

Unmet Health Needs of Two Billion

Is Community Financing a Solution?

William C. Hsiao

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Health, Nutrition and Population (HNP) Discussion Paper

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Health, Nutrition, and Population Discussion Paper

Unmet Health Needs of Two Billion: *Is Community Financing a Solution?*

William C. Hsiao^a

^a Professor of Economics and Health Policy, Harvard School of Public Health, Boston, USA

Report Submitted to Working Group 3 of the Commission on Macroeconomics and Health, Jeffrey D. Sachs (Chairman), September 2001

Abstract: One of the most urgent and vexing problem around the world is how to finance and provide health care for the more than two billion peasants and ghetto dwellers in low- and middle-income countries. Part I of this paper develops a conceptual framework for community financing and uses it to clarify and classify the variety of community financing schemes. This section of the papers discusses the impact of community financing schemes on outcomes and compares them to several African countries. Part II uses the conceptual framework developed above to explain why some community financing schemes in Asia have been successful and why some have failed. The review points to a number of measure that governments could take to strengthen such community financing. They include subsidizing the premiums of the poor, providing technical assistance to improve scheme management capacity, and forging links with formal health care networks. Satisfaction with the scheme was often related to the nature of direct community involvement in their design and management. A critical factor was the matching willingness and ability to pay with the expectation of benefits to be received at some later time. The review also highlighted several areas of government actions that appear to have a negative impact on the function of community financing schemes. Top-down interference with scheme design and management appeared to have a particularly negative impact on their function and sustainability.

Keywords: Community financing; informal sector; financial protection; health care financing; Asia region.

Disclaimer: The findings, interpretations and conclusions expressed in the paper are entirely those of the authors, and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

Correspondence Details: William C. Hsiao; Harvard School of Public Health, University Place, 124 Mt. Auburn Street, Suite 410, South Building, Cambridge, MA 02138, USA;
Email: <mailto:hsiao@hsph.harvard.edu>

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PREFACE

In January 2000, Dr. Gro Harlem Brundtland, Director General of the World Health Organization (WHO), established a Commission on Macroeconomics and Health (CMH) to provide evidence about the importance of health to economic development and poverty alleviation.

This HNP Discussion Paper is based on a Report on community financing submitted in September 2001 to Working Group 3 of the CMH. The mandate of Working Group 3 was to examine alternative approaches to domestic resources mobilization, risk protection against the cost of illness and resource allocation. The working group was chaired by Professor Alan Tait (Former Deputy Director of Fiscal Affairs, International Monetary Fund, and currently Honorary Fellow at University of Kent at Canterbury and Honorary Fellow at Trinity College, Dublin) and Professor Kwesi Botchewey (Director of Africa Research and Programs at the Harvard Center for International Development).

Professor Jeffery D. Sachs (Chairman of the Commission and Director of the Harvard Center for International Development) presented the findings of the CMH in a Report that was submitted to WHO on December 20 2001—[*Macroeconomics and Health: Investing in Health for Economic Development*](#).

The report of the CMH recommended a six-pronged approach to domestic resource mobilization at low-income levels: “(a) increased mobilization of general tax revenues for health, on the order of 1 percent of GNP by 2007 and 2 percent of GNP by 2015; (b) increased donor support to finance the provision of public goods and to ensure access for the poor to essential health services; (c) conversion of current out-of-pocket expenditure into prepayment schemes, including community financing programs supported by public funding, where feasible; (d) a deepening of the HIPC (Highly Indebted Poor Countries) initiative, in country coverage and in the extent of debt relief (with support from the bilateral donor community); (e) effort to address existing inefficiencies in the way in which government resources are presently allocated and used in the health sector; and (f) reallocating public outlays more generally from unproductive expenditure and subsidies to social-sector programs focused on the poor.”

Most community financing schemes have evolved in the context of severe economic constraints, political instability, and lack of good governance. Usually government taxation capacity is weak, formal mechanisms of social protection for vulnerable populations absent, and government oversight of the informal health sector lacking. In this context of extreme public sector failure, community involvement in the financing of health care provides a critical but insufficient first step in the long march toward improved access to health care by the poor and social protection against the cost of illness.

The CMH stressed that community financing schemes are no panacea for the problems that low-income countries face in resource mobilization. They should be regarded as a complement to—not as a substitute for—strong government involvement in health care financing and risk management related to the cost of illness.

