

Incentives and Institutions in the Provision of Health Care in Developing Countries: Toward an Efficient and Equitable Health Care Strategy

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IHEA Meetings, Rotterdam
June 7, 1999

Introduction

It has now become commonplace to argue that the objective of development is more than just an increase in GDP. There is growing consensus, for instance, that what we seek is improvements in living standards and, more broadly, democratic, sustainable and equitable development.¹ Other important measures of success in development — besides per capita GDP — are health indicators such as, for example, longer life-spans, low infant mortality, access to primary health care, and access to clean water. There have been some marked successes in these areas in recent years, as such indicators have improved significantly in many countries in both the industrialized and the developing world. In the last forty years for example, we have seen low-income countries add fifteen years to their populations' life expectancy and adult mortality drop by seventeen percent.²

And yet, behind these successes lie some troubling facts and trends. Most worrisome is that many of the achievements in health care over the past few decades have not reached the poorest among the poor. The lowest quintile in most countries within the developing world experiences markedly worse conditions than others. This is perhaps not surprising, because it is these individuals who typically lack access to clean water and adequate nutrition — let alone health care facilities. This simple observation by itself brings home important messages:

¹ See for instance Stiglitz (1998a).

² Statistical Information and Management Analysis (SIMA) database. See Figure 1.

- If we wish to look at aggregate health status indicators, we should focus our attention on those of the very poor. It is among the very poor that the greatest inequities exist and where there are the highest potential benefits per dollar spent.
- Programs aimed at improving access to clean water, improving sanitation and nutrition (or at least improving the plight of the poorest, so that they have the resources to buy more food) may yield higher benefits (per dollar) than programs aimed at improving health directly.

The World Bank has recently been emphasizing more holistic approaches to development, stressing the interconnections between the various sectors of society and economy.³ The provision of better infrastructure may prove to be one of a variety of effective ways of improving health. Health is important because it affects the ability of children to learn, of workers to produce and is, in general, fundamental to the human condition.

The fact that the poorest among the poor have not shared in the progress in health status among the developing countries is disturbing, but even more troubling is the fact that there have been declines in the aggregate trends in recent years, with potentially more adverse effects among the very poor. AIDS, by itself, has caused major setbacks in many African countries, with decreases in life expectancies of ten years or more. Given the high percentage of those in many developing countries already infected with the virus, prospects for the immediate future look even bleaker. (See Figure 2.⁴)

In addition, new drug-resistant strands of malaria and TB have been developing, posing further threats to the health of those living in the developing world. All of these issues are, by now, well known. The problem facing less developed countries is improving the health status, especially of the very poor, in spite of such trends. Markets can fail to deliver the health care that the poor need desperately, but so, too, do government

³ See Wolfensohn (1998) and Stiglitz (1998b).

⁴ For a fuller discussion of these issues, see World Bank (1997).

programs. Doctors paid for by the State sometimes fail to deliver services at all, or deliver them only to those who can pay, thereby precluding the poorest among the poor from receiving adequate medical attention.

I want to propose in this lecture a framework for thinking about these issues. It seeks to go beyond the old debates, which focused either on the failures of the market, or on the failures of government. Both sides of the argument are incomplete and misleading. For instance, many critics of government programs, noting their failures and, in particular, their seeming inability to get services delivered to the very poor, argue for greater reliance on the market. They fail to realize, however, that even in the best of circumstances, the market will simply not provide adequate services to the very poor, and that it was precisely market failures that prompted government actions in the first place. It is imperative, nonetheless, that we continue to search for the most cost-effective actions for improvement in health status.

Having said that, it is important to make a clear distinction between the financing of health care and its provision. One reason why governments fail to get health care to the poor is that they persist in locating public facilities in urban areas. A better response might be to keep governments financing health care, but to allow people to seek care — at the government's expense — from public or private facilities. Private providers would, therefore, have an incentive to locate to rural areas.

The problem is that the wrong lessons have been drawn out of those empirical and case studies showing the failures of government programs in the past. Yes, government programs *may* not work and they may fail to deliver services to the very poor, but this does not necessarily mean that government programs *cannot* work. The objective should have been to inquire into what caused the failures and to ask how those failures can be averted. Only if one could be convinced that there was something inherent about public provision that made failure inevitable — and that this failure was worse than the market failures being addressed — should one lose hope. Too often, the public failures can be easily traced to inadequate incentives; governments need to recognize that incentives

apply to them too, and not just to markets. Hence the theme of this lecture. There exist institutions, rules, and organizational forms that hold out the promise of providing appropriate (or at least better) incentives so that health care provision to the poor may be significantly improved. Given the extreme poverty of these individuals, these institutions will largely lie in the public and the non-governmental sectors — that is, in the non-market sector.

I will open my presentation today by discussing market and government failures in the markets for health insurance and care — specifically, why information asymmetries are so severe, and how societies have tried to address the market failures caused by these information problems. With this discussion as the backdrop, I will then propose an approach for raising health status in the developing world, providing recommendations in turn for the least developed and the middle-income countries.

Market failures

The health care sector of the economy is different in many ways from other sectors — even ignoring the special role it plays in extending life. In particular, market failures are more pervasive in this sector than in others, and no country has found a solution to these problems that it finds totally satisfactory. The most important market failures arise out of imperfections of information. Individuals go to a doctor to obtain information about their health status and what can be done about it. The individual is, in effect, buying information. To be sure, there are other sectors (such as the financial sector) where the purchase of information is perhaps the central part of the transaction and where government intervention often plays an important role. In these sectors, markets do find solutions, albeit imperfect ones. One example is the reputation mechanisms associated with repeat purchases, such as those enjoyed by Merrill Lynch and Goldman Sachs in the financial sector. I will return to this point in a few minutes; here, we need to recognize that such mechanisms often do not function adequately in the market for health. For example, most individuals are not in the market for heart transplants repeatedly, and they may not even know anyone who has obtained a transplant. Even if they do, reputation mechanisms may not work well. Imagine that my neighbor is satisfied with the doctor

who gave her a transplant. How do I know whether my problem is sufficiently similar to my neighbor's to warrant any inference about the doctor's ability to handle my case? Moreover, my neighbor typically can judge only the doctor's manner, and not whether the doctor has done a good job. Making the latter type of inference will require both time and a large sample. Individual cases can mislead: even if the heart surgery is done brilliantly, of course, the patient may fail to survive.

