mostly in upper-middle- and high-income countries where treatments and preventative measures are already relatively well developed. By contrast, low-income countries — with the most room for health improvement — account for more than one-third of the toll for infectious diseases.

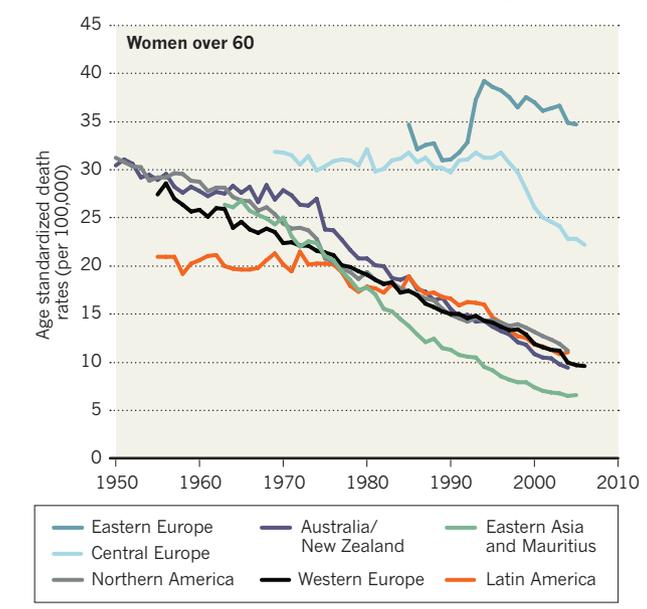


Male adult mortality risk (selected countries, 2010)



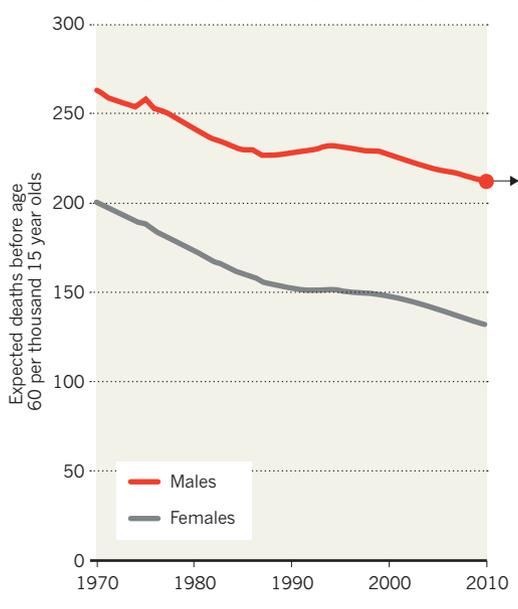
DECLINING CARDIOVASCULAR DEATH RATES

Many countries are successfully tackling NCD, with sharp falls in rates of cardiovascular disease, for example. Eastern Europe remains an outlier, with rapid growth in NCD following the collapse of the Soviet Union. Diabetes and women's lung cancer rates are also increasing globally.



PREMATURE DEATH

The risk of adult mortality can be estimated using the '45q15' indicator — the proportion of 15 year-olds in any year who will die before reaching the age of 60. Despite large differences internationally (right), the global average is declining rapidly.



poorer countries grow wealthier, their health systems are likely to improve and drive down disease levels, for example. Per capita levels of many NCDs, including cardiovascular disease, have in fact fallen in most countries over the past few decades (see 'Declining cardiovascular death rates'). The most conspicuous exceptions are diabetes — on the rise because of increased obesity levels — and lung cancers in women, as a result of more women smoking. The global trend in the rate of NCD

mortality, as opposed to absolute numbers of fatalities, is "down rather than up, especially in places where it is prioritized", concedes Johanna Ralston, chief executive of the World Heart Federation. "Where it is not yet on the agenda, it doesn't get prioritized, which is why [the UN summit] is so important." The case for action in poorer countries is compelling, she adds. The rate of increase of total NCD deaths in poorer countries is faster than in the past, potentially overwhelming

underdeveloped health systems, she says. Indeed, the outlook for poorer countries that have dysfunctional health-care systems, or that fail to tackle disease risk factors, could be bleak, says Mathers. In West Africa, for example, high blood pressure is common yet often goes untreated, even though cheap drugs are available. "There are enormous amounts of NCD in low-income countries that are preventable, but which aren't being prevented because of failed health systems," he says. ■ SEE EDITORIAL P.250