Based on an extensive survey of the literature, the main strengths of community financing schemes are the degree of outreach penetration achieved through community participation, their contribution to financial protection against illness, and increase in access to health care by low-income rural and informal sector workers. Their main weaknesses are the low volume of revenues that can be mobilized from poor communities, the frequent exclusion of the poorest from participation in such schemes without some form of subsidy, the small size of the risk pool, the limited management capacity that exists in rural and low-income contexts, and their isolation from the more comprehensive benefits that are often available through more formal health financing mechanisms and provider networks.

The work by the CMH proposed concrete public policy measures that governments can introduce to strengthen and improve the effectiveness of community involvement in health care financing. This includes: (a) increased and well-targeted subsidies to pay for the premiums of low-income populations; (b) use of insurance to protect against expenditure fluctuations and use of reinsurance to enlarge the effective size of small risk pools; (c) use of effective prevention and case-management techniques to limit expenditure fluctuations; (d) technical support to strengthen the management capacity of local schemes; and (e) establishment and strengthening of links with the formal financing and provider networks.

The report presented in this *HNP Discussion Paper* has made a valuable contribution to our understanding of some of the strengths, weaknesses and policy options for securing better access for the poor to health care and financial protection against the impoverishing effects of illness, especially for rural and informal sector workers in low-income countries.

Alexander S. Preker

Chief Economist
Health, Nutrition, and Population
The World Bank

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I. INTRODUCTION

A most urgent and vexing problem around the world is how to finance and provide health care for the more than two billion peasants and ghetto dwellers in low- and middle-income countries¹. Most of them are poor. Today, these two billion people do not have adequate health care to meet their basic needs (World Development Report 2000/2001). Most countries try to serve this population by operating public clinics in rural areas, but getting qualified practitioners to staff them is often difficult. They often simply evade or refuse or do not attend regularly, and/or they provide poor customer service and the facilities lack drugs and supplies. When people become ill, they first have to rely on home remedies. Unsuccessful self-treatment often leads to big bills for extensive use of outpatient services from traditional healers, private practitioners, and pharmacists. When serious illness strikes, the poor flood into, and overcrowd, the public and charity hospitals. In many countries, the patients have to pay for inpatient hospital services, and many of them have to bankrupt their family to pay for the services or forgo the treatment and die. Studies found higher proportions of women and children have to forgo medical treatment. Also, studies consistently found that poor households pay a very large part of their income for health care, even when the government theoretically provides free or nearly free services². Studies in several countries, including China, found that large medical expenditure (e.g., inpatient hospital services and costly outpatient drugs) is the major cause of poverty (Liu 2001). These facts raise at least three serious questions.

First, is a nation spending a reasonable amount for its health? Many countries do not spend enough for health care of their rural residents and urban poor. Can the governments spend more? It depends. Most low-income nations have too narrow a tax base and ineffective tax collection to yield large sums of general revenue. In deciding the share of the scarce general revenue to be spent on health, the political economy of most nations results in inadequate public funding for basic health care for the rural and ghetto households³. And other well-known financing modalities are unfeasible or undesirable. Social and private insurance are unviable to cover them. User fees are inequitable and create high barriers for the poor to access to health care. (Whether foreign sources and domestic governments can allocate additional funds to support the health care of this population is being addressed by another paper.)

Second, does a nation have the capacity to transform money into effective services for the rural and poor population? In many countries where the government funds and provides free or nearly free services for rural residents and the poor, the target population is not utilizing those public health services. These households use their meager income to pay for the services and drugs

¹ This paper was prepared as a part of WG3 of CMH studies on mobilizing resources for households not employed in the formal sector (hereafter referred to as the “informal sector.”) To state the obvious, they are not a homogenous group. Their occupations range from peasants, peddlers, day laborers, taxi drivers, and informal sector employees to shop owners and self-employed professionals such as physicians and lawyers. Some of them are rich, but most are poor. Some live in the city, but most live in rural communities. This paper focuses on mobilizing resources for the residents of rural communities, who make up more than 70 percent and 50 percent, respectively of the population in low- and middle-income nations. The paper also gives some attention to mobilizing resources for the urban poor.

² Close to 50 percent of the total national health expenditure for most low-income nations comes from direct out-of-pocket payment by patients (World Health Report 2000).

