1. Introduction to the book

The human immunodeficiency virus (HIV) that causes the acquired immunodeficiency syndrome (AIDS) has continued to thrive in the world over the last two or more decades despite all our efforts to restrain it. Our interventions are either not working, or not working fast enough. So millions have died, are dying, and will continue to die for years to come. The time has come to step back and reflect on what we know and don’t know about the HIV/AIDS pandemic so that priorities for HIV interventions can be set. The central argument of this book is that HIV/AIDS is much too difficult a problem to try to tackle it with best guesses, common sense, medical and ethical principles alone. Decisions need to be made that rely on data that relate to individual behavior and preferences as contained in a formal economic evaluation.

HIV is not like other public health disasters. Most public health hazards attack and kill off the most vulnerable people in society, especially the young and the old. HIV on the other hand targets largely prime age working adults. If you are a poor person living in a crowded home where others have TB or cholera, you are likely to catch these diseases. But with HIV there is more of an individual choice involved in its transmission.

Economics can be defined as the science of choice. How are choices made in economics? The answer is: on the basis of benefits and costs. This is true for individuals deciding how many hamburgers to buy, as well as for governments who have to decide how much to spend on health care. If the benefits of a good or service are greater than the costs, then one chooses more of it. If the benefits are less than the costs, then one chooses less of it. And if the benefits are exactly equal to the costs, then one has the right amount of the good or service and so one continues consuming or utilizing the good or service at the same levels as before. So this book will be all about how the benefits and costs of various interventions need to be identified, measured and compared in order that HIV/AIDS policy priorities can be set.

**TYPES OF HIV EPIDEMIC**

Countries can be classified into two categories in terms of HIV. The first category, which comprises the United States and most Western European...
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countries, can be called “localized”, where HIV just affects high-risk groups, such as intravenous/injecting drug users (IDUs), males having sex with males (MSMs) and commercial sex workers (CSWs). The other category relates mainly to Sub-Saharan African countries where HIV is “generalized” in the national population. The main reason for drawing this distinction is that what constitutes an HIV/AIDS intervention differs in the two sets of countries. In countries with localized HIV populations, specific groups are to be targeted. Providing condoms and clean needles would seem to be the interventions that need to be evaluated first. However, in countries with generalized HIV populations, almost any kind of public policy change can be viewed as an HIV intervention. Agricultural, transport, trade and educational reforms must all be looked at with an “HIV lens” (Gillespie and Kadiyala, 2005). In these countries cost–benefit analysis (CBA) needs to be applied routinely to many different kinds of intervention, whether it is the time that a commodity market opens, or whether women’s education should be subsidized. This book will therefore cover CBAs related to both sets of population category. For generalized HIV populations we will discuss HIV policy as one primarily dealing with a hunger issue and not one only of sexual behavior modification.

WHY SETTING HIV PRIORITIES IS NOT SIMPLE

Two fundamental reasons why the setting of HIV policies is not a straightforward exercise is due to the fact that HIV/AIDS epidemics are not unicausal and that the problems to be solved do not stay the same over time. Transmission can be due to heterosexual contact, MSMs, IDUs, blood transfusions and mother-to-child transmission (MTCT). HIV epidemics are also long-wave phenomena. The five waves are HIV infection, opportunistic infections, AIDS, death and impact. Some countries appear to be over the first wave, including the United States, Uganda, Thailand and Brazil. But no country is over the death wave and the impact wave is only just beginning (Gillespie and Kadiyala, 2005). As a consequence there are a host of different possible interventions to pursue and what one chooses to do at one point in time is not necessarily optimal at all periods of time. One size does not fit all; nor does one time fit all times. Again this points to using CBA to evaluate many different interventions and reusing CBA on many different occasions.

This book aims to act as a complement (two goods with quantities moving in the same direction) to that by Jeffrey Sachs’s (2005) book entitled *The End of Poverty*. He argues that, if developed countries just
devoted 0.7 percent of their national income to foreign aid, then poverty could be eliminated. But, poverty will not be eliminated unless major successes related to HIV/AIDS are achieved. And ensuring sufficient funds is only half of the problem. How they are to be spent is just as important and CBA needs to be enlisted in the task of deciding what to invest in. Sachs’s book has a chapter outlining the details of a specific project that would reduce poverty. But it is not shown that this project actually would be better than other development projects. Part of our book will be evaluating HIV intervention projects in countries where poverty is widespread (such as Tanzania). Obviously, reducing poverty can be expected to be worthwhile. However, the object is still to make countries better off and only the use of CBA will establish this.

OUTLINE OF THE BOOK

We will devote Part I of this book to spelling out in greater detail what is needed and why only CBA can be relied upon. We will first explain why the identification of HIV priorities is not straightforward and list some of the things that we think we know, and what we think makes sense, which are, in fact, things that are not true. Myths and counterintuitive results abound. Current HIV strategies assume that we already know what to do in any given country and that the task now is simply to ensure that this is “scaled up” to all the population. Hence the emphasis given to the Millennium Development Goals (MDGs), which simply set dates by which specified targets are to be achieved. Scaling up is not as obviously desirable as it is assumed, and we analyze its role in Chapter 7. Our second task in Part I is to explain why it is that setting any goals in the abstract devoid of CBA is not helpful in general, and also not helpful in the case of the particular goals set out in the MDGs. We close Part I with a summary of some of the key principles of CBA and how they relate to the setting of HIV policy.

Part II switches from things we do not know to an account of some of the things that we do know about the HIV epidemic. We focus on Sub-Saharan Africa (SSA) where most people living with the HIV disease are located. The main theme is that in SSA, HIV/AIDS is primarily a hunger issue.

Many people think that the reason HIV is so widespread in Africa is because, in a context where heterosexual activity is the main transmission mechanism, sexual activity must be higher than elsewhere. It turns out that when people are healthy, sexual transmission of HIV is inefficient. But, when people are not healthy, and suffer from malnutrition and parasitical
diseases, immune systems are greatly compromised and HIV transmission is greatly facilitated. Focus is then given to how multivitamins can be used as a micro-nutritional supplement. From there we turn to macro-nutritional issues and how agriculture policies can be viewed using the HIV lens. The emphasis here is largely on national and regional evidence. The main message will be that in countries with widespread epidemics, almost any change in institutional arrangements surrounding agriculture can be viewed as a potential intervention for HIV. Policies involve trade-offs and these need to be identified and quantified.

Since the whole raison d'être for CBA is to deal with trade-off situations where advantages need to be lined up and compared alongside disadvantages to see where the net position lies, the scene is now set to cover specific CBAs of various HIV interventions. Part III is therefore devoted to the presentation of a number of CBAs of HIV/AIDS interventions. We deal with some related to countries with localized epidemics and others pertaining to countries with generalized epidemics. As we shall explain, cost-effectiveness analysis (CEA), the technique of choice in the health care evaluation field, cannot be used to set HIV intervention priorities, so we shall show how it can be reconstructed as a CBA criterion. Since there is no real alternative to using CBA for the setting of HIV priorities, we will present a number of different methodologies for measuring the benefits. Readers should then be able to choose and embrace at least one CBA methodology that they are comfortable with.

Having seen how CBA operates in practice, Part IV will draw together some of the conclusions regarding the strengths and weaknesses of CBA. We examine the welfare economic base to CBA and discuss equity considerations as they relate to setting HIV priorities. CBA may be a terrible way to carry out health care evaluations. But, it will be seen to be the best way there is.