



The Challenge of Communicable Diseases

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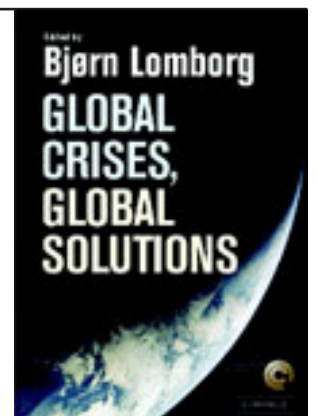
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Comments on the Challenge Paper on Communicable Diseases

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Introduction

In this paper, Mills and Shillcutt (M&S) give a good overview of what we know, given current drug availability, treatment protocols, etc, about the costs and benefits of an integrated health care intervention (Primary Health Care), and preventing and/or treating two infectious diseases (malaria, HIV/AIDS). The existing literature is well covered but I will argue that the existing literature is in some cases highly inadequate. Most studies are based on “best case” scenarios, where B/C analysis are done under “laboratory” conditions. Little reference is made to the facts that in many countries primary health care facilities are lacking or are dilapidated. In other countries there is no political will to take proper action. Bilateral, multilateral and private donors too often seem to be more comfortable with the status quo, even when circumstances cry out for new and perhaps unconventional approaches. These issues can be addressed within the B/C framework of this paper. It boils down to an effort to answer the question: why, when resources are available, technology exists, and national and international awareness is high, why is so little done in light of so much human suffering and potential economic loss. Unless we are willing to address this question little use can be made of even the most sophisticated B/C analyses.

Control of malaria

Every two minutes four people die from malaria in SSA alone. Three of those deaths are children under five.¹ In addition to the human suffering associated with this high mortality, recent estimates suggest that a 10% reduction in malaria can result in a 0.3 percentage point higher growth rate per year. Technology to deal with malaria exists. M&S evaluate a package of two preventive and one curative measure. The preventive measures are (1) insecticide treated mosquito nets (ITN) and (2) intermittent treatment of pregnant women (IPTp). The treatment measure is a shift from existing therapies (CQ, SP) to artemisinin-based combination therapy (ACT). It would be easy to make the point, as I will do in the next two sections, that while in theory cost effective interventions exist, in practice current delivery systems fail to reach large number of patients. This suggests that important aspects of the total delivery chain (from laboratory to patient) are ignored in the B/C analysis. However, this section of the M&S paper makes the strong case that effective interventions are not only possible in theory, but can be implemented on a (relatively) large scale.

The KwaZulu Natal example from South Africa is a case in point. A program shift (including ACT) was found to be highly successful, leading to large net benefits. It should be noted though, that South Africa has a relatively well-developed primary care system, which made the effective implementation of the program possible. Unfortunately, such success stories are scarce. The authors acknowledge that global initiatives as, for example, the Roll Back Malaria program, have contributed to the doubling of international expenditures on malaria, but there is no evidence of a significant reduction in the global burden of

¹ An additional four children die, every two minutes, from other, mostly preventable diseases.

malaria. Full reliance on public (government) health care infrastructure may be one of the reasons progress is slow. Experience in Tanzania, mentioned by the authors, shows that an appropriate division of labor between the private sector (distribution channels, out of pocket contributions) and the government (social marketing, stimulation of manufactures), can achieve a significant increase in ITN coverage.²

The need is high, the technology exists, there are examples of successful implementation on a relatively large scale, and B/C ratio's are impressive, and the international community has pledged significant increases in resources to fight malaria. The question remains: why is progress against this disease so sluggish. Or, in order to stay within the framework of this paper: are major obstacles (and thus costs), which prevent rapid expansion of coverage, overlooked? Part of the answer to this question may be found in the failure of the Garki program in Nigeria, where, despite a huge effort to control malaria, and despite the successful reduction of the human-biting rate of mosquitoes by 90%, no significant change in the parasite rate among villagers was found. A recent National Institute of Health report also concludes that currently available measures probably can cope with the malaria problem everywhere, except in the Afrotropical region.³ If these technical constraints remain, B/C ratio's for SSA will be much smaller than elsewhere.

Another possible constraint to successful implementation of proven remedies is a combination of government failure and donor failure. Since this is also the likely cause of any lack of progress against the HIV/AIDS pandemic, I will discuss this in the next section.

Control of HIV/AIDS

The numbers are staggering: between 2.5 and 3.5 million deaths in 2003 alone, for a total of more than 22 million up to now. Thirty four to 46 million infected at the moment, and 15,000 more next week, and for every next week to come, to as far in the future as we dare to make projections. HIV/AIDS is a genuine global development disaster. While early (micro) impact studies found only modest effects on economic well-being (per capita GDP growth), recent and more realistic models⁴ predict economic collapse unless there is an immediate and far ranging response to the pandemic.

M&S provide a survey of what is known about economic losses that can be averted by a variety of preventive measures. For countries where the epidemic is in a nascent stage, the losses averted between 2000 and 2005 can amount to

² For additional examples of successful public/private partnerships in health see Van der Gaag (1995).