Information failures show up in many ways. The imperfections of information affect not only the individual's ability to choose a doctor, but also the level of services performed. For example, studies have shown that there is a continuation of costly practices that seem unrelated to health outcomes over large regions (such as the United States). In some areas, for example, the number of Caesarian sections is considerably larger than in others, for no apparent socioeconomic or other health reasons.

These information problems manifest themselves in different ways, depending on the features of the health-care system. There are two broad categories of systems, fee-for-service and capitation systems. The former gives an incentive for doctors to provide services where the individual must rely on the doctor's judgment. In such an instance the doctor may, in good conscience, believe that the service is of benefit whereas an economist will ask whether the benefit is worth the costs. And because most of the costs tend not to be borne by the individual, the doctor may in good conscience even provide the service so long as the benefit exceeds the costs (borne by the individual). By contrast, the second type of system — capitation — may provide an incentive for the doctor to provide too little service, since his pay does not depend on the provision of any particular service.

Note that with perfect information, both systems could result in the efficient supply of services (provided there were not distortions elsewhere in the system). Just as Cheung (1969) has shown that a sharecropping contract need not entail under-production by the tenant farmer, since there is an implicit contract (which is enforceable under the information assumptions) between the landlord and the tenant concerning the level of

effort the tenant will provide — so too here. The same would hold for the capitation system. The inefficiencies arise out of the information assumptions.

With insurance, distortions associated with third-party payments tend to exacerbate distortions caused by the fee-for-service system. Asymmetries of information provide the fundamental reason for the under-supply of services under the capitation system. While we observe huge variations in practice, the extent to which they are related to either the problems of insurance or information remains a subject of current research.

As I mentioned earlier, in other markets where information imperfections loom large, we have seen the emergence of institutions that reinforce reputation mechanisms. Individual bankers do not, by and large, establish reputations that attract investors, but banking institutions do; those that establish a reputation for high-quality services. In other words, large institutions like Goldman Sachs can be thought of as establishing a reputation for their ability to hire and monitor bankers and to effectively guarantee the services they provide. Large organizations performing comparable functions in the health care sector have been slow to arise, perhaps because of the difficulties of ascertaining the quality of the services they provide. While one might have thought that it would be in the interests of individual firms to establish credible “report cards” providing such information, such voluntary disclosure mechanisms too have been slow to arise, and parts of the industry have even resisted. This is not inconsistent with the literature showing that markets by themselves may not engage in an efficient amount of disclosure.⁵ But even with good report cards, it is not clear that individuals will be able to process the information effectively. There may be a public good function in monitoring quality — just as there is in the financial sector. The problem is that such monitoring is often abused. In some cases, it may be used to restrict entry, performing a cartel-like function. In others, it may be used by public officials for populist objectives that have little to do with the underlying rationale for such regulatory activities.

⁵ For a discussion of market incentives for disclosure, and the need for government intervention, see, e.g. Stiglitz (1975a, 1975b, and 1998c). Note that there are some highly special assumptions in which markets do yield efficient disclosure. See, e.g. Grossman (1981). In recent discussions in financial markets, it is

The recent debate about HMO's in the United States illustrates these issues. Worried about the rising expenditures on health care, the 1993-1994 reform debate centered around greater reliance on HMO's. There was a belief that the fee-for-service system encouraged excessive consumption. It was believed that competition among the HMO's would keep prices down and service levels high, but within a scant two years, the debate had shifted; the worry was now that the HMO's were providing too few services and prices were too high. While the latter could be an indication of limited competition (in certain areas of the country, there was plenty of evidence for that), it could also be an indication of differential ability to provide services and the importance of reputation rents. Indeed, sectors of the economy relying on reputation will be characterized by high reputation rents (e.g. Goldman Sachs). It could also be merely a transitional phenomenon, as the high profits should, eventually, attract other reputable suppliers and thereby drive down profits. At this juncture, though, the movements seem to be more in the direction of continued reductions in competition.

Ironically, new regulations in developed countries have sometimes focused on areas in which information is not a serious problem. The kind of care provided in childbirth is something that can be easily assessed; it is as close to a standardized, thick-market commodity as one can find in the health care sector. Yet, it is upon these services (which many economists argue should not even be provided by insurance) that the government has focused the political debate in its attack on drive-by deliveries.

It is clear, then, that information asymmetry problems are severe through much of the health sector. These problems I have just discussed are even larger in less developed countries; moreover, because markets are smaller in those countries, there is a greater chance for imperfections of competition.⁶

remarkable that even those in market oriented economies like the United States have argued for disclosure requirements, and have not tried to assert that markets provide an efficient supply of information.

⁶ It has also long been recognized that markets in which information imperfections are greater may more likely be characterized by imperfections of competition. See e.g. Salop (1976) and Stiglitz (1989).

The second major problem in health care markets is risk. Major illnesses impose large costs, which individuals and their families typically cannot bear well. In a well functioning market economy, these risks would be shared among the population, through insurance markets. *But this is done very imperfectly, even in most advanced economies.* The absence of good markets for sharing risks represents a fundamental market failure, with profound consequences, as we shall see.

With an ideal set of markets, behind a Rawlsian veil of ignorance, individuals would purchase insurance concerning their lifetime risks before they, or anyone else, knew their health conditions. But such insurance does not (and probably cannot) exist. Most insurance is purchased at a time when a great deal is known about the individual's health status — hence individuals cannot obtain insurance on *that* risk.

Interestingly, insurance is far less complete than this analysis would suggest, presumably because of the problems of moral hazard, adverse selection, and transactions costs, which we shall shortly discuss, plus one other feature. In principle, individuals should purchase life-time insurance at as young an age as possible. But the dynamics and uncertainties of a market economy make such life-time contracts impossible⁷ — and even if such contracts were possible, they would greatly undermine the effectiveness of competition. Individuals typically purchase insurance for relatively short periods of time and typically do not even purchase insurance on re-insurability. Moral hazard arises whether insurance is held publicly or privately. And the private market solutions to the moral hazard problem are not constrained Pareto-efficient.