³ The industrial nations (except the United States) use general revenue or compulsory social insurance to pay and provide health care for their citizens working in the informal sector.

from the private sector. Why? Detailed country studies have consistently found a disturbing fact. In most low-income countries, although governments fund public provision of primary care at the village and township (subdistrict) levels,⁴ they cannot manage and monitor these publicly funded services at grass-root level. Whatever funds are spent do not produce the services that the people want and value, yet facilities are built and staffed (Bitran 1995; Gilson 1995; Zere, McIntyre, Addison 2001). As a result, when people become ill, they pay to see the private practitioners and buy drugs. (The findings of these studies are also summarized in another paper on efficiency.)

Third, we know the amounts spent directly by the households have not purchased the most cost-effective services. Can these resources be organized so they will be used in a more efficiently and effectively? Out-of-pocket payments to private providers have some serious drawbacks. First, there is no risk pooling. Second, patients have to pay whatever private practitioners and drug peddlers charge. At village level, the prices can be high since the population size would not likely to be able to support a few providers competing with each other. At the subdistrict (township) level, the competition is also limited because of population size. Also, the health service market suffers from well-documented market failures that can result in price gouging, poor medical quality, and induced demand for drugs sold at a high profit⁵. If households are willing to prepay the amount that they now pay out of pocket into an organized financing scheme, *collective gains* can be obtained. The organized fund could pool risks, improve quality and expand the delivery of health care, using the same amount of money.

Combinations of the above three problems lead to the unmet health needs around the world. We must identify the different combinations that cause the problem since they need different policy remedies. For many very low-income countries in Africa, the causes of their unmet health needs are clear: under-funding as well as the inability of their health systems to transform their money into effective health care for rural and poor populations. China, Egypt, India, and Kenya spend reasonable amounts, but their health systems cannot transform the money into effective services for rural and poor populations. In contrast, Sri Lanka, spending a modest amount, has produced enviable results in health status and risk protection. As a result, we have some confidence that additional public spending by Sri Lanka could yield significant gains, but we cannot say that about India.

Throughout the world, community financing has been used to mobilize resources to fund and deliver health care for rural and ghetto communities. Some types of community financing schemes have been successful in addressing all the three issues discussed above, while others are primarily income-generating schemes for providers (e.g., Community Health Fund in Tanzania.)

In recent years, community financing has become a term that is used loosely by health financing specialists to label any financing scheme that may involve some community contribution or participation. It ranges from Drug Revolving Funds that rely on user fees to fund a continuous

⁴ Funding maybe inadequate, but public fund usually go first to pay health workers, regardless of whether they deliver satisfactory services and whether drugs and other supplies are adequate. This practice has created a public employment program, not a health delivery program to meet patients' need and demand.

⁵ There are exceptions where private nonprofit providers charge reasonable prices and deliver quality primary health care such as the PROSALUD in Bolivia.

availability of drugs, to government managed prepayment schemes that require residents of a community to contribute to fund public facilities, to hospital sponsored and managed insurance schemes that principally cover only that hospital's services. These schemes are very different in nature and purpose, population covered, benefit structure, extent of risk pooling, and management.⁶ Labeling any scheme that involves the community as a community financing scheme (CF) has confused health policy leaders about which types of CF are viable and how CF can alleviate the health needs of two billion. It has also impaired researchers in investigating the key common characteristics of CF that explain the success or failure of a CF so that countries around the world can have a generalizable concept of CF to assess when they can take the individual successful cases of CF to scale.

This paper has two parts. Part I develops a conceptual framework for community financing and uses it to clarify and classify different types of schemes. The framework is intended to clarify the ambiguity, variations, and perplexity of community financing schemes so as to gain some insight into the characteristics that make community financing a success or failure. To do that, we have to ask: success or failure in what? This paper offers two criteria. First, what potential does community financing have to cover a significant percentage of the target population and mobilize resources? Second, since community financing is a means to an end, community financing schemes should be classified and examined by their *value added* to the outcomes that matter to a society. We evaluate their impact on outcomes and compare them to several in Africa. The comparative analysis provides some insight into which characteristics matter the most for establishing and sustaining community financing and what benefits they bring. Part II uses the conceptual framework to explain several community financing schemes in Asia and reasons for their success or failure.

II. WHAT IS COMMUNITY FINANCING?

Community-based health funds have existed for centuries. The earliest ones were largely sponsored by local religious organizations such as churches and synagogues. In the last century, community cooperatives, local mutual aid societies, and local funeral funds have sponsored and managed local health funds. The initiation of a nationwide community-based and managed program in China—the cooperative medical system (CMS), in the late 1950s captured the world's attention on the potential of community-based efforts to mobilize resources and provide cost-effective health care for the rural population. Other well-known successful community-based financing and provision programs include the Thai Health Card scheme and Indonesia's Dana Sehat. Each scheme covered millions of rural people for primary care and some secondary hospital services. Other local schemes such as Grameen Health Program, Dhaka Community Hospital Insurance Program, and SEWA have been successfully established and cover thousands of low-income households.

