Weapons of mass salvation: Canada's role in improving the health of the global poor

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Poverty, poor health and global insecurity are interrelated. Inadequate nutrition, poor sanitation and crowded living conditions combine with a lack of access to care to make the world's poor particularly susceptible to disease.[1] HIV/AIDS is on its way to killing several hundred million people in Africa, China, India and elsewhere. Of the annual toll of 5 million babies who die in the first month of life, 98% live in poor countries. Tuberculosis kills 1.5 million people per year, and malaria another million. Based on current trends, tobacco-related disease could account for a billion deaths from now until the end of the 21st century. Even in poor countries, ill health falls most heavily on the poorest: in India, the prevalence rates of tuberculosis, childhood mortality and tobacco use are 3 times higher in the lowest-income groups than in the highest.[2]

While poverty increases susceptibility to disease, illness in turn contributes to poverty. Arguably, one of the most effective instruments in the fight against global poverty is the control of major diseases.[3,4] Disease control, obviously, contributes to better health,[1,3,5] but it also enables individuals to earn more income and is a powerful enabler of education, which also raises income. Improving health status helps the poor to better withstand economic downturns and protects households from sliding into poverty as a result of catastrophic medical bills.[6] Better health also has macroeconomic implications:[3] countries with higher levels of tropical disease have slower income growth, and failed public health systems and poor disease surveillance contribute to the rapid spread of infectious illness. Poor health increases poverty and thus contributes to failed states, which spread terrorism. Critics will point out that it is poor governance and corruption that contribute to ill health, the spread of disease and insecurity (as, for example, is currently happening in Zimbabwe). However, health interventions often work better in difficult settings than do most traditional aid programs.[4,5]

Although standards of health among poor countries and, in particular, among the poorest in these countries, are still unacceptably low, it is important to recognize how much better these standards are now than they were in the past. Life expectancy in the last 40 years has improved more than in the preceding 4000 years. Smallpox, a disease that once killed nearly 2 million people a year, has been eradicated. Child and maternal mortality rates have fallen by over 90% in many countries, although these conditions still claim nearly 12 million lives (about the population of Ontario) annually.[1,5]

Health improvements in developing countries have been considerably quicker than equivalent progress in the industrialized north in the last 100 years. Research underlies these rapid gains. Contrary to some economists' views,[7] the lion's share of declines in child and adult mortality from 1960 to 1990 arose from research applied in public health programs, and not from higher income or education levels.[8] Knowledge about how disease is spread and how it can be dealt with accounts for most of our success in improving health. Such knowledge is transferable.

Consider a few examples of knowledge applied. In Malawi in 1997, less than 50% of children were immunized against measles, a disease now rare in Canada; 7000 people had the disease and about 300 children died. A cost-effective, evidence-based program was initiated that resulted in over 90% immunization coverage by 1999, with only 2 confirmed cases nationwide and no child deaths. In Peru the introduction of directly-observed short-course tuberculosis treatment reduced the number of deaths from tuberculosis by 80% in 3 years and cut the incidence of the disease in half over a decade. In much of Asia and Latin America, the number of deaths from malaria was reduced spectacularly after the introduction of modern insecticides, and the resurgence of the disease, while worrying, has never threatened to raise the death toll to anything like what it was.[5]

Improving global health will require vast sums of money. The World Health Organization has called for a war chest of about US$30–$40 billion annually to combat the major killers of the poor. This translates into a 6- to 8-fold increase over the current US$5 billion per year now set aside for health aid.[1,3,5] Although these amounts appear enormous, in macroeconomic terms they are puny. In fact, $30 billion represents about 50 cents for every $100 of annual gross domestic product of the world's richest countries.

Although most of this money is required to deliver services to the poor, some is needed for research to improve our arsenal against the big killers. Consider some past examples.[1,5] Oral rehydration therapy came out of research in Bangladesh. Its use has helped to reduce the annual number of deaths from diarrheal disease from about 5 million in 1980 to below 2 million in 1999. Conversely, the absence of evidence contributes to the widespread use of ineffective and often costly interventions, such as screening

of high-risk pregnancies to reduce maternal mortality.

Important gaps remain in the knowledge required to battle the big killer diseases. Most notably, research on interventions to reduce HIV transmission within vulnerable and general populations[9] has been limited. Similarly, antiretroviral medications help prolong lives for the infected, but are unlikely to reduce HIV incidence at the population level. Other challenges include testing new antimicrobials (or adequately testing older ones) and diagnostics for treatment of tuberculosis, malaria and childhood infections; innovative interventions against maternal and child anemia; and novel strategies to get the world's 1.1 billion smokers (80% of whom are in developing countries) to quit.