Short-term contracts in competitive markets have some decided disadvantages.

- In general, competitive markets charge prices that correspond to the risks faced; thus high-risk individuals will have to face large premiums, often above the amounts that they can afford.

⁷ There is, for instance, no way of ensuring that the firm will be able to fulfill the contract fifty years from the time of signing. Moreover, such long-term contracts would greatly undermine the degree of effective competition in the market. See, for example, Stiglitz (1988).

- Actions taken at one date have implications for health status at a later date; short-term health providers/insurers will take insufficient account of these inter-temporal linkages.⁸
- Even were there no inter-temporal linkages about consumers, inter-temporal contracts can provide suppliers with far better incentives in the presence of moral hazard⁹.

We have thus encountered what we may call our first policy dilemma: Short-term contracts provide consumers with more *choice* and, by exercising that choice, provide markets with greater *competitive discipline*. However, short-term contracts (especially given the pervasive incompleteness of such contracts) provide distorted incentives (a failure to take into account inter-temporal effects) and are less effective in addressing supplier-side incentive problems.

Similar problems arise with respect to (contemporaneous) exclusive insurance contracts. The provision of insurance by one firm has impacts on risk-taking behavior, and therefore on the risk faced by another firm. Efficiency requires exclusivity (or at least full disclosure). Indeed, the costs that the Medicare system must bear as a result of Medigap insurance illustrates the dangers — and inefficiencies — which arise from lack of exclusivity (or at least, not forcing Medigap insurers to bear the full costs that they impose on others.)¹⁰

This way of thinking about the problem — focusing on the purchase of insurance behind the veil of ignorance — puts a new light on a number of old questions in health care insurance. For instance, one of the major strands in liberal thinking about health care is that access to health care should not depend on one's income; rich and poor should have equal access. Critics of this view point out that in our society, there are many inequities; nothing is evenly distributed, so why should health care be? Indeed, providing equality of

⁸ Again, if individuals had perfect information, this would be no problem: they have an incentive to take account of them. But as we noted, information is highly imperfect. Concern about these inter-temporal linkages plays an important role in the policy discussion below.

⁹ I am referring here particularly to the problems that arise in HMO's, where the insurer is the supplier of health care services, and, as we have seen, there is a tendency for under-provision of services. See Stiglitz and Weiss (1983) and Arnott and Stiglitz (1990).

health care is Pareto inefficient; poor individuals would be willing to trade some health care for some more of other goods. On the other hand, behind the veil of ignorance, they might have wanted to have more complete insurance than was provided by the market. Indeed, they may even have wanted to commit themselves in the future not to trade off this health care for other goods, realizing that often such decisions are made myopically, and that the individual at time $(t + 1)$ may well regret the decision made at time (t) .¹¹

In standard competitive analysis, pooling (community rating, or more broadly charging individuals with easily observable different risk profiles the same rate) makes little sense; and it is indeed remarkable how much of such pooling we see (e.g. with insurance companies charging the same premium for small and large families). Yet, commitments to such pooling may be welfare-increasing, when viewed from the veil-of-ignorance perspective. While observed market practices seem to exhibit more pooling than the theory of adverse selection would suggest, it is possible (if not likely) that as competitive prices increase in the market there will be less pooling.

In advanced democratic societies, some insurance is provided through public programs where hospitals take patients who cannot afford to pay and in doing so shift the burden of such costs on to other users. As markets become more competitive, however, such cost shifting will become more difficult. Hospitals may close emergency rooms, for instance, in order to discourage such cost-shifting, or locate themselves away from places where such burdens may be imposed. What will happen in the United States, for instance, if current trends continue, in which an increasingly large fraction of Americans are uninsured, while the private sector works hard to cut costs and thereby reduce cost-shifting? Will more of the population actually be denied adequate medical care? Or will new institutional arrangements evolve? One could argue that these competitive pressures are forcing the hidden and random subsidies out into the open — and that in a democratic society, such transparency is desirable.

¹⁰ For a fuller discussion of the issue of exclusivity, see Arnott and Stiglitz (1991).

¹¹ As important as these notions are, and as large a role as they have played in traditional philosophical discussions of identity, integrating these notions into standard welfare analysis is not easy. For interesting explorations, see Schelling (1984) and Akerlof (1991).

It is clear that the markets to insure against the large risks of health are far from perfect, and that the absence of these markets has important implications. Economists during the past quarter of a century have devoted enormous energies to trying to ascertain why this is so, and what implications this has for government policy. Although the literature is sufficiently vast that I cannot review it all here, there are several points that are relevant for my main theme. The literature focuses on issues of moral hazard, adverse selection, and transactions costs. Moral hazard, for instance, implies that insurance companies will only provide partial insurance. The fact that some risks are better than others implies that insurance firms may increase their profits as much by cream-skimming — finding categories of customers who are charged more than their risks warrant — as by providing better services more efficiently. Marketing costs, monitoring costs, and costs of trying to select good risks and differentiate the rates on other risks represent huge *transactions* costs. It is curious that economists, who have long emphasized the doctrine that there is no free lunch, have often treated the market itself as if it were a free lunch. As I shall argue later, the large costs of running a market need to be set against its benefits and its other potential disadvantages.

Three key results emerge from this health-economics literature of the past quarter-century:¹²

- In general, markets are not (constrained Pareto-) efficient.¹³
- The incompleteness of markets gives rise to non-market institutions to fill the gap.
- In general, these non-market institutions may be dysfunctional; that is, economic welfare may actually be lower as a result, as these non-market institutions, with their incomplete risk sharing, crowd out the more efficient market institutions. (See Arnott and Stiglitz, 1991.)

¹² To be sure, there are other important results, e.g. concerning the non-existence of an equilibrium. See Rothschild and Stiglitz (1992).

¹³ See, e.g. Greenwald and Stiglitz (1986), Arnott and Stiglitz (1990), and Arnott, Greenwald, and Stiglitz (1994).

