CHAPTER 5

Working Together To Confront HIV/AIDS

IF DEVELOPING COUNTRY GOVERNMENTS, DONORS, AND multilateral organizations were already following the policies advocated in previous chapters, HIV would be a serious but manageable health challenge, perhaps not unlike cancer or other difficult-to-treat diseases, rather than a global epidemic. Unfortunately, national and international efforts to fight AIDS are far from optimal. Fifteen years into the epidemic, many developing country governments still lack adequate surveillance systems and have yet to enable a large enough share of those who are most likely to contract and spread HIV to protect themselves and others. Moreover, many countries also lack the society-wide policies to support such prevention interventions. Despite the willingness of nonprofit private groups to contribute to the fight against AIDS, some governments have difficulty providing the right mix of support and supervision. Donor governments and multilateral organizations, which provide much of the financing for national AIDS programs, have not always encouraged recipient governments to set and address appropriate priorities and they have invested too little in international public goods: knowledge and technology for fighting the epidemic in developing countries.

Why has the national and international policy response to the AIDS epidemic not been more satisfactory? Much of the explanation involves an understandable lack of knowledge. AIDS is a relatively recent challenge. Faced with a potential emergency, governments, donors, and multilateral organizations responded as best they knew how using the information then available. As knowledge about the epidemic and ways to combat it increases, public responses are likely to improve.

Like all public policies, however, AIDS policy is not made in a vacuum. Indeed, because the spread of HIV involves private behavior that

many people deplore—frequent changes in sexual partners and the injection of addictive drugs—governments that adopt programs to reduce the riskiness of these activities may be accused by their constituents of facilitating socially deviant or immoral behavior. Thus HIV/AIDS policy may be subject to strong political pressures, some of which work against the policies most likely to contain the epidemic.

In considering these issues, this chapter looks beyond the national policies discussed in previous chapters to consider how the main actors in the AIDS policy arena can work together to more effectively confront the epidemic. First we examine the evolving roles of national governments, donors, and the multitude of other nonprofit and for-profit organizations which we refer to collectively as NGOs. We conclude that many low-income countries should confront the epidemic more forcefully, both directly and in collaboration with NGOs. Turning to a detailed examination of donor funding and policies, we argue that bilateral donors and multilateral organizations, despite their substantial contributions, have focused too little on fostering new knowledge and technology, such as information about costs and effectiveness of alternative prevention strategies and research on an HIV vaccine. Finally, the chapter discusses how public opinion and politics shape AIDS policy and how developing country governments can work with a variety of partners to overcome the obstacles to sound policies for fighting AIDS.

Government, Donors, and NGOs

NATIONAL GOVERNMENTS BEAR THE RESPONSIBILITY FOR protecting their citizens from the spread of the HIV epidemic and of mitigating its worst effects once it has spread. But they are not alone in the effort. Bilateral and multilateral donors have provided both leadership and major funding for national AIDS prevention programs, especially in the poorer developing countries. And both local and international nongovernmental organizations have stepped forward to help against the epidemic, sometimes prodding reluctant governments into action.

The challenge for national governments is to define their role in the struggle against the epidemic, not in isolation from or in passive response to the other actors, but in active collaboration with them. Only the gov-

ernment can claim to represent and act on behalf of the national population. Among the three types of actors, it has the unique ability to authorize implementation of an intervention by a donor or NGO. However, a donor cannot be commanded to finance or implement a program in which it has little interest. NGOs, too, have preferences and technical strengths or weaknesses. Thus the government cannot simply assign tasks to itself and the other actors. Instead it must learn the preferences and judge the comparative advantages of donors and NGOs. If there are important tasks that public economics considerations assign to the public sector, but that donors and NGOs either cannot or will not perform, then the government must undertake them directly or subcontract them.

What roles have the three sets of actors played in the struggle against the AIDS epidemic? How can cooperation be improved to make the most of the strengths of each? To answer these questions, this section first describes the important role that donors have played in funding AIDS interventions in most developing countries. Although the data on financing are incomplete and imprecise, they present a coherent picture of the relative roles of national governments and donors: donors have assumed the major financing burden in the poorest developing countries, and bilateral donors show a preference for countries suffering from generalized epidemics. Since the available cross-country data speak only to financing, the analysis of the NGOs' role in implementation is based on examples. Although no generalization regarding roles will apply to every country, the analysis suggests that many national governments and NGOs should assume a somewhat larger share of the funding of prevention activities, leaving donors to focus on the international public goods discussed in the next section. Furthermore, anecdotal evidence supports the claim that the donors frequently work at cross-purposes at the country level. Efforts would be more effective if donors would improve their coordination with one another and with national authorities without slowing the speed with which they deliver assistance.

Most of the National Response Is Funded by Donors

The total amount of donor funding for AIDS was estimated at approximately $300 million in 1996. The largest contributor of new funds in that year was the United States ($117 million); the European Union ($55 million) and Japan ($40 million) provided the next largest amounts of grant funding, and the World Bank provided approximately

$45 million in new loan commitments that year, most of which was at concessional rates. This seemingly large amount of money is, however, only about 6 percent of total donor health assistance to developing countries.[1] Nevertheless, since AIDS expenditures represent a substantial fraction of total public spending on health in some developing countries, observers have asked whether too large a proportion of health resources is devoted to AIDS in these countries relative to other health problems.

The WHO Global Programme on AIDS, predecessor of UNAIDS, collected data on donor, national, and NGO funding of AIDS programs in participating countries for the period 1991–93. While this database is imperfect and underrepresents funding from national and NGO sources, it provides the only detailed view of AIDS funding for a significant number of developing countries. By matching it with data on total national health expenditures from the World Bank (1993c) and data on domestic AIDS spending collected by Mann and Tarantola for *AIDS in the World II* (1996), it is possible to measure the relationship between expenditures from each source and total national health spending in a country, and to compare the importance of national government and donor funding across countries.

Average annual 1991–93 spending on AIDS by donors recorded by the GPA funding database exceeded 10 percent of 1990 public health spending in only seven countries: Uganda (59), Tanzania (36) Zambia (27), Malawi (16), Central African Republic (13), Guinea (11), and Rwanda (11). In these seven countries, all of which are in Africa and have some of the most serious AIDS epidemics in the world, international AIDS spending is large enough to overshadow all other prevention programs operated by the ministries of health. International spending was greater than 1 percent of the public health budget in 32 additional countries, including the non-African countries of Haiti (7 percent), Vietnam (3 percent), Thailand (3 percent), Lao PDR (3 percent), Bolivia (3 percent), Bangladesh (2 percent), Sri Lanka (2 percent), Pakistan (1.4 percent), Honduras (1.1 percent), and Chile (1.01 percent).

However, table 5.1 reveals that countries with large ratios of donor-funded AIDS spending to total national health spending are the exception rather than the rule. The average country in fact received a little less than 2 percent of its 1990 health budget for AIDS. Even in low-income countries with generalized epidemics, the average percentage of the national health budget received for AIDS was only 8.5 percent. Looking across the table's three country income groups (see "Average"

Table 5.1 Average 1993 Donor-Funded HIV/AIDS Expenditures, by Stage of the Epidemic and Income Level
(percentage of 1990 national health expenditure)

	Income level (GDP per capita)			
Stage of the epidemic	*Low (< $725)*	*Lower-middle ($726–$2,985)*	*Upper-middle ($2,986–$8,955)*	*Average*
Nascent	0.7	0.2	0.01	0.3
Concentrated	1.7	0.4	0.1	1.2
Generalized	8.5	n.a.	0.1	7.9
Unknown	0.4	0.1	0.4	0.2
Average	3.2	0.2	0.1	1.8

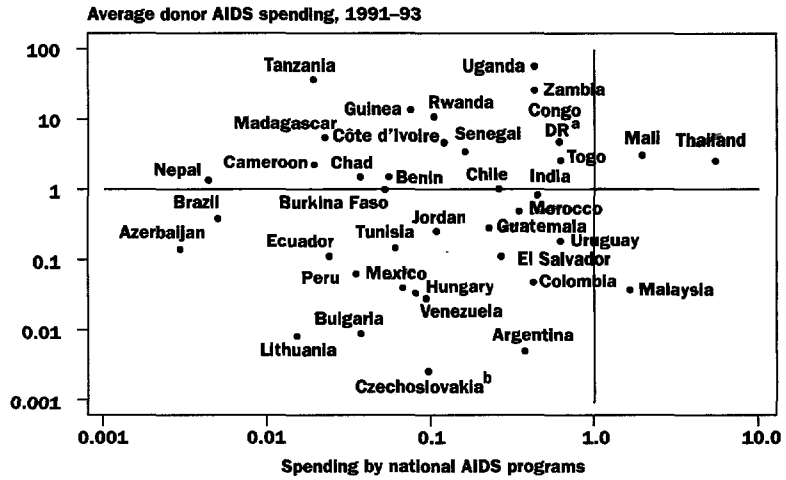
n.a. Not applicable.

Note See end of chapter 2 for definitions of "nascent," "concentrated," and "generalized." Donor assistance data are extracted by Pyne (*background paper* 1997) from the GPA funding database developed by the predecessor program to UNAIDS, the WHO Global Programme on AIDS. National health expenditure data for 1990 are from World Bank (1993c).

row), we see that the average percentage of the health budget received from donors for AIDS declines from 3.2 percent among the low-income countries to one-tenth of a percent among the upper-middle-income countries. This is due to higher total public health spending in the higher-income countries, as well as to lower donor allocations to these countries. Looking across stages of the epidemic (see "Average" column), we see that donor funding as an average percentage of national health spending rose consistently from one-third of a percent in the nascent countries to nearly 8 percent in the countries with generalized epidemics. However, even the higher figure does not threaten to overwhelm ministries or to overshadow other public health programs in the *average* recipient country.

If donor-funded AIDS spending is occasionally large compared with the national health budget, national AIDS program spending never exceeds 10 percent of total national health spending and only rarely exceeds 1 percent, as judged from the survey of national program spending conducted for *AIDS in the World II* (Mann and Tarantola 1996). Figure 5.1 shows that only three developing countries reported a figure for 1993 national AIDS program spending that was above 1 percent of their 1990 public health spending: Thailand (5 percent), Mali (2 percent), and Malaysia (2 percent).[2] Twenty countries reported spending nothing

Figure 5.1 Comparison of Average Annual AIDS Spending by Donors with That of National AIDS Programs, 1991–93
(percentages of 1990 government health spending)



a. Formerly Zaire.
b. Now Czech Republic and Slovak Republic.
Note: Since both axes are scaled in logarithms, 16 countries with zero national AIDS program spending are omitted from the scatter plot. Donor funding for AIDS is the average of 1991–93 funding from the GPA funding database. National AIDS program expenditures are from the survey conducted by Mann and Tarantola (1996) and are typically for various years between 1990 and 1993. The denominator for the ratios on both axes is 1990 public health spending as estimated in *World Development Report 1993* (World Bank 1993c). See Pyne (*background paper*, 1997) for further discussion of the data.

International and national AIDS expenditures are not correlated across countries and are usually small in relation to total public health spending.

at all of their own funds through their national AIDS program in the relevant fiscal year, although seven of these received donor contributions for AIDS in excess of 1 percent of their national public health budgets.