Canada's record in global health in the last decade has been disappointing. Overall, foreign aid has fallen by one-third (to about $2 billion in 2000), with increasing amounts of that aid tied back to contracts in Canada. Canada's proportion of aid in health did not rise, in contrast to other donors such as the United Kingdom and the United States, and spending on research for priority diseases is miniscule. Canada contributes only 3% of all aid from the world's richest countries. In addition, the effectiveness of traditional aid is mixed. Thus, one could easily conclude that the global poor do not get a whole lot of help from Canada.

Canada could maximize its impact on global health with 3 specific steps. First is speaking out. Both politicians and institutions need to keep global health central to Canada's role in the world. The strengthened emphasis on global health that begins with this issue of *CMAJ* represents one such effort. Second, Canada should aim for total annual *health* aid funding of about $900 million within 4 years. This would be about a 7- or 8-fold increase over current levels. Extra funds would be used to increase commitments to the Global Fund on AIDS, Tuberculosis and Malaria 6-fold, to $200 million per year. Most, but not all, of the Global Fund would be used to ensure that AIDS drugs are delivered within comprehensive control programs. Such funding is needed to complement Canadian plans to reduce the price of generic drugs to treat AIDS. About $600 million would be for bilateral aid focused on the control of priority diseases, the most important of which is the prevention of HIV infection. Canada already has shining examples of making HIV prevention work, most notably a project of the Canadian International Development Agency in the slums of Nairobi, Kenya.[10] Third, the remaining $100 million of health aid should be earmarked for intervention research on priority diseases. Substantial Canadian research capacity exists to combat the major global diseases, but it has been underused, and even discouraged.

This money can be found. Earmarking all of the already announced 8% increase in overall foreign aid for each of the next 2 years would generate nearly $160 million per year for health and would send a powerful signal of Canadian commitment to improving global health. Reallocations from other sectors need to be made: industrial or consulting contracts for Canadian firms are simply secondary in importance, and tied aid runs counter to good economic and moral sense. With reallocations, new funds of about $450–$500 million would be required. For the average Canadian taxpayer, the extra annual costs would translate into about that spent on a night out at the movies.

A new Canadian commitment to global health, for all its challenges, represents an unprecedented opportunity to improve global health and reduce poverty over the next 2 decades.

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References

1. Jha P, Mills A, Hanson K, Kumaranayake L, Conteh L, Kurowski C, et al. Improving the health of the global poor. *Science* 2002;295:2036-9.
2. Jha P. Avoidable mortality in India: past progress and future prospects. *Natl Med J India* 2002;15(Suppl 1):32-6.
3. World Health Organization. Commission on Macroeconomics and Health. *Macroeconomics and health: investing in health for economic development: report of the Commission on Macroeconomics and Health*. Geneva: The Organization; 2002. Available: www3.who.int/whosis/menu.cfm?path=whosis,cmh&language=english (accessed 2003 Dec 10).
4. Emmott B. A survey of capitalism and democracy: radical birthday thoughts. *Economist* 2003 June 28.
5. Jha P, Mills A. *Improving the health of the global poor: the report of Working Group 5 of the Commission on Macroeconomics and Health*. Geneva and London: London School of Hygiene and Tropical Medicine; 2002.
6. World Bank. *World development report 2000/2001: attacking poverty*. Washington: The Bank; 2001. Available: www.worldbank.org/poverty/wdrpoverty/report/index.htm (accessed 2003 Dec 10).
7. Pritchett L, Summers LH. Wealthier is healthier. *J Hum Resour* 1996;31:841-68.
8. Bhargava A, Jamison DT, Lau LJ, Murray CJ. Modeling the effects of health on economic growth. *J Health Econ* 2001;20(3):423-40.
9. Jha P, Nagelkerke JD, Ngugi EN, Prasada Rao JV, Willbond B, Moses S, et al. Reducing HIV transmission in developing countries. *Science* 2001;292:224-5.
10. Ngugi EN, Wilson D, Sebstad J, Plummer FA, Moses S. Focused peer-mediated educational programs among female sex workers to reduce sexually transmitted disease and human immunodeficiency virus transmission in Kenya and Zimbabwe. *J Infect Dis* 1996;174(Suppl 2):S240-7.

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