The last point is particularly important from a social welfare point of view. Not only can we not rely on markets; we cannot rely on non-market responses to market failures.

The discussion of this section serves to highlight several more of the basic policy dilemmas in the health care sector. Greater choice and more competition may exacerbate the adverse selection problem and increase transactions costs, more than offsetting the gains from increased efficiency and thereby lowering social welfare (at least as viewed behind the veil of ignorance). And reforms such as medical savings accounts that give individuals more scope for exercising “care” may also give the market more scope for cream-skimming.

As difficult as these matters are in developed countries, they are even worse in less developed countries, where insurance markets work even less well (or are virtually non-existent) and in which poor individuals clearly have little ability to absorb the large costs associated with hospitalization. In the remainder of this lecture, I wish to discuss how, in the context of these market failures, low and middle income countries can face the challenge of providing health care, especially to the very poor.

Providing Health Care to the Very Poor in Low-Income Countries

An old-fashioned economist would have been tempted, upon observing the large market failures just noted, to argue for a government program to provide health care to all the poor. But like economists in other fields, health economists have grown more skeptical of this type of response. They have observed the persistent failures in many government programs, and thus approach the notion of government intervention with a more jaundiced eye.

The problem of incentives, for example, can bedevil health provision in developing countries. Government programs to provide services to the poor have often failed because faulty monitoring failed ensure that the services were actually provided. In poor villages, the bulk of the payment to the doctor may have to be borne by the central government. With no incentive pay, and in the absence of monitoring, the doctor has no incentive to

actually provide the services. Often informal incentive schemes arise with the doctor receiving side payments and it is invariably the better off among the villagers who can afford the side payments, which means that the public services do not go to the poorest among the poor. One should, perhaps, not be too critical; these are, by any standards, the very poor, and the health care services can make a large difference in their lives. Services provided in urban areas raise further problems. Typically, the users of such services have incomes far above the national average¹⁴ — while such services do not even reach down to the poorest among the urban dwellers.

These inefficiencies are even more lamentable in developing than in industrialized countries. Poor countries have very limited resources, and funds aimed at improving the health status, especially of the very poor, have to be spent where they yield the highest returns. There are enormous opportunity costs. For instance, the cost of treating one AIDS patient for a year appears systematically across countries to be equal to the cost of providing ten children with a year's primary education.

How can we most effectively and efficiently raise the health status of the very poor in low-income countries? Fortunately, we have learned a great deal about the issues of monitoring, targeting, and social incentives in recent years, especially in other areas of social concern. Among the lessons, for instance, are the following:

- *Community-based monitoring.* Community-based monitoring of provision of health services may be more effective than monitoring from central headquarters. The community has stronger incentives to monitor and the costs of monitoring are lower. (Indeed, the marginal cost of doing so may be effectively zero, since such monitoring may be a by-product of other activities. Since the members of the community are the recipients of the services, community-based monitoring is the analogue to the discipline provided by consumers for conventional marketed goods.) Having said this, the implementing agency may also find it appropriate to complement the

¹⁴ Even in the United States, it has been argued that Medicare disproportionately benefits the better off — even though they pay more in taxes — simply because they have longer expected lives. See McClellan and Skinner (1999).

community-based monitoring with close local level monitoring and overall head-office supervision.

- *Community-based provision.* Having services provided by members of the community (who may be specially trained for that purpose) may lead to more effective provision, partly because other forms of sanctions (social sanctions) can be used to enforce “good” behavior, partly because such individuals identify with the community and its concerns. Rather than trying to force elite doctors or paramedics to serve in local communities — which they often respond to by spending their time either away from the community, or with the community’s élites — it may be far more effective to train some members of the community to provide at least basic services.

In several areas such community-based monitoring and provision has proven effective, especially when provided through non-governmental organizations. For instance, rural credit schemes in Bangladesh with peer monitoring have now been replicated around the world. Education and health programs carried out by BRAC, a leading NGO, have shown how these basic principles can be extended to other areas.¹⁵ The frontline implementers of one of BRAC’s key health interventions (the Essential Health Care program) are village health workers, trained by BRAC in identifying and curing common diseases, providing family planning and sanitation advice as well as providing referrals to specialists. In 1997, BRAC employed just under twenty thousand community health workers. Community-based monitoring of schools in Central American republics, like El Salvador, has shown how such programs can address the problem of teacher absenteeism effectively — parallel to the problem of doctors not providing services.

The importance of knowledge. The lessons from education are particularly germane, since some of the most important improvements in health status can come from education programs that inform the poor about sanitation (like where to construct latrines); the

¹⁵The Bangladesh Rural Advancement Committee, now known only by its acronym, BRAC, was established in 1971 to provide relief and rehabilitation services following Bangladesh’s liberation war. It has now developed into the world’s largest indigenous NGO providing multi-faceted development interventions throughout Bangladesh.

importance of having chimneys to allow smoke to escape out of one's hut; the value of pesticided-impregnated mosquito nets in protection against malaria; the value of certain precautions in protection against AIDS; the dangers of alcohol and drugs; and the importance of family planning. The impact of education on health status is well documented. And last year's World Development Report *Knowledge for Development* emphasized how knowledge and information could have profound impacts on the poor, including on their health status (World Bank, 1999).

Health, social capital, and social mobilization. There is one other important lesson that seems to be emerging from these experiences. Efforts at community organization aimed at one problem have positive spillovers for others. Organizing creates social capital, and that social capital can be put to a variety of uses. Each application, rather than diminishing the social capital, augments it. In this view, it is no accident that BRAC's successful credit programs have now been complemented with education, health care, and legal rights programs.

Key role of monitoring/delivery mechanisms. In assessing different health care strategies, we must gauge the benefits received by the very poor *through the mechanisms under which such services will actually be delivered*, taking into account the extent of monitoring which will actually occur. We know, for instance, that perhaps the most important way the health status of the poor can be improved is through access to clean water; and water projects with a heavy participation of the community in the design are not only likely to work better, but also to be sustained.¹⁶ Similarly, vaccines, especially for children, can be a low-cost way of improving health status. India has shown that special programs for the delivery of vaccines may be more effective (and more cost-effective) than delivering vaccines through multi-purpose clinics.