Since international and national AIDS spending are expressed as a percentage of the same denominator in figure 5.1, the scatter plot would reveal any tendency for spending from these two sources to be correlated. However, the distribution of points is almost spherical: there is no relationship, either positive or negative, between donor funding and national AIDS program spending. This and further evidence presented below suggest that in the average country, the national program budget was not primarily determined by donor spending decisions.

The 45-degree diagonal line in figure 5.1 represents equal allocations of donor funding and domestic funding in response to HIV/AIDS. The thirteen countries below the diagonal received *less* in donor funds to

combat AIDS than they spent of their own resources. The 26 countries above the diagonal, plus another 16 that reported spending none of their own resources for AIDS and are omitted from the figure, received *more* from donors than they spent through their national AIDS programs. Thus in roughly three-quarters of developing countries, donor spending on AIDS exceeded domestic allocations over this time period.

This analysis suggests that, although donor allocations for AIDS are not large enough to overwhelm the domestic health care system in most developing countries, these allocations are remarkably large relative to national spending on the same problem and probably in comparison with current international spending on any other disease. Perhaps only the international campaign to eradicate smallpox in the 1970s benefited from such a large preponderance of donor funds. But the amount of both types of funding varies a great deal from one country to the next. The next section seeks to explain this variation.

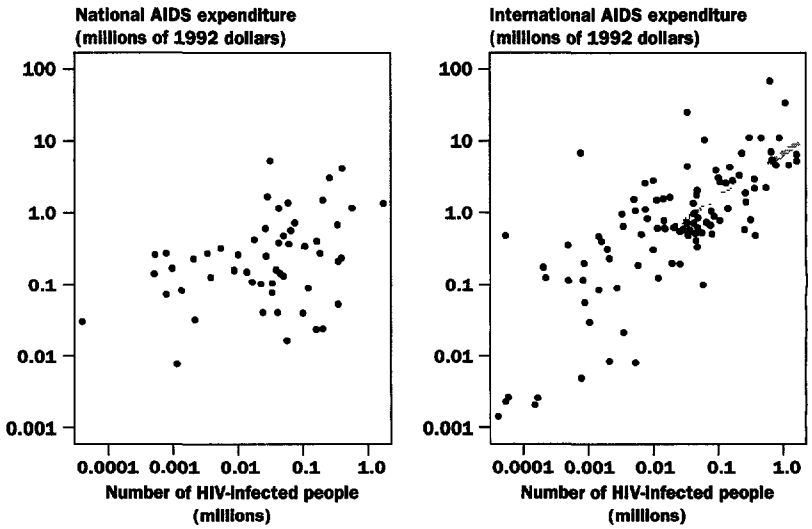
Donors Favor Lower-Income Countries That Have Larger Epidemics

As discussed in chapter 3, the severity of the epidemic and the availability of resources should be the two primary determinants of the extent of HIV/AIDS interventions in a developing country. Furthermore, the absolute size of a country's population will affect the scale of activities and therefore of expenditure.

How does spending vary across countries by infection rate, GDP per capita, and population size? To avoid double-counting the HIV-infected, the analysis below breaks the population into two components, the number infected and the number not infected. It then examines their separate influence, and that of GDP per capita, on aggregate levels of national and international AIDS expenditures in a country. More than 60 percent of the cross-country pattern of domestically financed AIDS expenditures can be explained by these three variables. The analysis focuses on the number of people infected and on GDP per capita to see how these two variables affect national and international allocations for confronting AIDS.

It is not surprising that national and international decisionmakers respond to the severity of the AIDS epidemic. Figure 5.2 presents the relationship between the number of HIV infected in the country and the amount of national and international AIDS expenditures in a country, after controlling for the number of people not infected and for GDP per

Figure 5.2 Relationship between the Number of HIV-infected People in a Country (in Millions) and the Amount of National and International AIDS Expenditures



Note: The country data plotted in the graphs have been adjusted for the influences of the country's GDP per capita and the number of uninfected people in its population. See note 9 in chapter 1.

Sources: Expenditure data: see note on figure 5.1. HIV infection data: see Pyne (*background paper,* 1996).

The expenditure of international donors is more responsive than that of national governments to the number of HIV-infected people in a country.

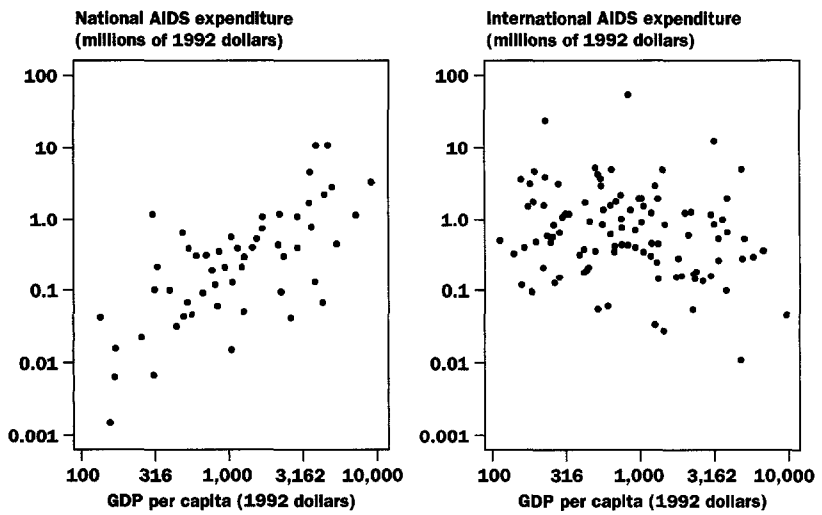
capita. The relationships are positive (and statistically significant) in both cases, but the international donors were responding much more to the number of HIV-infected people than were the national governments. Every 10 percent increase in the number of HIV-infected people (after controlling for the other factors) is associated with a 6 percent increase in international spending in the country, while national spending rises by only 2 percent. Although it is reasonable for governments to respond to evidence of HIV infection with increased funding for both prevention and curative programs, national governments that view the epidemic with urgency might be expected to respond *more* strongly to HIV infections than would international donors, not less so.

One possible explanation for the weakness of the national governments' spending response to the epidemic might be the availability of international donor funding. If this were true, one would expect that some of the variation in national expenditure, after controlling for HIV

infections and the other variables, could be explained by the receipt of donor funds. However, as we have seen in figure 5.1, there is no statistically significant correlation between national and donor funding in a country. Moreover, this is true even if we correct for the influence on national expenditure of GDP per capita, the number infected with HIV, and the number not infected.[3] Although some individual governments undoubtedly made their decisions on national funding levels based on what they were receiving from outside, this evidence suggests that this is not the case for the average country.

Turning to GDP per capita (figure 5.3), we see in the left-hand panel that national spending is extremely responsive to national income: of two countries of the same size and the same number of HIV-infected people, the one that is 10 percent poorer spends about 12 percent less on managing its AIDS epidemic. And the fit to that relationship is quite good. This striking sensitivity to income level could be explained as the rational response by decisionmakers who have full information about the danger of AIDS and the role of the public sector in confronting it but are not convinced that government intervention can slow the

Figure 5.3 Relationship between GDP Per Capita and National and International AIDS Expenditure



Note: The country data plotted in the graphs have been adjusted for the influences of the country's number of HIV infections and the number of uninfected people in its population.
Source: See note on figure 5.1.

With an AIDS epidemic of a given size, countries with more national resources spend more on AIDS, while receiving less from donors.

epidemic and are acutely aware of the many other demands on extremely scarce public resources. Under this interpretation, national decisionmakers view AIDS expenditures as a luxury, affordable only at higher income levels. Alternatively, it could be that decisionmakers in lower-income countries have less complete information about AIDS than those in other countries and perhaps are handicapped to a greater degree by conservative constituencies. Either of these interpretations suggests that donor assistance is acutely needed in the lowest-income countries to enable significant national activity against AIDS. But the latter interpretation, which is supported by the discussion of the political economy of AIDS in the last section of this chapter, further argues that *low-income countries should strive to increase their national effort against AIDS in order to ensure that people most likely to contract and spread HIV are able to protect themselves and others.*

The right-hand panel shows that the level of donor spending is also related to the recipient country's income, but in the opposite direction. This bias of the donors in favor of the poorer countries compensates to some degree for the much smaller national expenditures there; poorer countries receive somewhat more in donor funding than less poor ones, after correcting for population size and epidemic severity. However, donors do not fully compensate for the reduction in national spending: the country that is 10 percent poorer receives only 3 percent more donor resources. Furthermore, although the relationship is statistically significant, the fit is not very good. Thus many factors besides population size, epidemic severity, and GNP per capita influence international assistance to a country's AIDS program.[4] While donors must and should take many other considerations into account, this evidence suggests that *donors should give somewhat greater consideration to per capita income than they did from 1991 to 1993 when determining how to allocate resources to confront AIDS across countries, so that low-income countries with severe epidemics would be sure to receive the resources needed for the essential core functions of an AIDS program.*

Box 5.1 gives a detailed breakdown of AIDS funding by source for four countries and the Brazilian state of São Paulo. These detailed data from in-depth background studies performed for this report confirm the patterns discussed above (*background paper,* Shepard and others 1996). First, donor and national spending on AIDS both vary a great deal, even within this small sample of five countries: national government AIDS spending ranges from only 5 percent of AIDS spending in Tanzania to

Box 5.1 Government, Private, and Donor Expenditures on AIDS in Five Countries

SHEPARD AND OTHERS (1996) EXAMINED THE LEVEL and source of expenditures on HIV/AIDS in Tanzania, Côte d'Ivoire, Thailand, Mexico, and São Paulo State, Brazil.[1] Box table 5.1 reflects the international dollar amount and percentage of funding by source for each of the countries.

With the exception of Mexico, public funding per capita rises steadily with per capita GNP. Donor funding is by far the largest share (85 percent) of resources in Tanzania; in other countries, it is no more than 12 percent of total AIDS expenditures. The importance of donor funding outstrips its monetary value. First, it is insulated from domestic political pressures from patients and health care providers toward curative care, potentially at the expense of prevention. Second, it may play a catalytic role, showing the effectiveness of preventive expenditures and sparking contributions from other sources of funding.

The shares of public expenditures devoted to AIDS differ from total expenditure for AIDS by more than 1 percentage point only in Tanzania and Thailand. In Tanzania, the overall share is much higher due to substantial donor funding. In Thailand, the overall share is smaller because Thailand's extensive prevention program is predominantly publicly funded.

Variations in incidence explain why Tanzania, with the highest AIDS incidence (14.3 per 100,000) has moderately high expenditures per capita despite the lowest per capita GNP, while Mexico, with the lowest incidence, also has the lowest expenditures despite the second highest GNP.

Finally, political factors within the country and the donor community are also important. Tanzania's egalitarian ideals and relatively honest administration have long earned respect from the international donor community, and helped the country gain international support for its efforts to control AIDS. Thailand's openness in addressing AIDS through its National AIDS Task Force, chaired by the prime minister, has also brought support for that country's program.