³ Both examples are mentioned in Gallup and Sachs(2001).

⁴ Notably Bell et al. (2003).

27.50% of 2000 GDP in Egypt, or even 30.40% GDP in Tunisia, if action is taken now. The results are less impressive if action is taken five years from now. This conveys a sense of urgency that could have been much more underscored throughout the paper. In countries in the concentrated epidemic stage, high benefit cost ratios can be achieved by aggressive programs to promote condom use (as in Thailand), but here the paper begins to miss the point: in such countries, preventive measures are not enough. This is particularly true in countries with generalized levels of infection, up to 20% or even 40% of the population. Unless treatment regimes are implemented in these countries, they are economically doomed. Unfortunately, the paper is silent about treatment regimes.

Here is the situation in SSA: 26 million persons infected, and an estimated 70,000 persons receiving treatment, just about equal to the number of **new** infections in one week. M&S discuss the recent increase in available funding for HIV/AIDS, plus the dramatic decrease in the cost of drug regimes, and the increased awareness of the international community. Unfortunately, they fail to address the following question: how come, with billions of dollars available, proven technology and the apparent willingness of the international community to commit itself to addressing this issue, only one week worth of new infections is currently receiving treatment? How come that, according to the Global Fund website, this number will only be raised threefold over the next five years (i.e. to three weeks worth of new infections)?

Trying to answer these questions within the context of this paper is tantamount to asking: which enormous costs are apparently overlooked in the B/C analysis. The answer to this question has at least the following two components: government failure and donor failure.

All B/C calculations assume a more or less well functioning health sector infrastructure and a committed government. In most SSA countries, neither exist.⁵ As with basic health services (see below), governments have generally failed to provide even the most rudimentary health sector infrastructure that is needed to successfully address the HIV/AIDS epidemic, either in terms of prevention or in terms of treatment. Up to 75% of the people currently receiving treatment in SSA depend on the private sector. Most of them receive either insurance or direct treatment from their employers.

International donors are generally reluctant to involve private insurers or private providers. NGO's are usually involved in development efforts, including the prevention and treatment of diseases. But the for-profit private sector is often ignored or excluded, especially when it comes to health care provision. Still, the little bit of success in providing drug treatment for HIV/AIDS patients is largely a private sector story. This donor failure to try and do everything thinkable to bring this terrible epidemic to a halt is unexplainable in light of the gross discrepancy

⁵ With favorable exceptions as, for example, in Uganda.

between what needs to be done and what is done (or only scheduled to be done).

The total problem is daunting, but more can be done if donors would be willing to lift constraints that currently prevent a much larger role for the private sector. For instance, an HMO in Nigeria covers about 65,000 patients and has contracts with about 200 hospitals. This organization exists, and the infrastructure exists. Unfortunately the organization is under tremendous financial stress, up to the point that it is no longer capable of treating (in-hospital) end-stage AIDS patients. The same organization could provide drug treatment for about 10,000 patients, if only someone would put up the money. Money for the drugs and money for the work involved. But organizations that can be accused of trying to “make money from AIDS” are not eligible for international financial support. Governments are supposed to deal with the problem, but fail to do so. Those who have the organization and the infrastructure to, at the very least, provide a modest contribution, are not asked (and financed) to do so.

The potential for involving more of the private sector is real, but, at least initially, relatively small. Once successful programs do exist, however, one might expect a “supply response” when more private insurers and more private providers are attracted to this - dare I say it - emerging industry. Infrastructure is costly but needs to be built and maintained. (many governments have shown to be incapable of doing this). Physicians and nurses expect to earn a decent salary (many governments are too poor to pay decent salaries). When donors are willing to provide billions of dollars to address the problem, and donors and governments together fail to show adequate results, one should stop pursuing “more of the same”, and experiment with alternative delivery systems, such as those available in the private sector.

One major obstacle to greater private sector involvement is the fact that the private sector does not provide services to the poor. But HIV/AIDS is a democratic disease, hitting the poor and rich alike. Furthermore, when international donors can provide the resources in such a way, that treating poor patients will be as “profitable” for the private provider, as treating rich patients. In addition, the status quo, treating almost nobody, can hardly be considered ethically superior.

What does all this mean for the B/C analyses? It probably means that the cost of getting the HIV/AIDS epidemic under control is vastly underestimated. In countries where the epidemic is in the generalized stage, prevention needs to be supplemented with treatment. And both prevention and treatment need infrastructure (organization, clinics, staff). If you add these requirements to the calculations, the B/C ratio's will surely worsen. The alternative, i.e. the apparent inability of both governments and the international donor community to act effectively, will, according to the best available evidence, lead to economic

collapse of unprecedented proportions, not to mention the certain death of the tenths of millions of people currently infected.

In sum, in this section M&S do provide a good overview of what we currently know about the (sometimes only theoretical) highly beneficial impact of prevention measures for HIV/AIDS. It does not address treatment issues although they cannot be ignored in countries with concentrated, and especially in generalized levels of infections. Most of all, this section does not convey the gross inadequacy of current national and international efforts to get the epidemic under control. Unless new approaches are being tried, more parties are allowed to participate, old alliances are replaced by new ones, and – in general – old dogma's are thrown out, the epidemic will not be brought under control. This is not the time to search for the cheapest fire fighter: the house is already on fire and the fire is spreading fast.