Several major studies have reviewed and summarized the numerous community financing schemes around the world. Stinson (1983) was the first to compile an inventory and brief

⁶ This confusion is exacerbated by studies examining the community financing schemes from a particular point of interest and then label them by that single unitary factor. Several widely circulated documents have used new terms such as rural health insurance (U.S. Agency for International Development and the World Health Organization) and microinsurance (International Labour Organisation) for community financing schemes.

description of close to 200 financing schemes. Bennett et al. (1998) analyzed risk-pooling characteristics of more than 80 schemes globally. Most recently, Atim (1998) conducted a study of 22 mutual health organizations in Africa. These three comprehensive studies covered schemes ranging from local prepaid user fee plans and church-sponsored, traditional, third-party insurance schemes to universal compulsory social insurance for target populations. Their wide variations make it almost impossible to understand what constitutes a community- financing scheme much less grasp what made them successful.

Community financing can be broadly defined as any scheme that has three features: community⁷ control, voluntary membership, and prepayment for health care by the community members.⁸ This definition would exclude financing schemes such as regional compulsory social insurance plans and community-managed user fee programs. However, it is still too vague for analytical purposes when we try to understand what makes a community-financing scheme a success or failure.

Two analytical definitions of community financing can be derived from our strategic framework in mobilizing domestic resources for health outlined in Chapter 1 of the Report of Working Group 3, Commission on Macroeconomics and Health. Our framework argued that community financing is one of the several financing modalities to raise funds. *Then one way to differentiate community financing schemes is by examining their capability to mobilize resources and population coverage.* Our framework also suggests another way to differentiate CFs. Financing is an instrument to achieve societal goals. We are ultimately interested in a financing scheme's impacts on the outcomes of a health system. Therefore, *another way to differentiate CFs is by the final outcomes they produce.* We explain in greater detail about the two different approaches in classifying and studying CFs in (A) and (B), below.

A. CLASSIFY AND ANALYZE COMMUNITY FINANCING SCHEMES BY THEIR POTENTIAL TO MOBILIZE FISCAL RESOURCES AND ATTRACT A LARGE PERCENT OF TARGET POPULATION TO ENROLL

A CF's ability to raise funds from households depends on their ability to pay. A CF's capacity to raise funds from community businesses depends on the number of rural enterprises and cooperatives. Poverty households have to be heavily subsidized, and poor households also require some subsidy.

What would motivate households that have some ability to prepay to do so? Their willingness to prepay must be the primary determinant. Economic and social factors influence their willingness

⁷ *Community* is defined as a group of households living in close proximity to each other such as a village or a neighborhood. Often for risk pooling and managerial purposes, the villages might be grouped.

Besides geographic proximity, community also include organizations where people who share common interests come together as in producer and consumer cooperatives or women banks.

⁸ Prepayment can be for two types of health expenses: high cost and low frequency; and low cost and high frequency. The former involves much greater risk pooling (i.e., insurance) than the former. Insurance literature has long documented that most people lack the appreciation for the benefit of insurance which led to a common saying, "insurance is sold not bought." In advanced economies, voluntary private health insurance is being sold to the affluent risk-averse households, but not in low-income countries.

to prepay (Hsiao 1993, Bennett and Creese 1998). From the economic perspective, the expected economic and quality gains have to be equal or greater than the prepayment. On the other hand, social norms and close relationships may shape people's preference for prepayment that involves elements of income transfer. The economic and social considerations are discussed in A(1). Section A(2) discusses specifically which gains members are likely to value. In examining a CF's ability to produce economic and quality gains, we argue it depends on the motivation of the management, presented in A(3). Management's motivation and competence are manifest in certain organizational and incentive characteristics of a CF that are known to be able to improve efficiency and quality of health care. They are identified and discussed in A(4).