[1] In the time available for this study, Brazilian data on AIDS expenditures could be obtained only for the state of São Paulo. With a 1991 population of 33 million, this *state* is larger than two of the five *countries* in the study (Tanzania and Côte d'Ivoire). As it contains 54% of Brazil's reported AIDS cases, the state's AIDS situation is believed to capture the reality of AIDS expenditures in Brazil. Economic and expenditure data were inferred from national statistics.

Box Table 5.1 Per Capita AIDS Expenditures Broken Down by Source of Financing in Four Countries and São Paulo State, Brazil

(1993–95 international dollars)

Source	*Tanzania*	*Côte d'Ivoire*	*Thailand*	*Mexico*	*São Paulo, Brazil*	*Average*
Public	0.20	1.34	3.45	0.76	5.78	2.31
(Percent)	(5)	(42)	(72)	(52)	(67)	(48)
Private	0.35	1.69	0.76	0.70	2.65	1.23
(Percent)	(10)	(53)	(16)	(47)	(31)	(31)
Donor	3.12	0.16	0.56	0.02	0.26	0.82
(Percent)	(85)	(5)	(12)	(1)	(3)	(21)
Total	3.68	3.18	4.76	1.48	8.69	4.36

Note: Columns arranged left to right from lowest to highest GDP.
Source: Background paper. Shepard and others 1996.

72 percent in Thailand. Second, donors clearly favor the lower-income countries over the higher-income ones, while national government spending on AIDS is positively correlated with income. And last, the low spending on AIDS in Mexico reflects the trend, discussed above, for the level of spending to be associated with the number of HIV-infected.

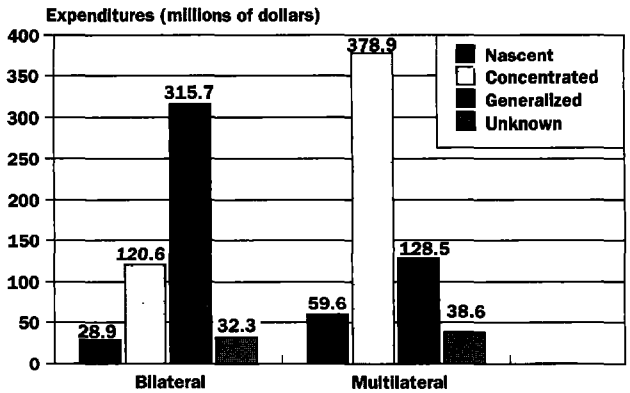
Bilateral and Multilateral Funding and the Stage of the Epidemic

HAVE BILATERAL DONORS AND MULTILATERAL ORGANIZATIONS responded differently to the epidemic? Figure 5.4 shows the allocation of approximately $1.2 billion in donor funding recorded in the GPA funding database over the period 1991–93 according to the type of donor and the stage of the epidemic in the recipient country.[5] While bilaterals allocated the lion's share of their AIDS assistance ($316 million, or 63 percent) to countries in the generalized stage of the epidemic, multilaterals allocated the bulk of their assistance ($379 million, or 62 percent) to countries in the concentrated stage of the epidemic. International NGOs (not shown) accounted for only a small portion of total funding reported in the database; the 16.4 million they provided was about equally split between countries with concentrated epidemics and countries with generalized epidemics.

This discrepancy between the funding patterns of bilaterals and multilaterals may have been only temporary and was perhaps partly due to two large World Bank loans made to India and Brazil during this period, both of which have concentrated epidemics. However, the pattern casts doubt on the frequent assertion that countries with advanced epidemics will encounter donor "fatigue" from bilateral donors and be forced to turn to multilaterals as the funders of last resort.

The observed pattern suggests instead that the bilaterals are particularly concerned about countries where the caseload is highest. Such behavior is consistent with two views of the motives of bilaterals. Perhaps they are altruistically responding to the suffering of countries with generalized epidemics. Or perhaps they view their self-interest as jeopardized most acutely by countries where there are large numbers of infected people. Whatever their motive, the bilateral focus on countries with generalized epidemics has left multilaterals to fund countries at the nascent

Figure 5.4 Donor Funding for HIV/AIDS Interventions in Developing Countries in 1993 by Type of Donor and Stage of the Epidemic



Source: GPA funding database as analyzed in Pyne (*background paper,* 1977, table 8).

Bilateral donors devoted the largest share of their AIDS funding to countries with generalized epidemics; *multilateral institutions focused their* funding on countries where the epidemic was still in the concentrated stage.

and concentrated stages. The outcome of this division of responsibility is that countries where the epidemic is nascent or concentrated pay higher costs for their external AIDS funding than those where it is generalized, but it does ensure that funds are available for all countries. It also permits donor governments to focus their resources on hard-hit countries where their constituencies are likely to most support spending.

NGOs Extend the Reach of Government and Donor Programs

Achieving the most cost-effective response to the HIV/AIDS epidemic requires cooperation between governments and NGOs, both nonprofit and for-profit. But working with NGOs can be costly for governments. Governments need to develop and apply guidelines and procedures to assure that the collaborative relationship operates with minimal friction and maximum effect.

Many of the highest-priority interventions require delivering highly differentiated services to small distinctive groups of clients, such as sex workers or poor AIDS-affected households. Effective service delivery requires the ability to learn from, and respond quickly to, the changing needs of a specific subpopulation. Because the needs of one client group are different from those of the next, unit costs are likely to rise rather than fall when the same organization attempts to deliver to multiple groups. In this situation, service delivery costs less if undertaken by

many small entities rather than by one large one, such as a government agency.

When a highly differentiated service has the attributes of a public good (as chapter 1 argues is the case for many AIDS-related prevention and mitigation services), local communities often spontaneously create a nonprofit, grass roots NGO to deliver them, endowing it with finances and volunteer labor (Weisbrod 1977, James 1982). However, in developing countries many local communities lack the internal organization or resources to create their own NGOs, and few have sufficient incentives or resources to subsidize services whose benefits extend beyond their boundaries. Thus, governments cannot expect spontaneously created NGOs to tackle the epidemic alone. NGOs need the public mandate, technical information, financing, and sector coordination that governments can provide, while governments need NGOs for their diversity, flexibility, potential cost-effectiveness, and credibility with marginalized people. By working together, NGOs and governments can be a formidable force in the struggle against HIV/AIDS.

How should governments select an NGO partner to deliver an AIDS-related service? Characteristics of the service to be delivered can often indicate the type of NGO that will be most appropriate, but ultimately governments will have to judge the qualifications of competing NGO candidates for the specific service delivery contract in question.

Once government has identified an AIDS-related service that is undersupplied by the private market, it must ask the question whether it is possible to (1) *precisely specify in a written contract* the quantity and quality of the service to be provided, and (2) *monitor the contract* for compliance. It might be difficult to specify a complete contract either because the quality of the service depends on subjective aspects of its delivery (for example, the kindness and solicitude of an individual delivering home-based care), or because even the physical aspects of service delivery are difficult to measure (for example, whether the condoms reportedly sold to sex workers really went to them or were instead sold to pharmacies catering to the middle class). Monitoring might be difficult for technical reasons (for example, the presence of a government representative in the room to watch an NGO member educate prisoners or sex workers might destroy the rapport between educator and clients), or a government might simply not have sufficient trained and motivated personnel to monitor a large number of NGO contracts.

When the contract can be specified accurately and monitored for compliance, the government can choose among all the available NGO

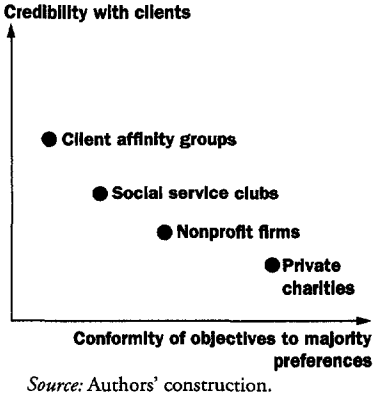
candidates, including both for-profit and nonprofit firms, depending only on their technical qualifications for the task at hand. In such circumstances the winning candidate will often be a for-profit firm with no direct ties to any client constituency, because they typically have the capability to mobilize the best expertise in the country, to produce outputs to international standards of excellence, to follow government or donor guidelines regarding records and accounts, to minimize costs, and to raise capital for expansion as needed to fulfill the contract.[6] However, since it typically has no other constituency to satisfy, a for-profit firm will reduce its costs, not only by eliminating waste, but also by reducing the quantity or quality of any unmonitored dimension of service.

When the contract for a highly differentiated service is difficult to specify or monitor, there is a strong argument for the government to favor an NGO that has its own constituency with a stake in the quality of the service. In contrast to the for-profit firm, which might divert resources in order to maximize profits, the nonprofit NGO has the incentive to divert resources toward the other services it provides or toward advocacy. Thus, governments considering delegation to an NGO as a solution to their inability to completely monitor performance must consider the conformity of the NGOs' overall objectives with the public interest.

In selecting an NGO partner, a government may face tradeoffs between credibility with clients, on the one hand, and accountability to majority preference and its own objectives and procedures, on the other.

Different types of nonprofit NGOs have different overall objectives. Broad-based public charities have large constituencies drawn from the general public and are therefore likely to have objectives in broad conformity with the general public interest. However, such broad-based public charities are likely to be less credible with the client groups than an organization composed of members of that group. Therefore, in selecting an NGO for a specific contract, governments may face a tradeoff between the degree to which the organization's objectives conform to those of the general public and the organization's effectiveness in working with the specific client group. Figure 5.5 shows the differing strengths of four stylized types of nonprofit NGOs—client affinity groups, social service clubs, nonprofit firms, and broad-based private charities—along these two dimensions. NGOs of all four types may be indigenous or may be the local affiliate of an international organization.

Figure 5.5 Differing Strengths of Four Types of Nonprofit NGOs



Source: Authors' construction.

These tradeoffs can be best understood by considering the two types of organization at either end of the spectrum. Because the management and staff of a client affinity group is typically drawn from and selected by the client group it is serving, this type of NGO will have the most credibility with its clients. Furthermore, to the extent that the services for which the government pays the organization are perceived by its mem-

bers as in their interest, the clients will themselves monitor its performance, greatly reducing government monitoring costs. For these reasons, client affinity groups can be very cost-effective in delivering highly differentiated services, such as peer counseling of sex workers.

However, the government's ability to delegate to a client affinity group is limited by the fact that the group's interests and objectives will sometimes diverge from those of the general public.[7] For example, it might not be a good idea to subcontract to a client affinity group of sex workers the collection of data on the proportion of its members who are HIV-positive, since the group might perceive that publication of such a number would be against its best interest. Moreover, some of the members of the affinity group may have socially unacceptable objectives that could be cross-subsidized from government resources. Thus, the divergence of objectives between the client affinity group and the government implies that a service contract with this type of organization will entail a risk of resource diversion toward the group's own objectives. Addressing this problem will increase monitoring costs.

Examples of client affinity groups that attain international recognition and receive international funding are multiplying. Perhaps the two earliest and best known such groups are WAMATA of Tanzania and TASO of Uganda. Founded by female relatives of people with AIDS, these organizations began as grass roots self-help groups providing basic home care services to home-bound or bedridden AIDS patients. Later, with outside support, they began to offer counseling for other HIV-infected individuals, as well as other services.

