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The importance of "throwing money at" the problem of global health

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Abstract

More funding from wealthy countries is required to improve health care and the infectious disease situation in developing countries. Although progress has been made, funds for fighting AIDS, tuberculosis, and malaria remain inadequate. These treatable and preventable diseases together kill over 6 million people every year. Funds are needed to improve access to existing medicines as well as to increase research and development of drugs. The idea that "throwing money at the problem is not going to solve it" rightly holds that increased funding is not sufficient for solving the health care problems of developing countries. In order to work, funds must be spent wisely. This does not mean that increased funding is unnecessary.

Six million people are killed every year by three treatable and preventable infectious diseases—AIDS, tuberculosis, and malaria. Approximately 40 million people are currently infected with HIV. In the past few years about five million people have become newly infected with HIV and three million people have died from AIDS. In one of the worst epidemics in history, AIDS has killed over 30 million people worldwide since the disease was first recognised in 1981. About 95 per cent of HIV/AIDS cases occur in developing countries. About two thirds (25.8 million) are in sub-Saharan Africa, where approximately 7.2 per cent of the adult population is infected and where in some parts HIV prevalence rates reach or exceed 30 per cent of adults. Botswana has the world's highest adult HIV prevalence rate at 35-37 per cent (1).

At the beginning of the 21st Century, only five per cent of those in need received AIDS medication. In December 2003, the WHO/UNAIDS announced the "3 by 5" plan to provide three million AIDS patients -- half of the six million who need it -- with antiretroviral medication by the end of 2005. The WHO progress report promised for the end of 2005 has not yet been published (at the time of writing this in February 2007). A June 2005 update announced that the plan was behind schedule, largely due to a lack of resources. At that time, only one million of the six million people in need of treatment received it; only 11 per cent of those in need in sub-Saharan Africa received treatment (2). At the close of 2006, UNAIDS reported that AIDS medications were reaching 24 per cent of those in need worldwide.

Great strides have been made in increasing access to antiretrovirals since the "3 by 5" plan was announced. The total number of people receiving treatment worldwide has increased dramatically. But the more ambitious goal of universal access is still a long way ahead. Greater resources are needed to purchase expensive AIDS medication, which after a dramatic drop in pricing for developing countries can still cost between US$100 and US$450 or more per year of treatment. More resources are also needed to improve infrastructure in developing countries and to boost the number of health care personnel worldwide.

Though not so well publicised or politicised, tuberculosis (TB) and malaria together kill nearly as many people as AIDS every year, despite the fact that the cost of treatment for TB and malaria is comparatively inexpensive. TB kills almost two million people annually, and 95 per cent of TB cases and 98 per cent of TB deaths occur in developing countries. The TB burden is greatest in Asia, which accounts for two thirds of the cases worldwide. The highest rates occur in China, India, and Indonesia (in that order) (3).

First-line TB medication, which is effective in 95 per cent of cases, costs only $10 or $20 per patient, but only 56 per cent of the world population had access to the WHO's recommended TB therapy in 1998 (up from just 23 per cent in 1995) (4). One result of improper TB treatment is the emergence and global prevalence of virtually untreatable "extreme" or "extensively" drug resistant TB (XDR-TB) announced by the US Centers for Disease Control and Prevention (CDC) and WHO in September 2006.

Malaria kills over one million people, mostly children, every year despite the fact that the current recommended and highly effective treatment for falciparum malaria, the most deadly variety, costs only $1 or $2 per course. Like AIDS and TB, the heaviest burden of malaria is felt in developing countries; and 80 to 90 per cent of malaria deaths occur in sub-Saharan Africa (5).

Why infectious diseases take a heavy toll

Infectious diseases take their heaviest toll in poor countries for numerous reasons. Because bad nutrition weakens immune systems, the poor are more likely to become infected and more likely to suffer bad outcomes when infection occurs. Increased susceptibility and vulnerability to infectious diseases also results from poor sanitation and hygiene, dirty water, poor education, bad working conditions, and crowded living

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conditions. Poor individuals are less able to afford medication, and impoverished communities are less able to make medicines available. When health care infrastructures are weak, drug shortages are frequent. Medication is then out of reach even for those who could afford it and those who would have received it free of charge if the medicines had been available (6). Because illness in turn promotes the poverty of individuals, families, local communities, and of developing countries in general, this results in a vicious cycle of poverty, sickness, suffering, and death.