(1) Major determinants of community members' willingness to prepay

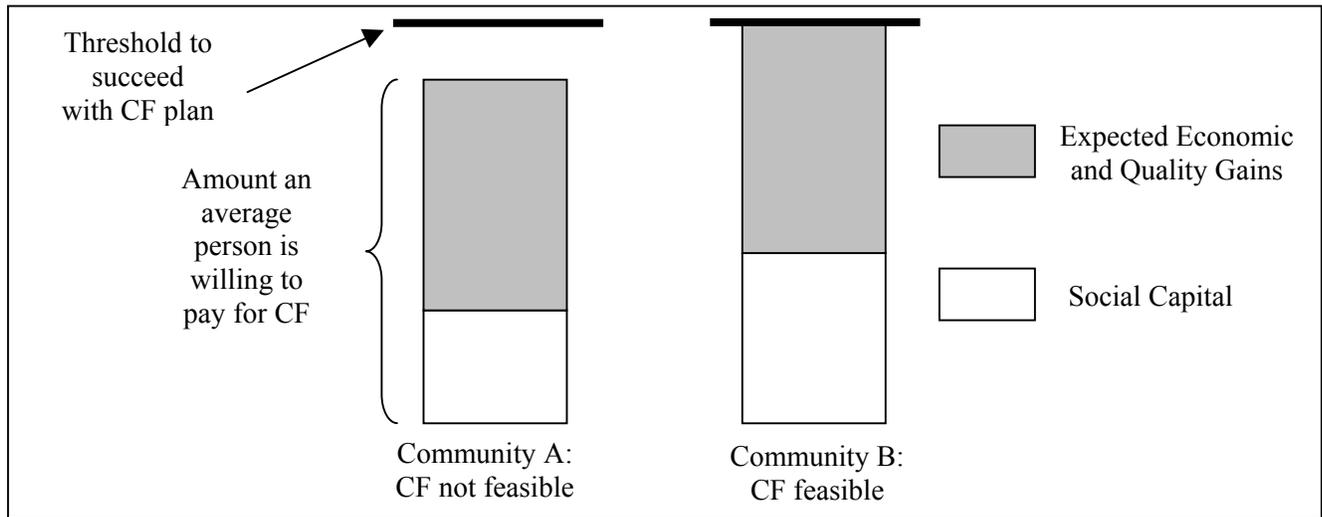
Economic theory suggests that households' willingness to prepay would depend on their belief the amount they can gain economically and/or in health care. In other words, the expected benefit has to be greater than the cost. That could happen in three ways. First, the existing facilities can produce the patient-valued services more efficiently (including reducing corruption) so the prepayment would buy more than it can now. Second, the prepayment will purchase something new that is valued by the household such as risk protection. Third, the government can provide direct and visible subsidy to motivate community members to join a CF. For example, when the government matches every dollar the community member prepays, members can easily see the economic gain. Other forms of subsidy can be discounting the price CF members pay for services and/or drugs.

As for social characteristics of a community that may influence households' willingness to prepay, we hypothesize that social capital could influence people's preference to prepay. Prepayment implicitly involves risk pooling, cross-subsidizing between the healthy and the less healthy, and between the rich and the poor. Young and healthy people will not enroll if they have to prepay a similar amount as the elderly and the less healthy people. But sociologists have long argued that social capital is an important determinant of people's willingness to cooperate with each other. This theory has been supported by several empirical economic and political studies (Putnam 1992, Liu 2001, Narayan and Pritchett 1997).

We hypothesize that the degree of mutual concern that community members have for each other (social cohesion and solidarity) could have significant influence on their willingness to prepay, even when an individual household is uncertain that the expected benefit will be greater than the amount to be prepaid. *In economic terms, it means social cohesion and mutual concern shape people's preference for prepayment. We hypothesize that the greater the social capital, the more people are willing to prepay.*

In a simple diagram, we can illustrate the interactions between economic gains and social capital and their sum has to reach a threshold—the prepayment required. We show a CF can be successful even when the prepayment amount is greater than the expected economic/health gain because of the social capital. This hypothesis is illustrated in Figure 1. While community A can produce the same level of economic and quality gains, it has less social capital than B, and the sum of the two for A did not exceed the prepayment amount required. Consequently, community A did not establish CF. However, because community B has more social capital, it was able to establish a CF. Our hypothesis may explain why some CFs have been successful while others have failed since CFs vary in their ability to produce gains, and communities have varied social capital.

Figure 1: Feasibility of Establishing Community Financing and the Amount the Average Person is Willing to Pay as a Function of Expected Gains and Social Capital



Supported by the Chinese government and UNICEF, we have been conducting social experiments in 10 poor rural counties in eight different provinces in China, testing whether social capital affects rural households' willingness to prepay. Liu (2001) developed several measurements of social capital such as degree of mutual assistance a household has given and participation in civic activities in villages. His preliminary regression analysis found statistically significant association between these social capital variables and people's willingness to pay and their actual enrollment in CFs.