Health, rather than health care services, as the objective of policy. Poor countries cannot afford the luxury that rich countries have: they need to keep a focus on improving health, not the delivery of medical services. Just as we are beginning to realize the necessity of a

¹⁶ See Narayan (1994).

comprehensive approach to development, so too we need a comprehensive approach to health. A comprehensive approach to health focuses on all the factors that affect health, and asks what are the interventions which are most cost effective in improving health status, and how can they be most effectively implemented. Programs to improve knowledge, childhood nutrition, access to clean water, vaccinations — these are among the central components of such a strategy.

As we approach each country, we need to assess what is working (or is likely to work) and what is not (or not likely to work) within the context of that country. Health care services are part of a nexus of social services and their provision fits into complex relations among villages, lower level jurisdictions, the central government and informal and formal institutions within each society. In some places, such as the Philippines, the provision of health care services in conjunction with the delivery of pre-natal and obstetrical services has proven an effective entry point, one which at the same time can be an important vehicle for social mobilization of women.

Low-income countries have limited resources to spend on health care. Fortunately, it appears that well-designed health care programs — focusing on high impact expenditures, addressing in particular *public* health concerns — can not only deliver high returns per dollar spent, but be an important component in an overall development strategy.

Middle Income Countries

Identifying an appropriate health strategy for, say, urban centers in middle-income countries is more difficult. The urban elites may demand a level of health care that cannot be extended to all, but may clothe their demands in more egalitarian terms. In these countries, I suggest that the appropriate strategy is a private-public partnership, which uses the special powers of the state to ensure that the health care sector be used as a progressive rather than regressive force.

Health care policy in these countries takes place against the backdrop of: (a) limited resources; (b) limited ability to target using income based means testing; and (c) limited insurance markets for handling the large risks associated with health care. In thinking about the design of a health care system, I have in mind a country in which there is a substantial low wage labor force, which could be brought within the umbrella of a social security system, as well as a substantial informal labor force that could not. One has to address the dilemmas and market failures discussed in the first section, making judgment calls about the relative importance of different concerns.

As I have pondered the tradeoffs, it seems to me that for most such countries, a system that places emphasis both on the functioning of its labor market and on the efficient delivery of health care services, especially to the poor, will probably be willing to sacrifice some choice for the attainment of those objectives. It will also have to look for other ways of maintaining efficiency than the discipline of the competitive market place — a discipline which in the health care sector seems typically exercised all too weakly. While it gives up on ideals of competition and choice, it will also have to compromise greatly with egalitarian ambitions.

The attainment of basic standards of health by the very poor must begin with the agenda described in the previous section: provision of the basic infrastructure (clean water and sanitation); provision of basic public health services, like childhood vaccinations; and a stress on education about the factors that affect health and actions that individuals themselves can take to improve their health status. But it must go beyond this agenda to include also the public provision of a basic level of core services, at a minimal level appropriate for low-income individuals, involving both clinics and hospitals. To the extent possible, these should be located in the communities they serve, and involve community-based organizations. At earlier stages of development, the non-profit sector played a critical role in the provision of health care in most developed countries. While minimal fees can be an effective way of curtailing abusive use of services, one has to recognize that in most less developed countries, standard means-testing will not work. Hence, greater reliance will have to be placed on self-selection devices. These include

location of facilities in poorer communities (which is probably a welfare-enhancing selection device, since it reduces the transport costs of those that are intended to be served) as well as queues (which are costly selection devices).

The government can organize, or facilitate the organization, of a second tier aimed at serving members of the formal labor market, who are typically better off. Here, I find quite compelling the attractions of a Singaporean-style provident fund. This fund is a fully funded individual account that can be used for a multiplicity of purposes directed at improving the broader living standards of individuals, especially those associated with risks, such as employment and health, and combining these social insurance programs with the basic need for a retirement program. The distinct advantage of a fund that covers more than one risk is that it can be designed to lower the effective degree of risk-bearing at the same time that it mitigates moral hazard problems. It achieves this objective by exploiting the fact that the different risks are not perfectly correlated; what one is concerned with is life-time income risks. Note that so long as total benefits out of such a program are roughly commensurate with the contributions, there are no significant adverse labor supply/employment incentives;¹⁷ under some circumstances, labor supply could even increase. The major distortion arises from the fact that individuals could escape the net of this formal-sector tax by joining the informal sector; the lower-quality health care service and the other (possibly inefficient) selection mechanisms (including the location of delivery) should mitigate that distortion.

The provident fund and second-tier health system would require individuals to pay small health care costs themselves, thus addressing the moral hazard problem. In addition, some part of the “premium” would be devoted to purchasing lifetime risk insurance, so that if the combined risks of an individual over his lifetime exceeded some threshold, his retirement income would not be exhausted. The important point of the second tier is that it would be fully self-financed. As such, eligibility could be extended to others not in the formal-sector labor force.¹⁸

¹⁷ See Stiglitz (1998d).

¹⁸ The health delivery system within the second tier could be private or NGO-based.

The compulsory participation would reduce transactions costs and allow the system to take advantage of scale economies. In advocating such a system, I recognize that there is a trade-off and that choice and competition may be undermined, but the advantages in reduced marketing and other transactions costs, and the avoidance of cream-skimming, more than offset these disadvantages. Efficiency can be maintained through benchmarking: international standards can be used to ascertain whether the insurance processing costs are in line and to judge the quality of services provided. Management of the “monopoly” (whether officially in the private, public, or non-profit sector) can have its rewards based on its performance relative to these benchmarks.

There is a concern about the two-tier approach (which reserves a tier especially for the poor) that is rooted in a colloquialism which suggests that “*programs aimed mainly at the poor tend to be poor*”. This is not necessarily so; greater involvement in this approach by the community and NGOs may provide effective checks on such a system. Clearly this may not work in all societies, but that does not preclude us from implementing this approach where it will work.