At the other end of the spectrum are the broad-based private charities. These organizations may be religious or secular but typically represent a large body of dues-paying members. Therefore, their constituency mirrors an important portion of the entire public, those who are willing to contribute regularly for charitable causes. Except for divergences due to religious belief, the interests of this mainstream constituency are likely to conform quite closely to those of the general public. However, private charities may not have credibility with all of the subpopulations that the government wishes to reach with its message and thus might be less effective delivering services to them. An example of a broad-based charity is the Thai Red Cross Society, which organized the first HIV/AIDS support group for affected individuals and their families in 1991 and only later developed the expertise to reach out to sex workers. That first sup-

port group was a powerful example that led the Red Cross and many different types of NGOs to create 80 such groups by mid-1996 (Phoolcharoen and Phongphit 1996).

Two other types of nonprofit NGOs fall between the affinity group and the large private charity. Social service clubs are *local* charitable organizations typically composed of middle class and elite community members who volunteer their time in order to improve their community. Their direct constituency, to whom they are primarily accountable, is their peer group within their own community. Social service clubs may be able to establish trust in client groups because service providers live in the same community with the clients and are volunteering their time. The members of such social service clubs have skills and education that can enhance the NGO's utility as a delivery organization. Although the interests of the typical social service club will conform to those of the local elite society, they may not exactly match those of the government or general public. For example, a social service club NGO providing AIDS information to truck drivers in Lahore, Pakistan, mentioned only one possible source of infection: blood transfusion ("Signs of Change . . ." 1996).

Nonprofit firms constitute the majority of NGOs in most countries. The distinction between a nonprofit and a for-profit firm varies from country to country and depends both on the tax laws of the country and on the vigor with which they are enforced. The most sophisticated nonprofit firms are like for-profits in that they can draw on the best national expertise and be held accountable to international standards. But nonprofit firms can, with greater ease and legitimacy than for-profit firms, develop a constituency, independent funding sources, and their own agenda of objectives. However, the nonprofit firm typically is constrained by a much smaller constituency, perhaps consisting only of the members of its board of directors and their immediate acquaintances. The rapid proliferation of nonprofit firms observed in some countries in response to the availability of service contracts suggests at least some degree of profit motive. For example, in the four years after the Brazilian government initiated a grant program for AIDS-related services, the number of NGOs registered with the Ministry of Health jumped from 120 to 480. A 1996 evaluation report that compared the earlier with the later group of NGOs found a change toward a more consolidated and formal organization structure, greater dependence on government funding, and a tighter focus on service delivery at the expense of public ad-

vocacy. This change suggests that the profile of the average Brazilian NGO working against AIDS is now closer to that of a nonprofit firm than to either a client affinity group (which would typically be less formally organized) or a broad-based charity (which would be less dependent on government funding).

Of course an NGO can embody the characteristics of more than one stylized type and some have objectives that conform closely to the public interest while also having high credibility with its clients. Box 5.2 describes one such program in Sonagachi, one of the largest red-light districts in Calcutta, India. The program combines the characteristics of the nonprofit firm and the social service club.

How well have governments done in delegating preventive or mitigating service delivery to NGOs? A program in Burkina Faso, one of the four West African nations with a generalized epidemic, offers an example of how government and NGOs acting in concert can extend the reach of their AIDS prevention and mitigation efforts, achieving better quality and access than if either had acted alone (Van der Gaag 1995). The project, which is supported by the World Bank, seeks to increase the use of condoms and other contraceptives and change behaviors that facilitate the spread of STDs. The government and NGOs share responsibility and

Box 5.2 Helping Calcutta Sex Workers Avoid AIDS

IN 1992 THE INDIAN GOVERNMENT, INTERNATIONAL donors, three local NGOs, and sex workers in Sonagachi, one of the largest red-light districts in Calcutta, joined together to launch a remarkably successful STD/HIV Intervention Program. The program, known as SHIP, has trained sex workers as peer educators, providing them with knowledge about STDs, the use of condoms, and negotiation skills, which are essential if sex workers are to convince their clients to use condoms without the support of pimps and brothel owners.

The success of this approach can be seen in several indicators. The number of condoms distributed through the program per month rose from 1,500 at the start of the program to 65,000 at the end of 1995. The number of abortions and the STD rate among sex workers in Sonagachi have declined significantly. And strikingly, HIV prevalence among the sex workers has remained at less than 1.5 percent.

Much of the program's success is credited to the sex workers who have become peer educators, since other sex workers regard them as trustworthy advocates of behavior change. Moreover, their employment in the program has brought community recognition, self-respect, and dignity, which have encouraged other sex workers to become peer educators, thus helping to ensure that the program will continue.

SHIP has been expanded into four other red-light districts in Calcutta; by 1997 it was reported to cover areas that include more than 80 percent of the sex workers in the city.

Source: Singh 1995

costs. Government roles include providing supplies at a subsidized rate; launching a national media campaign to promote the purchase of condoms; and teaching traditional healers to fill prescriptions, diagnose STDs, and refer cases to health clinics. Treatment of STDs will be handled primarily by NGOs, which are both nonprofit and for-profit firms; NGOs will also provide training to traditional healers. Both NGOs and public clinics will provide free condoms to people with high-risk behavior. The government has also provided encouragement and access to grant money for NGOs to enable them to offer additional services. This type of collaboration lays the foundation for increased coordination in the future between the two actors and fosters an environment of trust.

The largest and most elaborate effort to subcontract AIDS services to NGOs is probably the annual competition for service grants in Brazil. Supported by a World Bank loan, the program has funded all four types of nonprofit NGOs, including client affinity groups such as an association of transvestites in Rio de Janeiro, and nonprofit firms such as a university-affiliated research center in São Paulo. Clients have included children, hemophiliacs, pregnant women, feminists, transvestites, prostitutes, drug users, prisoners, truck drivers, and men who have sex with men. While grant competitions are managed centrally by an NGO liaison office attached to the Ministry of Health in Brasilia, state and municipal as well as federal government agencies provide complementary funding to, and collaborate actively in the execution of, funded programs. In the recent evaluation of this program, only 7 percent of the 111 current grantee NGOs were deemed to be falling short of their project objectives, and only 2 percent were having serious difficulties reaching their target populations. The financial control mechanisms employed by the liaison office, which include an annual visit to each grantee and audit of its accounts, has identified serious mismanagement in connection with less than 1 percent of projects. While the NGO liaison office constitutes a substantial new and expensive function for the Ministry of Health, in the four years of its existence it has facilitated the funding of 308 projects and disbursed a total of $14 million. Although the total impact of this activity on HIV infection rates in Brazil has not been assessed, it is clear that no government agency could have carried out directly so many diverse and precisely focused activities with these resources.

Unfortunately, to our knowledge there is no systematic study that compares the merits of alternative government procedures for evaluating

NGO proposals for an AIDS-related service delivery contract; nor are we aware of any study that compares ways for governments to monitor NGO performance under such a contract (National Research Council 1996, appendix to chapter 6). A starting place for such a study would be a comparison of the lessons learned in the recent service contracting experiences of Brazil, Burkina Faso, and Thailand. The availability of a set of standard, transparent, internationally recognized procedures for governments to follow in delegating service provision to NGOs could greatly facilitate government-NGO cooperation and minimize the disappointment of all parties concerned. AIDS donors, NGOs, government policymakers, and indeed the entire international health community would benefit from studies of the costs and effectiveness of alternative procedures for identifying effective NGOs to be service providers and for monitoring their performance.

Such studies are but one example of an urgently needed international public good, the topic of our next section.

Who Will Invest in New Knowledge and Technology?

DONOR SUPPORT FOR NATIONAL AIDS PROGRAMS IS IMPORTANT and, in a nascent epidemic, often critical; yet there are other crucial activities in which donors have a greater comparative advantage and a clearer public economics mandate. Because the benefits of prevention programs accrue primarily to a country's own population, all but the poorest national governments can and should finance a significant share of these costs. In contrast, donors are in a unique position to mobilize international support for the creation and dissemination of knowledge and technology that is transferable across countries. This section first discusses the organizational response and financial contributions of bilateral donors and multilateral organizations since the start of the epidemic. It then explains why knowledge and technology should be regarded as international public goods that the donor community alone is likely to provide. Finally, it discusses the need for specific types of knowledge and technology, including a vaccine, and organizational innovations for tapping the creative energy and resources of private firms.

The Evolution of Donor Policy

Although AIDS was first diagnosed in 1981, a systematic international and national response to the epidemic was not evident until the late 1980s. In many parts of the world, NGOs led the way in providing care and prevention services for individuals and communities affected by the epidemic (Mann and Tarantola 1996; *background paper,* Pyne 1997; Sittitrai 1994). The incremental and relatively limited response of WHO in the early years has been attributed to resistance by many member states to addressing the problem of HIV/AIDS (Panos Institute 1989). The establishment of the WHO Global Programme on AIDS (GPA) in 1987 helped to generate momentum for global prevention and mitigation efforts; that same year the U.N. General Assembly adopted a resolution encouraging U.N. agencies and other members of the U.N. family to initiate their own HIV/AIDS activities (Mann and Tarantola 1996).

During its early years GPA focused on helping national governments develop strategies to curb the spread of the epidemic. The year GPA was established, 170 countries requested assistance; by 1989 GPA had helped 151 countries to establish national AIDS programs, 102 countries to develop short term (6 to 12 month) plans, and 30 countries to develop medium-term (3 to 5 year) plans (Panos Institute, 1989). Largely as the result of the prodigious efforts of GPA, almost all countries today have national AIDS programs; most of them were formed between 1985 and 1990.

Meanwhile, in response to the U.N. General Assembly Resolution, UNDP, UNICEF, UNFPA, and UNESCO developed a joint HIV/AIDS strategy document that specified the resources and staffing that each would allocate to combating the epidemic. UNDP played the most prominent role, devoting 2.1 percent of overall agency resources and 0.43 percent of overall agency staff (Garbus 1996, as cited in *background paper,* Pyne 1997). Other multilaterals also initiated AIDS programs. In 1987 the European Union established the AIDS Task Force in order to fund AIDs-related programs in developing countries. The World Bank, which made its first loan exclusively to combat AIDS in 1986, had financed 61 projects in 41 countries, for a total commitment of $632 million by the end of 1996 making it the largest source of funds for confronting HIV/AIDS (*background paper,* Dayton 1996; World Bank 1996a).

In the late 1980s, the wealthier donor countries, in addition to making contributions to the GPA and providing support through the other multilaterals, also launched their own bilateral HIV/AIDS programs. By 1993 the largest of these was the U.S. program; launched in 1988, it includes the centrally funded AIDS Control and Prevention Project (AIDSCAP) as well as other activities initiated and funded by country USAID missions.[8] Other countries with large bilateral AIDS programs include Canada and Norway (launched in 1987); Denmark, Germany, the Netherlands, Sweden, and the United Kingdom (1988); Japan (1989); Belgium and France (1990); Australia (1991); and Switzerland (1993). Table 5.2 gives the total amount spent in 1993 by twelve major donor countries.