(2) What gains maybe valued by community members?

Numerous studies have examined why rural population have voluntarily enrolled and stayed enrolled in different CFs. Market surveys were also conducted in China and in Indonesia to glean what kind of health care and risk pooling people prefer to prepay and how much they are willing to prepay. Overall, these studies found people most often mention the following items among the top three products they valued most: availability of close-by and affordable⁹ primary care and drugs; some protection against high financial risks such as hospital charges; neat and clean facilities particularly outhouses or bathrooms; reasonably competent practitioners, and good customer service. Various studies conducted in Asia, Africa, and Latin America also had similar findings. We summarize the products valued by community members in Table 1.

⁹ Affordable defined as reasonably priced as judged by historical precedents or by common sense.

Table 1: How Community Members Valued Service Availability, Quality, Risk Protection, and Costs

Availability of Affordable Services			Quality of Services (competence, cleanliness, and custom service)			Extent of Risk Protection	Costs	
Preventive	Primary Care and Drugs	Hospital	Preventive	Primary Care and Drugs	Hospital		Travel	Charges at Time of Use
High	High	Modest	Modest	High	High	Modest	High	High

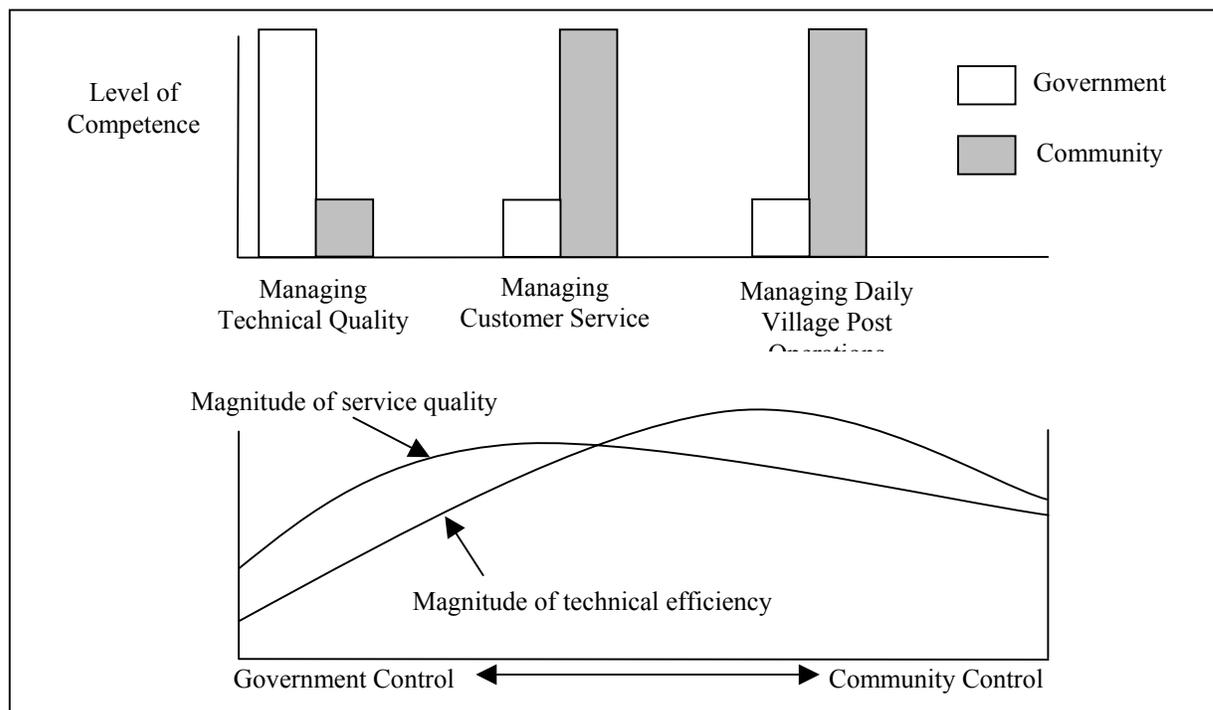
(3) When would a CF give priority to produce economic gains and improve quality of services for the patients?