It is possible that a partial pooling equilibrium of the form I have just described could be maintained without government using its powers of compulsion and proscription to prevent its unraveling. But it is also possible that without government restrictions, private plans may come in to cream-skim, lowering premiums for the best risks, but raising premiums for others. Attitudes towards this form of entry need to be guided by several principles. While there should, in general, be a preference for institutional arrangements that allow more choice and that promote competition freely, general theoretical results establish that markets in which adverse selection effects play an important role are not in general even constrained Pareto efficient. Here, the gains to some are largely at the expense of others and, as we noted earlier, resources are wasted and inefficiencies are introduced in the process of cream-skimming.

Compulsory participation in the second tier does not, however, mean that the government proscribes the creation of a third tier. The fact that such individuals, by choosing to go to a third tier, effectively “lose” their contributions to the second tier will, of course, be a discouragement. But the government need not go beyond this to actively discourage the creation of a third tier. It may be that those served by this third tier would, in the absence of the third tier, receive medical care abroad and that the doctors who would have served them correspondingly move abroad. Those in the country are then little affected — though there might be some positive spill-over in learning from the high technology services, there may also be some negative spill-over, from others in the country trying to adopt medical practices not best suited to the situation of the country. In other cases, the migration of medical resources may be less than the migration of demand, in which case inducing elites to seek services abroad may have external benefits to those within the country.

The ease with which the government can affect the development of a third tier also depends on the circumstances of the country. The United States has successfully suppressed the development of an alternative to Medicare, partly because of the heavy subsidies paid, but partly because those providing services through Medicare are precluded from engaging in balanced billing. Governments can require exclusive dealing contracts with the first and second tier provided, which, given the dominance of those segments, effectively precludes the development of a third tier, or at least a third tier of any significant size.

Free choice versus adverse selection. For years, the United States has struggled with the issue of balancing concerns about free choice with worries about the adverse effects of adverse selection, and the patchwork of regulations bears testimony to the difficulties presented. For years, an alternative methodology, risk adjusters, has been discussed. These would assess taxes and subsidies on different insurance firms reflecting the “risk” pool that they had managed to attract. In principle, such risk adjusters would eliminate (or at least reduce) incentives for cream-skimming. Development of these risk adjusters has been stymied by the fact that it appears that the best predictor of health care needs at any

date are health care utilization during the previous period; other characteristics of the individual play some role, but are of secondary importance. But risk adjusters where risk adjusters were based on last year's expenditures would imply that, say, the policies of an HMO attempting to reduce expenditures at date t would adversely affect the HMO's future receipts: *the attempt to countervail adverse selection would undermine incentives for efficiency.*

Another example where choice and adverse selection have run into conflict has occurred in the choice of HMO vs. fee-for-service plans among Medicare patients. There is evidence that healthier patients prefer HMO's; when individuals become sick it apparently becomes more important for individuals to choose their own doctors. As a result, it is difficult to compare the efficiency of the two — there is a selection bias; and it is difficult to set fees at comparable levels. Some HMO's have tried to mitigate the adverse selection effect by restricting movement into and out of the HMO. But this conflicts with the principle of choice; initiatives to reduce these barriers will, correspondingly, exacerbate the adverse selection problem.

Interaction of adverse selection and moral hazard. Adverse selection problems have complicated the design of “solutions” to other problems in the health care sector. For instance, MSA's (medical savings accounts) are designed to put into place better incentives — individuals would have to pay more of the costs at the margin. But it has been feared that MSA's would attract wealthier and less needy individuals and as a result, those remaining behind would have to pay higher premiums. While there remains some controversy about the magnitude of these adverse selection effects, what is clear is that there is a distortion: the benefits of choosing a high deductible policy are not just those associated with the greater efficiency, but with the reduction in the implicit subsidies.¹⁹

¹⁹ Much of the earlier theory of adverse selection questioned the importance of the induced cream-skimming effect, because under those theories, there would be complete selection in any case. In practice, however, markets demonstrate a far higher degree of pooling than seems consistent with conventional theory—reflecting perhaps the role of norms in employer provided insurance, the imperfections of competition, and the dynamics of adjustment. In this environment, a change in incentives, such as that associated with MSA's, may indeed result in more differentiation.

Meaningful choice. There is often a confusion in the choice debate between the value of choices among insurers/health care plans and among doctors. The former, I suspect, has little intrinsic value, except in one dimension: some individuals may place different values on the ability to make choices within a health care plan. The latter has, for many individuals, high intrinsic value. (Each individual likes to believe that his doctor is the best. Though it is hard to see how everyone can get the best doctor, similar miracles occur on a regular basis — almost every student, as far as I know, believes he is in the top half of his class.) The attribute of insurance firms that individuals care about is the efficiency of service; insurance firms are engaged in the transactions business, and the attribute that matters is the cost of those transactions. To be sure, individuals with different degrees of risk aversion/wealth may wish different levels of insurance, but even that can be accommodated easily within a single payer system, by providing individuals with choices among plans. The more difficult issue, which has not been fully resolved, is how to provide incentives within such a system for efficiency — without at the same time encountering the adverse selection problem. For instance, providers/provider systems that are more successful in containing costs could be allowed to provide more extensive coverage, e.g. including a higher percentage of costs of prescription drugs.

Evolutionary approaches. In the end, given our present state of knowledge (including the present abilities to implement risk adjusters), countries will need to make pragmatic compromises and take an evolutionary approach. As circumstances in the country (its income) and satisfaction/dissatisfaction with the health care system changes, the system will need to be adapted.

Central to this strategy are (a) benchmarking, so that one can assess how well one is doing (both in coverage and efficiency) compared to other countries with similar incomes; and (b) an awareness of some of the pitfalls:

- Where competition does not emerge, not only must there be greater reliance on benchmarking, but there needs to be some attention as to why. (For example, are incumbents deliberately suppressing competition?)

- Where competition does emerge, attention must be addressed to the question of the extent to which it is based on greater efficiency in providing services, and the extent to which it is based on greater efficiency in cream-skimming. Comparisons of clientele of different firms provide some measure of the extent of adverse selection. A review of practices — to see the extent to which they are deliberately engaged in cream-skimming at a significant level — may be required when there is extensive evidence of adverse selection.

Structures need to be established to help mold professional norms to be more cost conscious, to focus on health outcomes rather than service delivery, and to be non-discriminatory.