Under the leadership of the GPA, many national plans were written, many AIDS interventions were launched, and many national leaders became aware of the severity of the AIDS epidemic. For the first time, senior policymakers discussed high-risk sexual behavior and how gov-

Table 5.2 International AIDS Expenditures through Bilateral and Multilateral Channels, by Major Donor Countries in 1993 and Net Immigration in 1992
(millions of dollars except as indicated)

Country	*Bilateral*	*Multi-lateral*	*Both*	*Total*	*Net immigration (thousands)*
United States	82.0	34.0	1.0	117.0	793
France	18.5	1.4	0.1	20.0	86
United Kingdom	7.8	8.4	n.a.	16.2	147
Germany	7.8	0.9	4.1	12.8	788
Canada	8.2	3.1	0.3	11.6	195
Sweden	3.7	5.1	1.0	9.8	20
Norway	4.6	2.5	2.3	9.4	10
Denmark	2.1	2.7	4.1	8.9	12
Australia	7.1	0.5	0.3	7.9	48
Netherlands	2.7	2.4	0.9	6.1	43
Japan	1.0	4.5	n.a.	5.5	48
Luxembourg	1.0	0.3	n.a.	1.2	6
Total for 12 donors	146.4	65.9	14.1	226.3	2196

n.a. Not applicable.

Note: Funding totals exclude the AIDS share of national contributions to the multilateral lending agencies.

Sources: Laws 1996, table 35-1, and OECD 1995, table I.1, p. 24

ernments should respond. However, the epidemic continued to spread. In the early 1990s a group of member states, especially the donor governments then funding the GPA, became concerned that, as a part of WHO, it had insufficient mandate to coordinate the expanding efforts against the epidemic across the U.N. system. The donor community perceived that the GPA was unable to restrain donors from competing vigorously with one another instead of cooperating around a mutually agreed plan of action and came to believe it necessary to create a specialized international institution with an explicit mandate to coordinate the work of the other U.N. agencies at the country level. As a result they worked with UNDP, the World Bank, and other multilaterals to create a new special-purpose U.N. program dedicated uniquely to combating AIDS. The Joint U.N. Programme on AIDS, widely known as UNAIDS, officially began operations on January 1, 1996. It is based in Geneva and works most closely with its six cosponsoring agencies: WHO, UNDP, UNICEF, UNFPA, UNESCO, and the World Bank. It is governed by a Programme Coordinating Board (PCB) of 22 member states and 6 cosponsors, plus, for the first time in the U.N. system, 5 rotating nonvoting representatives of NGOs

The PCB has assigned UNAIDS four roles: first, *policy development and research,* which are to account for a larger share of UNAIDS' activities than it did of the GPA's; second, like the GPA before it, UNAIDS is to take the lead among U.N. agencies in providing *technical support* to national AIDS programs around the world; third, the program is committed more formally to *advocacy* on behalf of HIV/AIDS prevention and mitigation than was the GPA; and finally, UNAIDS is charged with the difficult task of *coordination* of its cosponsors and of other U.N. agencies. In this last role, it can potentially address the needs described in the next section by serving as a forum within which multilateral and bilateral donors can agree to donate more to AIDS research, prevention, and control than they otherwise would. Since cooperation with other donors at the country level entails substantially increased costs to each donor and deprives each of being able to claim sole credit for supporting the government on a specific activity, the incentives for such cooperation are weak. Since UNAIDS lacks the power to enforce cooperation from its co-sponsoring multilaterals, much less from the bilaterals, the hope for this form of donor cooperation lies in the good will of the staff of the various donors working at the country level—perhaps reinforced by the insistence of the national government.[9]

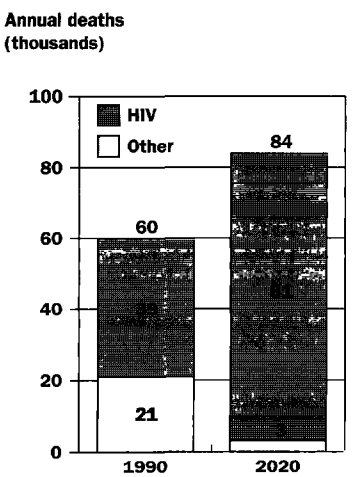
Donors Should Focus More on International Public Goods

One explanation for international assistance to help developing countries combat their AIDS epidemic is altruism. Just as famine and flood overseas can elicit an outpouring of generous assistance from more favored countries, the disease problems of low-income countries have often been the cause of generous government and private contributions.

However, in the case of an infectious disease that even the most sophisticated medical technology cannot always cure, like drug-resistant tuberculosis, the Ebola virus, or HIV, it is also in the self-interest of higher-income countries to help poorer ones combat the disease. Chapter 1 argues that there is a compelling role for government in the prevention and control of infectious disease. Figure 5.6 illustrates that in industrial countries HIV is estimated to have caused 65 percent of adult deaths from infectious disease in 1990 and, unless new antiretroviral therapies are effective and become widely available and affordable, is projected to account for over 96 percent of such deaths in 2020.[10] This is much higher than the HIV share of deaths from infectious disease in developing countries (see chapter 1).

Already the major cause of adult death from infectious disease in industrial countries, HIV could account for twice as many adult deaths by 2020, unless new treatments prove to be effective and widely affordable.

Figure 5.6 Deaths of Adults from HIV and Other Infectious Diseases in the Established Market Economies, 1990 and Projected to 2020



Source: Murray and Lopez 1996.

The current and future magnitude of HIV's contribution to the infectious disease burden within industrial countries' borders provides them with two reasons to spend money on HIV control in the low-income countries. First, any lessons learned about how to slow the spread of the epidemic, whether through behavioral modification or technological advances, are potentially applicable at home. Second, because HIV is infectious and the higher-income countries exchange thousands of tourists and attract thousands of legal and illegal immigrants to their shores every year, a reduction in HIV prevalence in low-income countries has a secondary effect of protecting the citizens of higher-income countries. Evidence suggests that countries are already aware of these arguments: the five countries that provide the most support to the global effort against AIDS also receive the most immigrants.

Assuming that self-interest is at least part of the explanation for the high-income countries' contributions to AIDS prevention in the developing world, will this be sufficient to generate the globally optimal expenditure on AIDS control in developing countries? Recall the discussion in chapter 1 of the difficulty in coordinating the contributions to mosquito control of all the individuals who inhabit mosquito-infested

land. Once the mosquitoes are gone, even people who have contributed nothing to the effort will benefit. Since each individual can hope to "free-ride" on the others' contributions, each holds back from giving as much as he would be willing to pay to end the mosquito infestation. A similar free-rider problem threatens to prevent the donor countries from voluntarily donating as much to the AIDS effort in developing countries as the abolition of the epidemic would in fact be worth to them. Because it suffers from this international free-rider problem, the effort to combat AIDS can be viewed as an international public good.

Another good on which it is easy to free-ride is new technical information, such as that generated by frontier medical research on treatment of AIDS and opportunistic illnesses, AIDS vaccines, or, to the degree that the results are transferable across countries, by operations research on the best way to market condoms to the people most likely to contract and spread HIV.

The solution to problems of local or national public goods is typically government intervention. At the local level it is in the interests of all the individuals concerned to support a government that taxes them all and uses the taxes to control mosquitoes and fight other infectious diseases. A similar argument can be made for an international government with the power to tax countries and spend the proceeds on international public goods such as the control of HIV/AIDS. However, since countries are unlikely to surrender their sovereignty to a supranational body for this or any other reason, another solution to the international free-rider problem must be found.

As an alternative to government, the individuals who live on the mosquito-infested land could negotiate with and persuade one another ("I agree to give more if you will") until sufficient money was raised among them all to solve their joint problem. While requiring more time and effort from individuals than the simple solution of a tax, the negotiated solution is potentially workable. At the international level, the United Nations is a forum for such negotiation and persuasion. Through it, countries can potentially be persuaded to donate their "fair share" to international public goods, such as AIDS control.

Thus from the public economics point of view, it is not surprising that donor countries have been willing to donate to AIDS control and to research on AIDS. However, given the free-rider problem, it is unlikely that the donor countries have committed as much as it would be in their joint best interest to provide.

Investments in International Public Goods

Information that can be generalized beyond the country in which it is produced can originate in either the social or the physical sciences. This section discusses both types of knowledge and a third type of international public good: international institutions.

The medical and social sciences of epidemiology, sociology, economics, and operations research are necessary to track the epidemic and to learn what sort of interventions prevent the most secondary cases of HIV infection per government dollar spent. Applied social science research offers the greatest hope for immediately slowing the spread of AIDS and of improving the well-being of the hardest-hit survivors.

The biological sciences, including microbiology, immunology, and virology, are making slow progress toward a vaccine and a cure. However, market imperfections mean that only a small share of biomedical research is designed to produce products or knowledge that will benefit low-income countries. WHO's Ad Hoc Committee on Health Research estimates that 95 percent of spending on health research and development is directed toward solving health problems that mostly affect the richest 10 percent of the world's population; only 5 percent of such spending is directed toward the diseases that account for most of the disease burden of the remaining 90 percent of the world's population (Ad Hoc Committee 1996, p. 102). An important role of governments, especially of donors, is to tilt incentives for medical research somewhat more in favor of the low-income countries.

A third important type of public good is the international institution that enables a group of countries to coordinate their efforts in their mutual best interests. Two types of international institutions are relevant to the AIDS epidemic: those among low-income countries in a region, and those that bring poor and high-income countries together in a common struggle against HIV/AIDS.

Information from the social sciences on behavioral interventions. Any successful preventive intervention among individuals who are very likely to spread the virus will produce positive spillover effects for the host country, in the form of reduced secondary transmission, which to some degree will also benefit other countries. But the most valuable output of such an intervention for the outside world is knowledge that can be applied in other countries. Donors who fund behavioral interventions

have a responsibility to ensure that the opportunities for the generation of new knowledge that arise from such programs are not wasted.

Although the imperative to learn from interventions seems self-evident, surprisingly little is being done in this regard. Recent literature reviews found that publicly available written evaluations exist for only about 10 percent of donor-funded interventions. Worse, of the few hundred published studies, very few were conducted with sufficient thoroughness to determine whether or not the intervention actually changed the risk behavior or HIV incidence (Choi and Coates 1994; Oakley, Fullerton, and Holland 1995; National Research Council 1991).[11]

The reviewers noted many deficiencies in the available studies. In some cases the lack of baseline data made it impossible to know whether a measured difference between a control and experimental group was due to differences in the two groups present before the intervention. In others, baseline data were collected but there was no control group against which the intervention group could be compared. Few studies attempted to determine whether changes in behavior were due to the intervention or to a placebo effect arising from the existence of the study. To be sure, ethical considerations and the complexities of research with human subjects often make it impossible to use a true experimental approach. An alternative is to have copious baseline data and implement quasi-experimental research designs (Moffitt, 1991). However, very few studies attempted such an approach.

Differences between the standards of knowledge for pharmaceutical products and those for behavioral interventions against HIV are striking. Since pharmaceutical products can be patented, private firms have a strong incentive to win the race to the market with a new drug. Governments have responded by requiring that companies prove the safety and the efficacy of new drugs, typically at a cost of millions of dollars. These sums are spent even on such relatively minor drugs as a new headache pill in order to ensure very high standards. The government does not hesitate to require such expenditures, knowing that firms will spend this money on any drug they think will pass the market test.