We can understand what products community members value highly, the producers may not have supplied them, particularly under public provision. Under what circumstances would CFs be motivated to produce the economic and quality gains valued by the community members? Management control is one critical determinant. Household interview surveys consistently found community member’s key concern was whether the funds will be used exclusively for their benefit. Corruption is a major worry together with excessive spending on staff compensation and services that have less value to the patients. Consequently, to be willing to pay, peasants must trust and have confidence in the organization that manages the fund. In most low-income countries, the government has not earned the trust and confidence of the people at village and township levels (Gilson et al. 1994, Hsiao 1995.) When this is the case, nongovernmental organizations (NGOs) that have the people’s confidence must manage the fund. Other managers could include local agricultural cooperatives, churches and mosques, funeral funds, or a newly formed community organization. *This aspect—people’s confidence and trust in the organization managing the fund—is a precondition for a CF’s success.*

We believe, in general, governments are less capable than the local community to manage the services for the patients’ benefit at the village and subdistrict levels. The reasons are straightforward. Governments face financial and human resource constraints in managing thousands of clinics at village and township levels. But CF members have a self-interest in seeing that their prepayment is used wisely and efficiently for services they value. When the local community has significant control over the CF, members can have a greater voice in deciding how funds should spent. The members can manage the efficiency and quality of services much more effectively because they can readily monitor the staff’s regular attendance at the clinic and the availability of drugs and supplies. They can directly experience the practitioner’s technical competency and the service quality and can observe daily the cleanliness of the health facilities. Therefore, we can expect greater economic and quality gains as community control and management increases. This relationship is illustrated in Figure 2.

The curve in Figure 2 represents the hypothetical relationship between the gains and community control. Their relationship is nonlinear because we assume the community members have limited education, management know-how, and knowledge of medical affairs. At some point, the gains reach an asymptotic point because of the community’s limited ability to manage. Thus, the best combination of control and management may be a combination of community, government, and health professionals.

Figure 2: Plausible Relationship between Locus of Control and Economic and Quality Gains



Experience from local community-controlled CFs and household interview surveys conducted in China and Indonesia support our hypothesis. As described in Part II of this paper, one large Chinese survey conducted in five provinces found more than two thirds of the community residents want significant control over the CF in order for them to enroll. In examining the CFs' experience, we have consistently found that agricultural and lumber cooperatives managed CFs in Indonesia. Community-managed Dana Sehat and CMS have increased the availability and access of health care at the village and subdistrict levels. Moreover, the Indonesian experience also illustrates the limited managerial capability of the community members. The most successful Dana Sehat plans were the ones where villages grouped themselves together by subdistrict. The board members were chosen by community members, but fulltime qualified managers were hired to manage the plan at the subdistrict level (see Part II).

(4) What operational characteristics of a CF may represent managerial efforts to improve efficiency and quality?

Four key factors emerged when we examined which organizational and management characteristics and incentives structures are more likely to yield efficiency and quality gains valued by the community members. Market surveys in China and Indonesia and household interview surveys consistently found that availability and proximity of reasonably competent practitioners matter the most to community members. They have a paramount concern about the distance they have travel for the basic primary care and drugs (see Part II). They also value highly home visits by health practitioners such as midwives (see Part II). Second, studies found that economic gains can be produced by organizational arrangements such as integrating

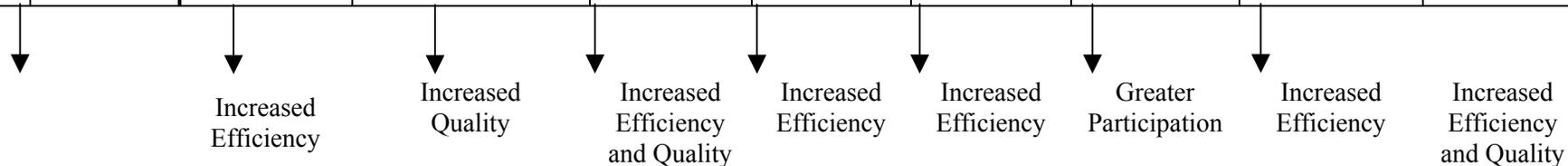
financing and provision of preventive and primary care at the village level,¹⁰ using an essential drug list, centralizing the bulk purchase of drugs, and having an organized drug distribution network (Carrin 1992, Saurborne 1994). Quality gains can be obtained through organizational arrangements such as establishing a formal referral system, regular monitoring of clinical performance of practitioners at lower level facilities by the higher level facilities, and cleanliness and hygiene at the clinic, particularly the bathrooms. Efficiency and quality gains can also be obtained by using patient and provider incentives such as imposing a copayment on drugs to reduce moral hazard, allowing patients some choice to create competition, paying practitioners separately for health education and prevention to improve self-care and prevention, and paying salary plus bonus to practitioners to improve working hours and custom services (McPake et al. 1992)