Less Developed Countries collectively need to take actions to address the “public good” problems of health care, especially those that have to do with knowledge creation. They have a common interest in the development of technologies which are more appropriate to their circumstances and their health needs. Indeed, there is a concern that the profit incentive of drug companies does not provide them with incentives to go after the diseases that are of particular concern to the developing world or to develop a product that is particularly suited to the needs of those countries (e.g. low cost); though hundreds of millions might be affected, each could pay little. We at the World Bank have been looking for ways to improve those incentives, for example in relationship to the development of vaccines for AIDS and malaria. One proposal is the creation of a fund that would ensure any firm that discovered a vaccine appropriate for the LDCs that there would be a large pool of funds available to buy the vaccine.

In LDCs, the most important adverse selection problem concerns the very poor. As we noted in the beginning of this lecture, it is the very poor who have markedly worse health outcomes than other groups within the population. But the very poor will be served by the first tier of the program. In a sense, once one had a reasonably well targeted first tier, then the adverse selection problems are, from this perspective, second order. Ensuring that the first tier actually services the bottom quintile should be a first priority.

Two caveats to this formula: Any system creates special interests, concerned with preserving any rents that they can garner within the system (and any system is created to protect already existent rents). Thus, in the design of the system, great care needs to be taken to limit the extent of rents that are created. This is especially important in LDCs, where good jobs are often scarce, so that excessive expenditures are hard to cut back. Thus, relatively hard budget constraints — e.g. fixed maximum percentages of GDP or the government budget to be spent on the first tier — may be necessary. And competitive triggers in the second tier — frameworks which facilitate entry when costs exceed certain benchmarks — need to be considered. Vigilance against anti-competitive practices has to be maintained.

The United States provides the second set of warnings to what might seem an eminently sensible approach. This evolutionary approach seems to be the one adopted by the United States. What has emerged, though, is a patchwork of subsidies and regulations, reflecting mixtures of populist and real concerns and political opportunism, in which the cost effectiveness of different expenditures varies markedly. To induce cost consciousness, Medicare has a co-payment, but to ensure that those co-payments are not a burden, individuals can buy medi-gap insurance, thus eliminating the incentives that were placed there in the first place. And while medical insurance is provided competitively, none of the insurers are forced to pay the costs they impose on the Medicare system as a result of higher utilization. We have a private insurance system, but to make sure that all children are covered, there is now a publicly financed insurance system for children from lower income families. But eventually, much of the money for this program will probably go to children who would otherwise have been insured. Would a more targeted program have been more cost-effective? The Nash equilibrium in institutional arrangements need not be (and typically is not) efficient.

Concluding Remarks

The health care sector is different from other sectors of the economy. As a society, we think of health care outcomes differently — they are not, for the most part, just like other

goods. This is especially true for the very poor in LDC's, where health care outcomes show up so dramatically in statistics like life expectancy and infant mortality. They are also different because of the nature of the risks that they confront individuals with, the significance of imperfect and asymmetries of information and the importance that adverse selection and moral hazard plays. As a result, markets work imperfectly. The worry is that so do governments. We should be clear about our objectives: It is not perfection, measured against some ideal benchmark.

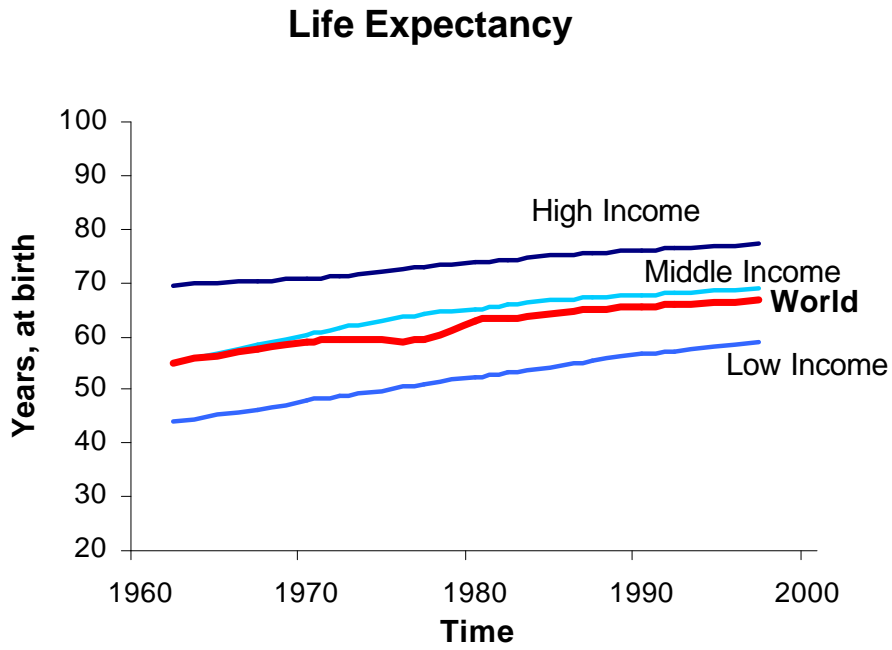
For those of us engaged in development, there is a clear set of priorities: improving the health status of those at the bottom of the income distribution. Providing knowledge, and improved public health — from AIDS prevention to clean water to childhood vaccination and nutrition programs — probably provides the most cost effective way of doing so. In many places, institutional innovations — going beyond markets and government, to community based delivery mechanisms — will not only provide enhanced delivery of important services, but also play an important role in the broader social mobilization that is key to successful development.