The failure of the pharmaceuticals industry to develop and produce medicines and other medical technologies most needed in developing countries is another relevant factor. While new vaccines, drugs, and diagnostics are sorely needed in the fight against AIDS, TB, malaria, and other infectious diseases, the industry has lacked financial incentives to develop products primarily needed by the poor. The more profitable and attractive targets of medical industry research and development (R&D) are products wanted by affluent populations such as interventions against chronic diseases and lifestyle drugs for conditions like baldness, impotence, allergies, and depression.

The current situation has been called the "10/90 divide". This means that more than 90 per cent of medical research resources are targeted at diseases that account for only 10 per cent of the global burden of disease (ie, diseases most relevant to the wealthy). Less than 10 per cent of research resources are aimed at those that account for 90 per cent of the global burden of disease (ie, diseases that most affect the poor). In addition to the increased funding needed to make existing (and sometimes inexpensive) medicines more accessible to impoverished populations, a boost in resources is needed to fuel R&D in areas most relevant to the poor.

The insufficiency of funding

Impoverished countries lack the resources to ameliorate the situation. It is widely recognised that sustained and increased funding from wealthy nations is needed. Substantial progress has already been made on this front. Increased efforts of the wealthy world to improve the health of the poor, especially with regard to the diseases discussed above, is evident in the establishment of the Global Fund to Fight AIDS, TB and Malaria (to which $9.8 billion has been pledged through 2008) (7), President Bush's Emergency Plan for AIDS Relief (through which $15 billion, including $10 billion in new funds, has been pledged by the US government to fight AIDS over a five year period), the efforts of the Clinton Foundation and the Gates Foundation, the WHO's "3 by 5" plan, and so on.

As of June 2005 a total of $27 billion was "available or ... pledged for HIV/AIDS globally from all sources for the three-year period 2005-2007." (2) This is a tremendous increase over the $300 million available in 1999, $3 billion in 2002, and $4.7 billion in 2003 (8). Warren Buffet's June 2006 pledge to donate $30 billion in instalments to the Gates Foundation, meanwhile, reveals that progress continues (9). These are all positive developments. This kind of financial support from wealthy countries and individuals is justified and necessary.

There is, however, a substantial shortfall of funding relative to what is required. The $27 billion pledged or available for HIV/AIDS from 2005 to 2007, for example, is $18 billion short of the estimated need for HIV/AIDS treatment, care, and prevention efforts during this period (2). As more of the 40 million people infected with HIV eventually progress to the stage where they require treatment, the need for funding will grow. It is thus important that increased funding continues into the foreseeable future. In the case of HIV/AIDS it is crucial that each patient receives regular treatment. If funding is not sustained, the interruption of medication will promote the emergence and spread of drug resistance. Despite recent gains in financial commitments from the wealthy world, both increased and sustained financial support for the battle against AIDS and other infectious diseases is warranted. At the same time, given the link between poverty and disease, we should advocate poverty alleviation more generally, as opposed to merely increasing assistance with a biomedical technological focus.

Many object that "throwing money at the problem is not going to solve it". Though correct, a claim like this says nothing about the extent to which the provision of resources is necessary for improving health care in developing countries. Mere provision of financial resources is insufficient for solving the problem of AIDS and other infectious diseases in developing countries. Funds must be used sensibly and difficult choices must be made regarding the uses to which funds are spent: the extent to which they should be targeted towards alternative diseases, and the extent to which they should be directed at treatment, prevention, development of infrastructure, or research and development of new medical technologies, and so on. If bad choices are made and inefficiencies prevail, then funds will be wasted. Donor funds are also lost when placed in the hands of corrupt officials so commonly found in developing countries.

To justify increased funding for global health, funds must be put to good use. Mechanisms have fortunately been put into place to insure that funds flow in fruitful directions. The Global Fund to Fight AIDS, Tuberculosis and Malaria, for example, has explicit mechanisms for tying disbursements to the achievement of programme results (7). These results, meanwhile, are impressive. Thanks to the $3.3 billion disbursed through the Global Fund as of January 31, 2007, 770,000 patients have been placed on antiretroviral treatment for AIDS, two million patients have received DOTS treatment for TB, and 18 million insecticide-treated bed nets have been distributed (7).

Making the money work

Some might argue that this apparent progress does more harm than good. On the face of it, the enormous increase in the number of HIV positive people with access to AIDS medication is wonderful. AIDS treatment, however, involves lifelong therapy. It is crucially important that those on therapy now and those who start therapy as the drug rollout proceeds, continue to receive treatment on an ongoing basis. Starting millions of people on AIDS drugs would be a recipe for disaster if drug provision is not sustained into the future. Interruption of

antimicrobial (ie, antiviral or antibacterial) therapy causes drug resistance, which could make our existing arsenal of medication useless. We should not offer antimicrobial drugs in the present if we are not sufficiently confident that we can continue to provide them in the future, long enough for recipients to complete or continue treatment (ie, for life in the case of AIDS). We must also ensure that those who have started therapy with antimicrobials are able, or enabled, to complete or continue their treatment. If these two principles are not followed, then wealthy world contribution to temporarily increased drug provision may do more harm than good.

