

Copenhagen Consensus: Ideas for reducing cancer and heart disease

By Bjørn Lomborg | Posted Monday, April 30, 2012, at 2:42 PM ET
| Posted Monday, April 30, 2012, at 2:42 PM ET

Slate.com

The High Cost of Heart Disease and Cancer

Malaria, AIDS, and tuberculosis get all the attention in the developing world. But chronic diseases kill more people.



Anita Saores, 17, is in the advanced stages of bone cancer on her right knee at the Bairo Pite Clinic in Dili, East Timor. Infectious diseases get more attention in the developing world, but chronic diseases kill more people.

Paula Bronstein/Getty Images.

In this series, Bjorn Lomborg explores the smartest investments to respond to global challenges such as hunger, chronic and infectious disease, sanitation, climate

change, and global conflict. See the other articles here. And find out which investments are currently at the top of the Slate readers' priority list. Have your say by voting at the poll at the end of each article.

Chronic diseases such as heart disease, stroke, and cancer are problems that we associate with rich countries, while infectious diseases such as malaria and HIV/AIDS are more commonly seen as the problems afflicting the poor. But 80 percent of global deaths from chronic diseases occur in low-income and middle-income countries. Cardiovascular disease in low- and middle-income countries killed more than twice as many people in 2001 as did AIDS, malaria, and TB combined.

Yet, according to a recent review of donor health funding, chronic disease receives the smallest amount of donor assistance of all health conditions, having lost ground since 1990 relative to infectious diseases. Donor assistance for health was estimated at almost \$26 billion in 2009. The amount allocated to chronic disease was \$270 million, or a miniscule 1 percent of the total.

In Copenhagen Consensus 2012, specialist academics produce new research on the smartest responses to global challenges, and then Nobel laureate economists prioritize the best policies. In a research paper released today on chronic disease, Prabhat Jha and a team of researchers argue that chronic diseases already pose a substantial economic burden, and this burden will evolve into a staggering one over the next two decades.

Although high-income countries currently bear the biggest economic burden of chronic diseases, developing countries (especially those that are middle-income) will assume an increasing share as their populations grow and the effects of the tobacco epidemic take greater hold.

And the costs for governments of achieving maximal adult survival are rising, in contrast to declines in the costs of achieving child survival. This divergence is chiefly a consequence of the lack of tobacco control in most low and

middle-income countries (while smoking rates are declining in many developed countries, they are on the rise in the developing world), the lack of sustained investments in new drugs, and gaps in the strategies and in the program implementation for chronic diseases.

Jha and his team argue that addressing chronic disease in poor countries requires a rethinking of developmental assistance and possibly new delivery approaches.

They identify five key priority interventions where the costs are relatively low compared to the benefits.

The most important action is tobacco taxation. Estimating conservatively that tobacco causes about one-third of the vascular disease, half of all cancers and 60 percent of chronic respiratory diseases, the researchers estimate a total economic loss from tobacco of about \$12.7 trillion over the next 20 years—or about 1.3 of global GDP annually. Already, tobacco kills up to 6 million people a year, including about 1 million each in China and India. Without increased cessation efforts, tobacco use could account for about 10 million deaths per year by 2030, with most of these occurring in low- and middle-income countries. With no change to current patterns, 1 billion tobacco deaths might occur this century, in contrast to 100 million in the 20th century.

Reducing tobacco deaths in the next few decades requires current smokers to quit, and tobacco taxation is particularly effective at raising cessation rates: a 10 percent increase in price leads to a 4 percent to 8 percent drop in consumption. France, for example, tripled the price of cigarettes quickly (over a decade or so), and this cut consumption per adult in half, while more than doubling tax revenue in real terms. Lung cancer rates for young men in France have fallen sharply since. Tax hikes need not cost anything except the political will to overcome vested interests. Generously estimating a comprehensive tobacco control program including a tobacco tax rise to cost \$500 million annually, such a program would avert more than 1 million deaths each year. Put into economic terms, the benefits would be 40 times higher than the costs.

The second initiative is using low-cost drugs to avert heart attacks. Jha argues that systemwide efforts to achieve high rates of appropriate drug use administered within hours of an acute heart attack should be a high priority. Up to 300,000 heart-attack deaths could be prevented each year at the cost of \$200 million. Jha calculates that, in economic terms, each dollar spent would generate \$25 of benefits.

Another approach to the same problem is to create a “generic risk pill.” In the absence of any drug therapy, adults with previous stroke, heart attack, diabetes, or any other evidence of some serious vascular disease have about a 7 percent annual risk of either dying or being rehospitalized with a recurrence. If they take an aspirin a day, that risk drops to 5 percent; if they add two more drugs to reduce blood pressure and blood lipids, it drops to 2 percent. The exact sequence of drugs matters little, but being on three or four drugs (aspirin, a blood pressure pill or two, and a statin drug to lower cholesterol) daily versus being on no drugs means a greatly reduced 10-year risk of rehospitalization: 16 percent for those receiving treatment as compared with 50 percent for those on no drugs. All of these drugs are low-cost and thus could be easily packaged into “polypills” or generic risk pills for widespread use, similar to the way many countries treat tuberculosis with several drugs.

This “generic risk pill” would prevent 1.6 million deaths annually. If the cost per adult patient per year were \$100, the total cost would then be \$32 billion per year. The higher cost is reflected in a lower “benefit-cost ratio”: Each dollar spent on this initiative would see about \$4 worth of benefits. Still, this remains an attractive investment.

Next, Jha proposes efforts to reduce salt consumption, which is a significant cause of heart diseases and strokes. This can be done in food processing or at the cooking or eating stages. The former approach is being tried in Latin America where Brazil, Argentina, and Chile are among the countries with industry agreements to reduce salt in processing.

Experience in the United States and other developed countries suggest that substantial reduction from current levels is feasible with only some consumer resistance. Argentina and South Africa are focusing on salt reduction in bread. The main limitation in salt reduction strategies is the unproven impact on changing behavior when salt is mostly added at the table as a condiment. The researchers propose a population-level intervention to reduce salt intake

through voluntary manufacturing changes, behavior change using mass media and other awareness raising campaigns. An annual expenditure of \$1 billion would save more than 1.3 million lives a year from heart disease and strokes, meaning that the benefits are 20 times higher than the costs.

Finally, Hepatitis B is a viral infection that attacks the liver and is the major cause of liver cancer worldwide. Yet the Hepatitis B vaccine can prevent 90 percent of liver cancer deaths, and the Hepatitis B vaccine is safe and very effective when given at birth or in early childhood. The vaccine could cost as little as \$3.60 per child vaccinated. Spending \$122 million to increase vaccine coverage by 25 percent would avert about 150,000 annual deaths from the disease, 40 years into the future. Each dollar spent generates \$10 of benefits.

There is a strong argument to increase spending on chronic disease. The burden on poor countries is already high, and will grow considerably. But what priority should these initiatives be given by policymakers and philanthropists? How could limited money best be spent to combat global challenges? Have your say by voting below.

Tomorrow, we look at infectious disease funding. We have seen major breakthroughs in the battles against killer diseases such as malaria and HIV/AIDS. But how can we ramp up our efforts to save more lives?

In this series, Bjorn Lomborg explores the smartest investments to respond to global challenges such as hunger, chronic and infectious disease, sanitation, climate change, and global conflict. See the other articles here. And find out which investments are currently at the top of the Slate readers' priority list. Have your say by voting at the poll at the end of each article.

X



MySlate is a new tool that you track your favorite parts Slate. You can follow authors and sections, track comment threads you're interested in, and more.