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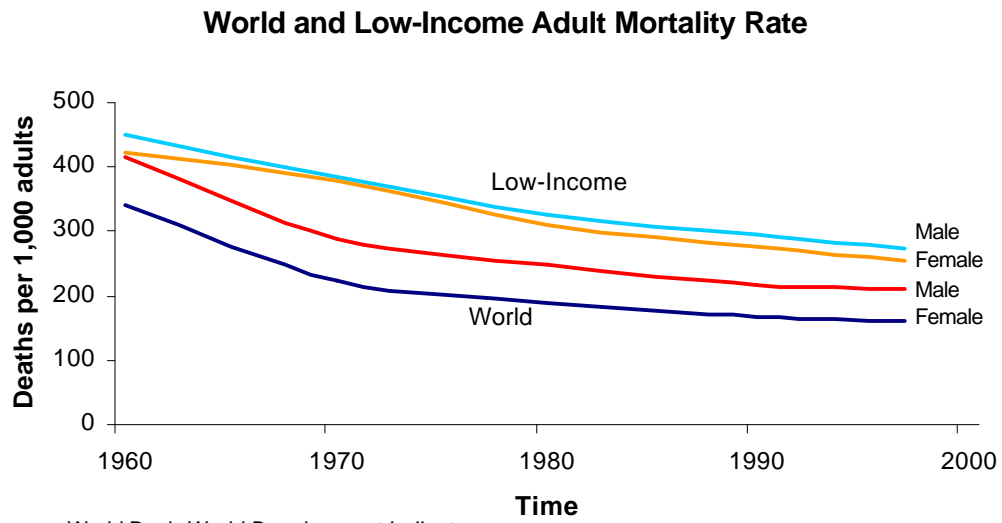
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Figure 1: Increase in Life Expectancy and Decrease in Adult Mortality

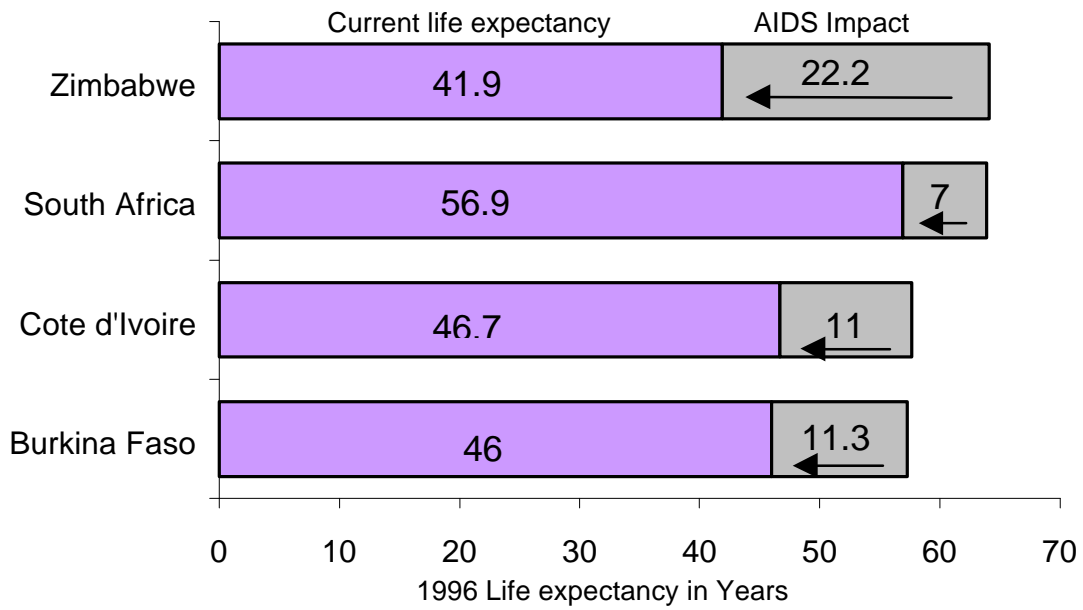


Source: World Bank *World Development Indicators*



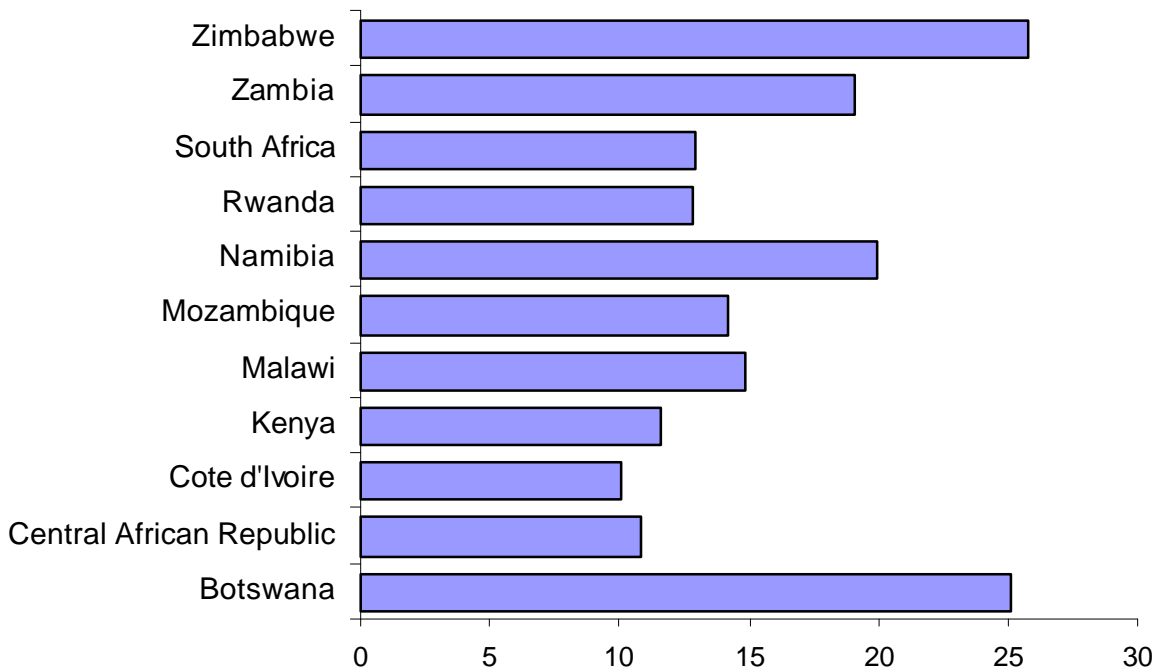
Source: World Bank *World Development Indicators*

Figure 2: Impact of AIDS in Africa
Shortened Life Expectancy



Source: *Confronting AIDS*, World Bank Policy Research Report

High Adult HIV Prevalence



Source: 1999 World Development Indicators, World Bank.