Laurie Garrett has recently argued that the major achievements regarding the mobilisation of funds may have other adverse effects on health care in developing countries (11). She is particularly worried about targeting funding towards particular diseases—such as AIDS, TB, and malaria—and the effect this has on local health care infrastructure. The concern is that the significant influx of AIDS funding, for example, in effect drains resources away from the broader health care system. Health workers may leave jobs in public/state health care systems for higher-paid work with relatively better funded AIDS care provision programmes. Given the lack of trained health workers worldwide, the void created by targeted treatment programmes is left unfilled. General health care provision suffers as a result, even if progress is made with regard to AIDS in particular.

Garrett cites Haiti as an example: "The past several years have witnessed the successful provision of antiretroviral treatment to more than 5,000 needy Haitians, and between 2002 and 2006, the prevalence of HIV in the country plummeted from six per cent to three per cent. But during the same period, Haiti actually went backward on every other health indicator." (11)

Rather than targeting particular diseases, Garrett argues that spending should aim at improving more general health indicators: maternal survival and overall life expectancy. A related idea would be to aim for, and tie spending to, decrease in the global burden of disease (12). Basing spending decisions on these broader aims is appropriate but not, of course, incompatible with targeted funding. If there are sound reasons for believing that reduction of particular diseases provides the best means of improving general health indicators, then targeted funding may go hand in hand with broader goals.

Though Garrett seems to suggest that funding problems have been solved and we therefore need to move on to other problems, her analysis implies that enough funding has not been provided. The scenarios she describes with respect to AIDS illuminate additional problems that need financial fixing. Resources are needed to boost the numbers of health workers worldwide and to improve health care infrastructure in poor countries. Given the close connection between poverty and disease, general improvement of living conditions in poor countries should be added to the list of things that need funding from budgets aimed at global health improvement. Increased R&D for neglected diseases and drug provision are only part of the solution.

References

1. Joint United Nations Programme on HIV/AIDS. AIDS epidemic update. Geneva: UNAIDS; 2005. [cited 2007 Mar 9]. Available from: http://www.unaids.org/epi/2005/doc/EPIupdate2005_pdf_en/epi-update2005_en.pdf
2. World Health Organisation. Progress on global access to HIV antiretroviral therapy: an update on "3 by 5". Geneva: WHO; 2005. [cited 2007 Mar 9]. Available from: http://www.who.int/3by5/fullreportJune2005.pdf
3. WHO. *The stop TB strategy*. Geneva: WHO; 2006.
4. Lienhardt C, Ogden J, Sow O. Rethinking the social context of illness: interdisciplinary approaches to tuberculosis control. In: Gandy M, Zumla A, editors. *The return of the white plague*: global poverty and the 'new' tuberculosis. London: Verso; 2003. p 200.
5. Institute of Medicine. *Saving lives, buying time: economics of malaria drugs in an age of resistance.* Washington, DC: National Academies Press; 2004.
6. Farmer P. *Infections and inequalities: the modern plagues.* Berkeley, CA: University of California Press; 1999.
7. Global Fund to Fight AIDS, Tuberculosis and Malaria. *Monthly progress update—31 January 2007*. Geneva: The Global Fund; 2007. [cited 2007 Feb 22]. Available from: http://www.theglobalfund.org/en/files/publications/basics/progress_update/progressupdate.pdf
8. Institute of Medicine. *Scaling up treatment for the global AIDS pandemic.* Washington, DC: National Academies Press; 2005.
9. Kaiser Daily HIV/AIDS report. [cited 2006 Oct 25]. Available from: http://www.kaisernetwork.org/daily_reports/print_report.cfm?DR_ID=38118&dr_cat=1
10. Global Fund to Fight AIDS, Tuberculosis and Malaria. *Who we are, what we do*. Geneva: The Global Fund; 2005. [cited 2007 Mar 9]. Available from: http://www.theglobalfund.org/en/files/publications/basics/brochure_2005/brochure_2005.pdf
11. Garrett L. The challenge of global health. *Foreign Affairs* 2007 January/February.
12. Pogge T. Human rights and global health: a research program. *Metaphilosophy* 2005; 36: 182-209.