

OPINION

Halving premature death

Death in old age is inevitable, but death before old age is not. Except where HIV or political disturbances predominated, mortality rates have been decreasing for decades, helped by sanitation, health care, and social changes. Even in low-income countries, at current death rates, three-quarters of newborn infants would survive to age 50, and half would survive to age 70. If disease control keeps progressing and economic development proceeds, then within the next few decades—except where disasters or new epidemics supervene—under-50 mortality should fall to less than half of today's 15% global risk, and under-70 mortality should be less than one in six.

World under-5 mortality decreased from 14% of all live births in 1970 to 5% in 2010. It could reach 2% by 2030, with continued attention to female education, perinatal care, vaccination, adequate nutrition, curative treatment, and other key child survival determinants. World under-50 mortality halved from 28% in 1970 to 15% in 2010 (5% under-5 plus 10% later), but varies 10-fold between countries, with further inequalities within countries. Its main causes, apart from maternal and perinatal mortality, include communicable diseases, undernutrition, and fatal injuries (suicide, homicide, and, particularly, accidents). They also include alcohol, a major cause of injuries, and tobacco.

Noncommunicable diseases (NCDs), such as cancer, stroke, heart disease, and emphysema, cause a quarter of all deaths before age 50, plus four-fifths of those at ages 50 to 69. The most important external factor is smoking, which still causes about a quarter of all cancer deaths in the European Union and a third of all cancer deaths in the United States, plus comparable numbers of deaths from other diseases. Smoking also causes many deaths in China, India, Russia, and worldwide (totaling about 5 million deaths a year, and rising). Fortunately, quitting works; smokers who stop before age 40 (and preferably well before 40) avoid over 90% of the risk. Each year, governments make US\$300 billion directly or indirectly

from tobacco, so at constant prices, a one-third reduction would lose governments \$100 billion. But if tax increases double the current prices and thereby reduce smoking by one-third, this would save just as many lives and gain governments \$100 billion a year.

The World Health Organization's recent resolution on NCDs calls for reducing smoking by a third by 2025, decreasing hazardous alcohol drinking, and halting the increase in obesity. It also supports the wide use of generic drugs such as statins and antihypertensives to prevent NCD recurrence.

If 2010 mortality rates continue unchanged (which they will not, as death rates are already falling), then in 2030 there would be about 20 million deaths before age 50, and 20 million more at ages 50 to 69. For many countries, halving their 2010 under-50 mortality rate by 2030 would be a feasible target; worldwide, it would avoid 10 million of the 20 million deaths projected above for 2030. Adoption of this target would reinforce current successful efforts to reduce maternal and child mortality and death from HIV, tuberculosis, malaria, and other communicable diseases, but would also require serious and successful efforts to substantially reduce accidents and NCD mortality.

Changes in mortality at ages 50 to 69 are dominated by NCD mortality, where some important control measures may take decades to have their full effects.

Although reductions of about one-quarter or one-third could well be seen by 2030, halving global mortality in this age range will take longer. But even if the ultimate goal is to substantially reduce under-70 mortality, halving under-50 mortality would be a more immediate target and could be achieved worldwide by 2030 (or in the 2030s). With additional gains in later middle age, some 40% of all premature deaths would be avoided.

Public health and medicine do not offer eternal life, but do offer a more comfortable life and an increasingly good chance of avoiding premature death. Still, however, almost all of us will die before 100.

— Richard Peto, Alan D. Lopez, and Ole F. Norheim

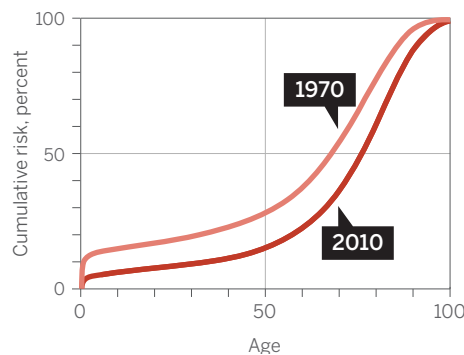
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World mortality, 1970 and 2010

Decreasing risk of premature death



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