In contrast, preventive interventions that have the potential of producing far more public benefits, in the form of secondary HIV infections averted, are held to much weaker standards. Since these kinds of interventions can not be patented and they produce positive externalities, the public sector typically must finance them. If governments held them-

selves to standards as rigorous as those they set for pharmaceutical manufacturers, HIV prevention interventions would be forced to meet standards of rigorous design and data collection methods that would enable the public to learn whether an intervention will be safe and efficacious in subsequent application.

Although it might seem that safety would not be an issue, the examples of needle exchange programs and counseling and testing for HIV infection suggest the contrary. It is precisely the fear that the provision of clean needles might encourage injecting drug behavior and that an HIV testing program, even with the accompanying counseling, might reduce the propensity to practice safe sex among those who are told they are positive that often undermines public support for these programs. The public has an interest, and indeed a right, to know the magnitude of any such "side effects," as well as the efficacy of the intervention, before it finances its continuation or expansion.

Information from the biological sciences on medical interventions. With potential profits protected by the patent system and a large potential market in industrial countries for an AIDS cure, research by both private firms and nonprofit institutes has been intense in the industrial countries. The most recent product of that research is the triple-drug therapy discussed in chapter 4. As shown, the high costs of providing this therapy mean that it will not be of immediate benefit to the 90 percent of HIV-infected people who live in low-income countries.

Some observers, aware of these prohibitive costs and pessimistic about the prospects for successful behavioral interventions, believe that the only hope for reducing the impact of HIV on low-income countries is a vaccine. But vaccine research of all types faces serious impediments.[12] These include the increasing complexity and expense of vaccine research, the need to sell perhaps 40 million doses before production processes attain economies of scale; the inability of people in developing countries to afford expensive vaccines; and, perhaps most serious, companies' vulnerability to damage claims in the millions of dollars, if even one dose of a vaccine causes the disease it was designed to prevent (Ad Hoc Committee on Health Research 1996, Robbins and Freeman 1988). Partly as a result of these impediments, worldwide public and private sector investment in vaccine development totaled a mere $160 million in 1993, compared with an estimated $1.3 billion spent on other approaches to prevent HIV infection and about $5 billion spent on HIV-related health care (FitzSimmons 1996).

In order to achieve the substantial international public benefits of vaccines for the diseases of the developing world, governments must play a role. The May 1997 announcement of a U.S. goal to produce an effective AIDS vaccine within ten years as a U.S. national goal is welcome news not only for people in the U.S. but for people everywhere, including developing countries. His choice of a ten-year target date, which some experts believe to be too optimistic, is a sobering reminder that no vaccine will solve the AIDS problem in the developing world in the near future (see box 5.3.)

The need for government involvement is apparent not only for an AIDS vaccine, but also for other medical advances, which would substantially benefit people in the developing world who lack the purchasing power to motivate the pharmaceutical companies of the industrial countries. Examples include vaginal microbicides and simple inexpensive diagnostic kits for classic STDs such as chlamydia and chancroid that are currently difficult and expensive to properly diagnose (Ad Hoc Committee on Health Research 1996; Elias and Heise, 1994).

As the example of the hepatitis B vaccine discussed in box 5.4 makes clear, once a vaccine or other drug has been invented, tested, and produced on a large scale, its price is likely to fall to the point at which commercial firms can profitably manufacture and distribute it in large quantities at prices that are affordable in developing countries. Thus, the need for government involvement is likely to be temporary, but critical.

International institutions can produce international public goods. We noted above that the United Nations and other multilateral organizations can provide forums in which countries can persuade one another to contribute more than they otherwise would to the production of an international public good. Two additional types of international institutions that could solve specific kinds of international free-rider problems are private-public alliances for health research and regional cooperation bodies.

Public-private alliance for health research. WHO's Ad Hoc Committee on Health Research has recently proposed a "Health Product Development Alliance" between the public and private sectors whose mandate would be tightly focused on the development of a limited number of products for major causes of disease burden that are currently neglected by existing efforts (1996, p. 101). Such an alliance would use a variety of approaches to improve the incentives for private firms to develop pharmaceutical and other health care products urgently needed in developing

Box 5.3 Challenges To Be Overcome in Developing an HIV Vaccine

THIS BOOK ARGUES THAT DONOR COUNTRIES AND multilateral institutions have a comparative advantage in creating incentives for HIV vaccine research and that doing so would be in their own self-interest, as well as the interest of developing countries. Policymakers asked to provide such support, either directly or by supporting mechanisms to generate appropriate incentives, have a right to ask: Is an HIV/AIDS vaccine really possible? What challenges must be overcome?

The short answer is that many scientists believe that a vaccine is indeed possible, but that the challenges are very substantial. The most basic challenge involves the question of whether human immune responses can prevent HIV infection or prevent illnesses in a person infected with HIV after vaccination. Although most people infected with HIV develop a broad range of anti-HIV immune responses (antibodies are one example), these responses are generally not capable of eliminating the infection or preventing progression to disease. Nobody knows whether these same immune responses would be more effective if they were induced by a vaccine, before exposure to HIV.

Intriguingly, some individuals do seem to have protective responses that enable them to ward off either HIV infection or the effects of the virus. Examples include the apparent absence of HIV in half to three-quarters of babies born to HIV-infected mothers and apparent resistance to HIV infection in a few individuals who remain uninfected, despite repeated exposure to the virus. Similarly, a few individuals, called long-term nonprogressors, have carried the virus for ten or more years but have not become sick with AIDS. In addition, trial HIV vaccines appear to have been effective in protecting chimpanzees from HIV, while other vaccines appear to protect monkeys from the simian immunodeficiency virus or SIV. All of these responses could be due at least in part to a strong immune response.

A second set of challenges involves the high degree of genetic variability in HIV: there is no guarantee that a vaccine developed to protect against one strain would necessarily protect against the others. HIV strains from different parts of the world have been grouped into ten genetic subtypes: A, B, C, D, E, F, G, H, I and O. Most of these subtypes

countries. These mechanisms, some of which require changes in the tax codes and legislation of participating countries, include:

- direct support for the costs of the early stages of product development
- analysis of the potential market for a specific new product that would primarily benefit people in the lowest-income countries[13]
- tax relief and or streamlined regulatory controls for the development of products for low-income countries
- worldwide tax breaks for pharmaceutical companies and extended periods during which they have the exclusive right to sell the drug (provisions similar to those of the U.S. Orphan Drug Act of 1983)

are present in Africa, subtype B is most common in developed countries. Encouragingly, recent research indicates that the genetic differences among subtypes may not necessarily affect the way that they respond to a vaccine. Nonetheless, the issue remains high on the vaccine research agenda and is of particular importance for those developing countries where several subtypes are present.

The third set of challenges involves the need for human trials; and a related need to ensure that these are conducted according to accepted standards of medical ethics. Despite the progress in testing vaccines on chimpanzees and monkeys, human trials are essential to determine the safety and effectiveness of an HIV vaccine. More than 20 candidate HIV vaccines have been tested in Phase I and Phase II trials with more than 2,000 HIV-negative volunteers, mostly in the United States. These trials have indicated that candidate vaccines are safe (Phase I) and that at least some of them induce HIV-specific immune responses (Phase II) which could confer protection against HIV infection or disease. However, because deliberately exposing trial volunteers to HIV is unthinkable, information on protective efficacy can only be obtained from large-scale Phase III field trials.

Multiple Phase III trials will be necessary to evaluate the protective efficacy of different vaccine concepts, against different HIV subtypes, against different routes of transmission, and under different health, nutritional, and/or genetic conditions which may be present in different countries where the vaccine is to be used. In order to gather the necessary information, these trials must be conducted in industrial and developing countries. The United States has announced its intention to proceed with a U.S. Phase III trial within the next two years, and discussions are underway to conduct Phase III trials in selected developing countries. The results of these trial may become available early next century. Of course, there is no guarantee that these trials will lead to an effective vaccine. However, without proceeding to Phase III trials, an HIV vaccine will never be available.

Source: Esparza, Heyward, and Osmanov 1996; FitzSimmons 1996; Gold 1996; International AIDS Vaccine Initiative 1996; Johnston 1996, and Osmanov 1996.

- advance guarantee of a market for a health product that meets certain objectively verifiable criteria.

The last idea is a particularly innovative approach to solving the incentive problem. One way to implement the idea would be for one or more low-income countries with a specific disease problem not being adequately tackled by biomedical research to offer to buy a large quantity of the first drug or other medical product that meets precise specifications, regardless of the identity of the developer. To be credible, this offer would be guaranteed by a consortium of international donors and lenders. The total financial package could include, for example, grants from bilateral donors and a mixture of soft or market-rate loans from multilateral institutions or even commercial lenders. In the purest form

Box 5.4 Can Companies Make a Reasonable Return from the AIDS Vaccine?

"I CAN ONLY TELL YOU ABOUT THE EXPERIENCE with hepatitis B vaccine, which was developed 20 years ago. In the first couple of years the price of the vaccine was as high as $25 to $40 a dose, with three doses needed [US$50 to $80 at 1997 prices]. So companies aimed for the upper end of the market and the market was stalled. The price could not go too high despite the global need for the vaccine. In china alone, with 1.2 billion people, the hepatitis carrier rate is 10 percent. Yet many countries were practically out of the purchasing market.

"When the recombinant hepatitis B vaccine was developed, the price decreased a little. Now the price has come down to probably US1.00 per dose, [less than two percent of the initial price]. And four years ago, Thailand put the hepatitis B vaccine on the general program of immunization. So all babies in our country now receive the vaccine.

"Companies must realize that the potential market for an HIV vaccine in the developing world is tremendous, but it can only be captured by using two or three price tiers. The high price would be for industrialized countries, while developing countries would have another price. Companies must profit from their investment. And developing countries must be able to afford the vaccine. Figuring out how to work this out is a very important challenge for government, business, scientists and international organizations."

Dr. Natth Bhamarapravati, chairman, Subcommittee on HIV Vaccine Trials developer of a vaccine against dengue hemorrhagic fever, and former president of Mahidol University, Bangkok, Thailand. From an interview published in IAVR (1997b).

of the guarantee, none of this financing would be released until the desired product was approved by independent testing laboratories. Only then, as the culmination of a period of research and development that might last as long as five or ten years, would the financial instruments be executed, the donor contributions delivered, the international loans disbursed, and the delivery and distribution of the product initiated.

The most urgently needed anti-AIDS technology—a vaccine to protect against HIV infection—is already the subject of a public-private partnership. Established in 1996, the International AIDS Vaccine Initiative (IAVI) is the first attempt to organize a health product development alliance along the lines recommended by the Ad Hoc Committee on Health Research. First proposed by the Rockefeller Foundation, the IAVI has attracted support from the Merieux Foundation, UNAIDS, and the World Bank, and Until There's A Cure, an NGO with links to the AIDS community. Its mandate is to accelerate the development of HIV vaccines appropriate for worldwide use by reducing obstacles to vaccine development and filling gaps in the current effort. In 1997, IAVI's first full year of operation, participants expected to devote a total of $2 million to $4 million in direct support of research on an AIDS vac-

cine (IAVR 1997a). In light of the U.S. initiative to produce an AIDS vaccine, the challenge to IAVI will be to assure that vaccine development programs do not neglect the needs of low-income countries, where 90 percent of HIV infections occur.