Strengthening basic health services

In this section, the authors first provide a B/C analysis for an overall increase in health expenditure in HPIC countries. This analysis is based on a paper by Gupta et al. (2001), which shows that public spending on health in those countries needs to increase from 2% of GDP in 1999, to 12% in 2015 in order to reach the MDG of reducing child mortality by two thirds. Not only is such an increase highly unlikely, the rate of decline in child mortality that is assumed to be caused by such an increase, is contrary to what is commonly found in the literature that tries to link health improvements to public spending on health. Filmer and Pritchett (1999), conclude, from a careful analysis of cross-national data, that “the impact of public spending on health is quite small, with a coefficient that is typically numerically small and statistically insignificant”. These authors also show the relevancy of such findings for B/C analysis. While most studies of the cost effectiveness of preventive and curative interventions suggest that massive health gains can be achieved at low cost (e.g. \$ 10 per death averted), estimates of the association between public health spending and health gains imply that in practice the cost of a child death averted (by spending on PHC) may be between \$ 50,000 and \$ 100,000.

Furthermore, M&S are well aware of the importance of factors other than health expenditures in the production of health, such as income and education. Still, these determinants are ignored in the analysis, although economic growth is projected to stay at 3.4% annually during the period 2001-2015. Filmer and Prichett (1999) report an income elasticity of child mortality of $-.6$, in line with other literature on this topic. Together with a projected increase in GDP of 3.4%, that alone will result in a 2% annual decline of child mortality. When M&S include a much smaller autonomous decline in child mortality (1.1% annually) they already find negative net benefits of increased health spending. Clearly, the results presented in table 5.3 (a B/C ratio of 2.6) are not credible.

This leaves the main question still unanswered: millions of children die every year in developing countries from causes that can easily and cheaply be prevented by (often simple) PHC interventions. Still, the relationship between public health spending and child mortality (or other health measures) is in practice virtually non-existing. To put it differently, based on the theoretical link between an intervention and its impact on health, PHC-type of interventions are highly cost-effective. On the other hand, the empirical link between public spending on such interventions and health outcomes is so weak, that net-benefits can become negative. We must again conclude that in the theoretical analysis some huge costs are overlooked. M&S mention some possible causes for these costs: poorly managed public health facilities, lack of ability to translate expenditures into the actual delivery of drugs and goods to local service providers, preference for spending on tertiary facilities. Perhaps the biggest problem is that, in virtually all countries where governments try to run the health care system, the vast majority of publicly provided goods and services are consumed by the middle and upper middle classes, and do not reach the poor. This way, private health care providers are being crowded out, while those who would benefit most from publicly provided services, don't have access to such services.

The Commission on Macroeconomics and Health (Sachs, 2001) correctly draws attention to the need to drastically increase spending on health in poor countries, with donors playing a major role. But "more of the same" will not have the desired impact. Where governments fail, the role of private providers (of services and of insurance) should be given a larger role, even when public and donor financing will continue to provide the vast majority of resources. As in the previous two sections, what is needed is a break with the traditional view that health is such a special commodity that the provision of health services should remain in the hands of the government. Nine million children in developing countries die every year from preventable causes. Higher incomes, better education (for women), access to safe water and sanitation have all been shown to greatly reduce child mortality. Public spending on health care has virtually no effect, or rather the current way of public spending on health care has no effect, despite the proven potential of PHC. The separation of finance and provision is essential to improve this situation. Governments and donors alike should actively stimulate a larger role for the private sector in health insurance and health care provision for the promises of modern health care to become reality for the world's poor.

Conclusion

In these comments I tried to draw attention to the big gap between what is needed and what is actually done (or even only scheduled to be done) to greatly reduce the burden of disease in developing countries. In doing this, I followed the three topics addressed by M&S: malaria, HIV/AIDS and Primary Health Care.

In the past few years it has become abundantly clear that much more resources need to be devoted to health in the developing world and not only out of humanitarian concerns; the impact of disease on the economic development of a country can be huge. In fact, recent studies show that the choice between treatment and no treatment can be tantamount to the choice between economic development and economic collapse. Still, national and international efforts to address these issues are grossly inadequate. The main question is “why”. Why, in light of all the evidence (and, let’s not forget, all the human suffering) do we collectively fail to get results at a sufficiently large scale?

I point to (well known) government failure and to (less frequently acknowledged) donor failure. Current efforts can still be characterized as “more of the same”, with a heavy government role and too little attention given to what the private sector can do. In B/C terms that means that the costs of the prevention or treatment of diseases, in real world situations, are severely underestimated. It remains to be seen whether the higher estimates of both the benefits and the costs will lead to higher or lower B/C estimates. But that uncertainty should not be cause for inaction. In current B/C analyses we do not address the most important question: why do we fail. As a result, these studies are likely to come up with the wrong answers.

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