Other important potential applications for a public-private alliance in the AIDS arena lie in the development of vaginal microbicides and virucides, which would allow a woman to protect herself from HIV infection without asking her partner to wear a condom. Poor women in developing countries are often at a particular disadvantage in negotiating condom use with their partners; yet these same women are also most likely to lack the purchasing power to buy a vaginal virucide. By guaranteeing the market, a public-private alliance would provide an incentive for pharmaceutical companies to develop such products. Public-private partnerships could also offer incentives for development of reliable, inexpensive diagnostic tests for STDs such as chlamydia, which are prevalent in developing countries and accelerate the spread of HIV, and to stimulate research that would lower the cost of antiretroviral therapies.

Regional cooperation. When an AIDS epidemic first comes to public attention, many people and some governments blame neighboring countries or "foreigners" generally for the introduction of the virus. But every infectious event, whether through sex, or needle sharing, or transfusion, involves two people. One of them must be a national resident if the epidemic is to enter the national population. For the epidemic to then spread within the country, there must be additional infectious events involving residents. Thus, in any country with a serious AIDS problem, the national population must have taken an active role in its spread.

Blaming foreigners for the spread of the disease within the national population is not only illogical, it also undermines efforts to confront the epidemic. First, blaming foreigners gives people who are not in direct contact with foreigners a false sense of security, thus hindering efforts to encourage safer behavior. Second, blaming foreigners may worsen relations with neighboring countries, making it more difficult for governments to coordinate prevention and mitigation efforts. Soured relations may also threaten other benefits of economic cooperation, such as those from migrant workers or from commerce.

Rather than casting blame, a more productive approach would be for governments in neighboring countries to discuss ways in which they can cooperate to overcome the *shared* problem of AIDS. For example, neighboring countries can agree not to attempt to screen out HIV-positive

migrants; to share information about prevention measures and the course of the epidemic; to coordinate policies on AIDS-related social issues such as prostitution and drug addiction; and to offer similar levels of subsidies for AIDS treatment and assistance to affected households, to avoid creating incentives for HIV-positive people to migrate in search of higher subsidies. Donor governments and multilateral institutions can play a useful role in supporting such regional dialogues.

Overcoming Political Impediments to Effective AIDS Policy

THE POLICY MESSAGES OF THIS REPORT ARE NOT STARTLING new findings. The call for preventing infections among people most likely to contract and spread the virus is a reiteration of arguments for the control of the sexually transmitted diseases that were already recognized 20 years ago (Brandt 1987). The warning that subsidizing AIDS treatment more generously than, say, cancer treatment endangers the quality and accessibility of health care for everyone is familiar from discussions of health sector reform (World Bank 1993c). The finding that the poorest households are most vulnerable to the shock of an AIDS death is consistent with previous work demonstrating that poor households have difficulty weathering other kinds of shocks. The conclusion that "survivor assistance" provided by the government or NGOs should be targeted to the poorest AIDS-affected households follows logically. The advantages of decentralizing and privatizing government service programs are well established. At the level of international public goods, the need for better knowledge and technology for developing countries has been glaringly apparent for years.

If these messages are familiar, why are they not being followed in countries around the world? The answers clearly lie outside the technical discussions that have occupied this book so far and fall instead into the domain of political science, a less-developed discipline than either epidemiology or economics, with fewer guiding principles. However, the examples of countries that have achieved modest success in confronting AIDS suggest some lessons.

Interest Groups and AIDS Policy

Many groups with divergent interests affect the design and implementation of HIV/AIDS policy, and the mix of groups and their relative strength changes over the course of the epidemic. At the outset, few groups are concerned. However, as the epidemic progresses, the number of interest groups increases and the politics of AIDS becomes ever more complex.

Early in the epidemic, physicians and medical suppliers have an interest in learning how to treat AIDS and how to protect the safety of health care workers from needle sticks and other accidental infection on the job. A group that emerges at about the same time is people infected with HIV. Although the number of these individuals is initially small, and they may at the outset lack political influence, they are often highly motivated to lobby government, since their very lives may depend on persuading the government to subsidize AIDS treatment and care. As the epidemic spreads, the size of this group and its potential to influence government policy increase. Often overlapping with this group are individuals who practice high-risk behavior but who are not infected—or hope they are not infected. Although these people have a strong interest in government-subsidized prevention for themselves, in the early stages of the epidemic they are rarely well organized enough to lobby on their own behalf. Yet increasingly the AIDS epidemic has induced people with the highest risk behavior to organize in order to promote their interests. Furthermore, NGOs working on HIV prevention and AIDS care become advocates for the populations they serve. Finally, as the number of AIDS cases increases, insurance providers and employers will become concerned about rising health care costs and increased sickness and death among employees.

At all stages of the epidemic, the largest interest group is the one *least* motivated to learn about the issues or lobby on its own behalf: the general public of HIV-negative individuals who rarely practice risky behavior. Like most of those with riskier behavior, these people at low risk have an interest in marriage, in conceiving and raising healthy children, and in seeing them married, all without the risk of HIV infection. Although not themselves suffering from AIDS, in a generalized epidemic these people find that the price of health care has greatly increased because of higher demand and increased costs. Some of these people are the poor who have never suffered an HIV infection or death but nevertheless need

help in order to escape poverty. Some suffer dangerous chronic diseases other than HIV, such as cancer, kidney disease or diabetes, and cannot afford the treatment to keep themselves alive.

To be truly democratic, a society must find ways—for example, opinion polls or elections—for the many with a small interest in an issue to express their views inexpensively and influence the course of events. Politicians facing a ballot box have an incentive to seek the opinions of ordinary people and consider these together with the views of smaller, more vocal interest groups. A government that is responsive to the nation's political leadership will follow suit.

However, in the case of HIV/AIDS, the policies that will best protect the average citizen are not necessarily popular. Politicians and government officials, who may themselves be unsure of the best policies for confronting the epidemic, have the difficult task of explaining to the public why taxes should be spent subsidizing condoms and STD treatment for prostitutes and clean needles for injecting drug users. Conservative social and religious groups, perhaps not fully appreciating the great harm that can arise from failing to prevent the spread of HIV, may oppose efforts to reduce the risks involved in commercial sex or injecting drug use, or to encourage condom use generally, out of concern that these efforts will encourage behavior they regard as immoral. Business interests, having immediate profits in mind, may apply the kind of pressure to government that was dramatized in Henrik Ibsen's 1883 play *An Enemy of the People:* a physician who discovers that his Norwegian town's polluted public baths are a threat to tourists' health is pressured to keep silent by the democratically elected mayor and his supporters, and ultimately declared to be an "enemy of the people" himself.

Mexico and Thailand offer two dramatic examples of AIDS policymaking in the midst of all these conflicting pressures. The former coordinator of Mexico's National Committee for the Prevention and Control of AIDS (CONASIDA), Dr. Jaime Sepulveda, has summarized the responses of government, NGOs and mass media during three periods from 1985 to 1992 (Sepulveda 1992). As shown in table 5.3, the government response evolved from "erratic and medicalized" in 1985–86 to "reactive and participatory" in 1989–92. Strikingly, organizations of homosexual and bisexual men and liberal NGOs were initially silent and then actively opposed to the AIDS control program. Through continued efforts to engage these interest groups, government policymakers eventually won them over; by the third period they were active participants

Table 5.3 Responses to the AIDS Epidemic in Mexico: Government, NGOs, and Mass Media

	Nongovernmental response		
Government response	*Gay and liberal NGOs*	*Pro-Vida and other right-wing groups*	*Mass media response*
Erratic, medicalized, 1985–86	Silence	Slight opposition	Alarmist
Planned technocratic, 1987–88	Anger, protest	Strong opposition	Reactive only to "sensational" news
Reactive, participatory, 1989–92	Protest participation	Lawsuits, marches	Fatigue

Source: Sepulveda 1992

in carrying out prevention programs. Meanwhile, Pro-Vida, a conservative religious group, and other right-wing organizations became increasingly outspoken, if ultimately ineffective, in their opposition.

Sepulveda includes the mass media among the actors in the shaping of Mexican AIDS policy, but he describes their role as only occasionally helpful. As late as 1992 he characterizes media coverage as continuing to focus on the number of AIDS cases, while neglecting other crucial information about the disease: "In spite of the constant presence of information about AIDS in the mass media, specific aspects of the disease are not addressed so that collective accurate knowledge about AIDS is not generated nor is participatory discussion promoted." He points out that television and radio do a somewhat better job than print media, sometimes using live programs with interviews, phone-in questions, and audience participation to generate discussion (Sepulveda 1992, p. 143). However, he concludes that, by the third period covered in the table, the media have passed from "alarm" to "fatigue" without ever providing the information that the public needs to understand the epidemic.

An authoritative case study of Thailand highlights other political problems that can arise in designing and implementing an effective response. In the second half of the 1980s, as evidence that HIV was spreading rapidly among Thai sex workers and injecting drug users accumulated, a government official insisted that the situation was under control: "The general public need not be alarmed. Thai-to-Thai trans-

mission is not in evidence." In keeping with this sanguine view, the government spent only $180,000 on HIV prevention in 1988 (the GPA committed $500,000 to Thailand that same year). The study suggests that during this period of democratic rule, in a pattern reminiscent of that described by Ibsen in Norway 100 years before, "high-level cabinet pressure was brought to bear on the ministry of public health not to publicize the emergence of increasing HIV in the population" (Porapakkham and others 1996, p. 8).

Although Thai national funding increased to $2.6 million by 1990 (and donor funding reached $3.4 million), the government did not initiate a high-profile, aggressive campaign to control HIV until 1991–92, when the country was led by Premier Anand Panyarachun, who had been appointed by the leaders of a military coup. The new prime minister took several important steps that have since been credited with helping to slow and perhaps reverse the epidemic in Thailand. First, he shifted control of the AIDS control program out of the Ministry of Public Health to the Office of the Prime Minister, giving it added political clout. Second, he increased the budget almost 20-fold, to $44 million in 1993. Perhaps most important, he initiated the "100 percent condom program" focused on brothels, as described in chapter 3. Since then Thai funding to AIDS control has continued to increase, reaching more than $80 million in 1996, a sum equivalent to more than one-quarter of the *entire* international donor commitment to AIDS control in developing countries that year.

The high-profile campaign was initially unpopular with the influential tourism industry, and tourism indeed temporarily declined. However, once AIDS had a prominent place on the national agenda, opposition to the measures gradually faded—and support increased. "There were too many vested interests in maintaining the high status of the national AIDS program to make a policy reversal," the case study noted. "In particular, the enormous budget allocated to the HIV/AIDS prevention and control campaign was vigorously coveted by a wide-range of participants" (Porapakkham and others 1996, p. 17). Thus, the policy situation in Thailand had come full circle, from one in which special interest groups used their influence to oppose a vigorous prevention policy, to one in which the participants in the prevention program assumed the role of vested interests in sustaining it. Since all programs that involve significant public expenditure develop their own constituencies, policymakers must be careful at the outset to initiate programs that are

in the interest of the general public, as appears to have been the case in Mexico and Thailand.

Donor Assistance and Public Consensus

Although the politics of AIDS will differ greatly across countries, bilateral donors and multilateral organizations can help to encourage public consensus on effective, low-cost responses to HIV through direct funding and through a judicious use of encouragement and conditionality. For countries that are still in the nascent stage, where citizens are not sufficiently aware of the epidemic to support funding activities from public revenue, donor funding can be critical in gathering surveillance data or establishing a demonstration project. Sometimes donors can require certain actions as a condition of the receipt of an aid package. However, the leverage afforded by conditionality is often quite limited and may depend on all donors agreeing to the desirability of a given condition. Conditionality is more likely to work if the government (or important elements of it) intends to carry out the action in any case but has not yet made it high enough priority to get it accomplished.

One example of the effective application of conditionality occurred during negotiations of the $70 million World Bank loan to India. In 1991 the government's initial posture was that there was no need for specific interventions with sex workers and their clients in Indian cities. One influential government figure asserted that "in India AIDS is not sexually transmitted." As a result of a position taken jointly by GPA and the World Bank, the government of India agreed to double the size of its proposed AIDS program to include interventions with those most likely to contract and spread HIV, to be implemented by NGOs. Since then the extent of the sexually transmitted AIDS epidemic in India has become obvious to the highest levels of government, as evidenced in a 1997 speech by Prime Minister Deva Gowda. Attention has turned from whether interventions with those who practice the riskiest behavior are necessary to how best to implement them.

These instances suggest that donors can significantly improve the timing and quality of country-level responses to HIV/AIDS. However, the evidence cited in chapter 3 and earlier in this chapter suggests that donors have often waited until AIDS has moved beyond the nascent stage before providing support. Although the data suggest that multilateral institutions are more likely than bilateral donors to direct resources

to countries at the concentrated stage of the epidemic, neither supports countries sufficiently at the nascent stage, when the largest benefits can be achieved with the smallest expenditure. We return to this issue in the policy recommendations in chapter 6.

Individuals Who Make a Difference

Although this chapter, and indeed most of the book, has focused almost exclusively on national governments, donors, or groups, sometimes a courageous individual changes the way an entire nation or society thinks about HIV/AIDS, opening the way for a more effective and compassionate response. These individuals may be national political leaders or other well-known figures, such as athletes or movie stars, who are not themselves infected. Or they may be individuals, famous or not, who are infected with HIV and summon the strength and courage to serve as advocates for a sound national response.

Examples of such individuals in the industrial countries are known worldwide. Actress Elizabeth Taylor has made fundraising for AIDS a nearly full-time occupation. Others, such as the late Princess Diana of Britain, have reduced prejudice and fear simply by being photographed embracing a child with AIDS. Among U.S. athletes, diver Greg Louganis, the late tennis star Arthur Ashe, and basketball's Magic Johnson have each helped to raise awareness of the disease by coming forward with the news of their infection.

But while these figures are widely known and often admired around the world, the fact that they are from industrial countries means that their high-profile activities have only a limited ability to overcome denial in developing countries. People in a poor country learning that a movie star or athlete in a rich country has become infected may continue to think, "It can't happen here"—even though 90 percent of HIV infections occur in developing countries. Because of this, every country and all societies need local individuals with the courage to advocate an effective response to HIV/AIDS. Where such individuals have stepped forward, their efforts have often had a significant positive impact on public awareness and attitudes.

Fortunately, as the understanding of the epidemic increases, a growing number of individuals in developing countries are demonstrating such leadership. To mention just three examples: the speech by Indian Prime Minister Deve Gowda naming HIV/AIDS as a national health problem helped to overcome the idea that India was somehow not

threatened by the virus. Zambian President Kenneth Kaunda, in acknowledging publicly that his son had died of AIDS, helped to energize his country's response to the ravages of a widespread epidemic. Finally, Marina Mahathir, daughter of Malaysian Prime Minister Mahathir Mohamad and the president of the Malaysian AIDS Council, a nongovernmental organization, has spoken out in her own country and internationally for greater political commitment to mobilizing the resources necessary for effective prevention.

Some of the most compelling advocates of an effective response to the epidemic are people who are themselves infected with HIV. Philly Lutaaya, an enormously popular Ugandan singer and songwriter, became the first prominent African to acknowledge that he was infected with HIV. He spent his remaining healthy time writing songs about his battle with AIDS and touring churches and schools throughout Uganda to spread a message of prevention and hope. After Lutaaya's death at age 38, the Philly Lutaaya Initiative continued his work. With assistance from UNICEF, the Initiative sponsors lectures in schools and communities across Uganda highlighting personal testimonials of hundreds of people infected with HIV. A 90-minute television documentary on Lutaaya's struggle with AIDS released in 1990 reached millions of television viewers around the world (Graham 1990, Kogan 1990, McBrier 1995).

But a person need not be a celebrity prior to infection for personal testimony to have a powerful impact. Perhaps the most courageous individuals are otherwise ordinary people who, after becoming infected, step forward to acknowledge their disease and, in the face of discrimination and persecution and with very limited personal financial resources to draw upon, speak out for a more effective public response. All these individuals serve as a powerful example to those who meet them, a few become nationally known. Box 5.5 describes how one such individual, a factory watchman, raised awareness about HIV/AIDS in Thailand.

■ ■ ■

This chapter has analyzed the roles of governments, donors, and NGOs in financing and implementing effective policy responses to HIV. It has argued that each of these types of organizations has particular strengths and that for an effective global response to HIV/AIDS, all of these groups, plus countless exemplary individuals, must work toward a common goal of overcoming the epidemic.

As the chapter relates, much has already been done; yet the analysis also identified some key shortcomings. Governments have the unique

Box 5.5 Someone with AIDS Who Made a Difference

WHEN CHA-ON SUESUM CONTRACTED HIV FROM A blood transfusion he was fired from his job as a factory watchman; his wife, who worked in the same factory, was also fired. In 1987, Cha-on decided to make his case public and accepted a job as an AIDS educator with the Population and Community Development Association of Thailand, a nongovernmental organization.

Cha-on soon appeared on national television talk shows and on the front pages of Thailand's biggest newspapers. The result was an outpouring of public sympathy for his own hardship, and a turning point for society as a whole in dealing with the epidemic. While Cha-on was still well, his activities focused attention on discrimination against those infected with HIV. However, as the entire nation witnessed his rapid progression to clinical AIDS and finally his death, another critical issue was brought to the fore. Thais began to understand that AIDS was real and that they themselves could become infected and die. Cha-on's lasting legacy was stronger support for and receptivity to HIV prevention efforts throughout Thailand (Porapakkham and others 1996).

responsibility for coordinating their country's overall response to the epidemic. As part of that responsibility, many governments, especially in developing countries, should take on greater responsibility for basic epidemiological surveillance and prevention activities. NGOs have often played an important role in prodding governments into action; governments that select appropriate NGO partners can often greatly increase their reach, especially in working with marginalized groups to help people who practice the riskiest behavior to protect themselves and others. Donors and the multilateral institutions they support have provided significant financing and other assistance for all of these efforts. But donors need to do a better job of focusing attention and resources on countries where the epidemic has yet to attract policymakers' attention, especially countries with nascent epidemics, where prevention is most cost-effective. Moreover, international donors have the unique ability to mobilize financing and other support for international public goods, such as evaluation of alternative approaches to preventing HIV and mitigating the impact of AIDS, as well as research on a vaccine that would work in developing countries. Such efforts are in the donors' own best interest, as well as the interest of developing countries, and deserve much greater attention and support. Finally, donors have the responsibility to coordinate their activities at the country level, both among themselves and with the national government.

Although there are no easy solutions to the technical and political problems posed by the HIV/AIDS epidemic, examples from countries around the world offer hope that people of good will, working together, can overcome this global epidemic.

The next and final chapter in the book summarizes its main policy recommendations and looks toward the future.

Notes

1. This calculation uses the estimate of $4.8 billion for total health assistance in 1990 (World Bank 1993c, p. 166).

2. Although national AIDS program spending underrepresents total national spending on the AIDS program, it probably captured most of it in 1993.

3. The effect of donor spending on national spending was estimated under the maintained hypothesis that national funding does not affect donor funding by including donor funding as a fourth regressor in the equation to predict national funding. After controlling for (the logarithms of) GDP per capita, population and the number of HIV-infected people, the coefficient of (the logarithm of) donor spending is 0.01 with a t-statistic of 0.08. The instruments necessary to identify a model of simultaneous causation between national and international funding are not available; therefore, such a pattern cannot be ruled out.

4. These two relationships do not appear to be the result of a national decision to reduce AIDS funding in response to the perception that donors are providing such funding already. See note 3.

5. According to the available data, multilateral funding totaled $605.7 million during this period, 22 percent more than bilateral funding. The World Bank made two large loans, one to India for $70 million and one to Brazil (the total size of the Brazil project was $250 million, of which $160 million was borrowed from the World Bank). The loan to India was at a concessional interest rate accorded to the lowest-income countries and thus approximately equivalent to a $50 million grant (Arias and Servén 1997). The loan to Brazil was at higher rates accorded to less-poor countries, so that the equivalent grant would be significantly smaller. For the purposes of this analysis, the difference between loans and grants has not been taken into account.

6. Tax law typically forbids nonprofit firms from selling shares of the firm to raise capital, as for-profit firms are free to do.

7. See, for example, "NGOs Flout AIDS Control Policy" (1994). We set aside the fact that the government may imperfectly represent the interests of the public.

8. In late 1997, USAID was preparing programs to succeed AIDSCAP.

9. Given a constant total donor AIDS budget in a recipient country, the country would benefit if its AIDS programs were developed as a coherent whole and all donors agreed to pay a share of the total. However, experience shows that the amount of any given donor's expenditure in a country is not usually fixed. In those cases where the donor's budget for the country is fixed in the short run, it is still likely to be fungible across sectors. Thus, the amount of AIDS financing from a given donor depends upon how much its representatives want to fund the AIDS projects that the government allows it to fund. It is often alleged that donors prefer to "put their flag" on a project, so that they can claim credit for it in the international community and to their domestic constituency. These incentives lead to a situation in which no donor wants to fund the overhead costs of an AIDS programs or a portion of any part of the program. Any attempt to coordinate donors, whether bilateral or multilateral, must struggle against these perverse incentives.

10. This projection is based on the assumption that the number of incident cases will stabilize in every region of the world once incidence falls to half of its peak value. "The choice of an equilibrium value for incidence that is 50 percent of peak incidence is entirely arbitrary and does not take into account advances that may be achieved in behavior modification or technological breakthroughs such as a vaccine or more effective chemotherapy. Consequently considerable caution is required in interpreting these HIV projections, particularly for the years beyond 2005" (Murray and Lopez 1996, p. 347).

11. See the examples in chapter 3 and the summary of rigorous evaluations of preventive interventions in developing countries in appendix A of this report.

12. A "decrease in the willingness of pharmaceutical companies to become involved in vaccine research, development and manufacturing" was observed as early as 1985 (Institute of Medicine 1985, p. viii).

13. The behavioral sciences can also contribute information that will increase the profitability of a medical intervention. For example, the European Commission is sponsoring a "market perspectives study" on vaginal microbicides in Brazil, Côte d'Ivoire, Egypt, India, Kenya, the Philippines, Poland, and South Africa. A finding that women are willing to pay for this drug would improve the incentives for private pharmaceutical firms to invest in their development (AIDS Analysis Africa 1996).