Using the factors gathered from various CF experience and marketing studies, we can classify and examine CFs by the local community's relative control and managerial power over the CFs, and their organizational, managerial, and incentive characteristics. These are important since they may indicate the relative gains that a CF can produce, valued by those who have to prepay. Once we can examine the magnitude of the gains and the kind of gains a CF can produce, we can infer what a CF's likelihood of success in raising funds from the community and the size of the population likely to enroll. In Table 2, we summarize the major characteristics of CFs that enable them to produce significant economic and quality gains. It is important to stress that most of the cost reduction produced by CFs came from purchasing drugs in bulk and using them more appropriately (Carrin 1992, Saurborne 1994).

¹⁰ The currently favored policy of separating financing from provision can work only when there are several competing providers. This condition seldom exist in villages and towns. In the United States, the major industry in many isolated towns organized the staff-model health maintenance organization (HMO) where financing and provision are integrated. They have proven this organizational form, controlled privately, can produce high quality health services at lower cost. Low-income countries have had similar experience. More important, low-income countries have few qualified practitioners working in villages and towns. Where public health services are absent or operate inefficiently, peasants rely on indigenous doctors, drug peddlers, or private practitioners whose competence varies widely but who charge high prices. The local community can improve the efficiency and quality of basic health care by organizing health posts and clinics and by recruiting qualified health workers and practitioners and assuring them a steady, reasonable income. But this requires a prepayment financing arrangement.

Table 2: A Typology of Selected Characteristics of Community Financing Schemes

Name	Control	Operational Features							
		Organization					Incentives		
	Degree of community control	Integration of financing and provision at village level	Organized referral system, monitoring by continuous educ by upper level	Organized purchase and use of drugs	Contracting hospitals	Allow choice and competition	Subsidy	Copayment to reduce overuse of services/drugs	Salaried practitioners
Thai Health Card									
Tanzania Community Health Fund									
<u>CMS</u> - Jiangsu County									
<u>CMS</u> - 14 Counties									
<u>CMS</u> - 10 Counties									
<u>CMS</u> - Tibet									
Dana Sehat									



C. WHEN HOUSEHOLDS ARE WILLING TO PREPAY—LESSONS FROM SPECIFIC COMMUNITY FINANCING SCHEMES IN ASIA

From the CFs that we closely examined in Part II of this paper, several types of CFs emerged, based on the key factors that can explain the success or failure of the various schemes. We summarize them here.

Direct government subsidy to the individuals. The Thai Health Card represents this generic model. Its success seems to come from four factors, including: (i) patients have to pay high user fees unless they enroll; (ii) the government directly and visibly matches the premium paid by the enrollee; (iii) the patients have free choice of public providers; and (iv) most people can readily calculate that the benefits would exceed the premium they pay. This model should not be even included as a community financing scheme since it has little grass-root community involvement.

Cooperative health care. China's CMS and Dana Sehat represent this generic model. Financing and provision are integrated at village and subdistrict levels. The original success of CMS was largely due to its extremely efficient and low-cost health care delivery system, which brought clear benefits to the enrollees and was also compulsory. But its major weakness was in public control and management. The local officials in many communities abused their power and misused CMS funds for their own gain. When the compulsory feature was removed after the agriculture reform in early 1980s, only the uncorrupted CMS (between 50 percent and 60 percent of the CMSs) had any chance to survive on a voluntary basis. The CMSs that continued, despite the government's effort to abolish them in the mid-1980s, can be divided into two groups. Many better-off communities had enough middle-class rural households, were able to give some subsidy, and decided to continue. Poorer communities that continued with their CMS did so largely for four reasons: (i) the local government leaders' were enthusiastic about continuing with the scheme; (ii) the leaders were able to mobilize subsidy from either local government or rural enterprises; (iii) the CMS was able to integrate financing and provision at village and township levels to produce efficient, quality health care; and (iv) the CMSs had to account to the enrollees for use of the fund. The experience of Dana Sehat was similar to the CMS's. Dana Sehat's slow expansion can be explained by two factors. First, the government gives no subsidy, and the poor and near-poor households could not pay. Dana Sehat succeeded largely in areas where a religious charity or rural industries such as a lumber cooperative were able to provide some subsidy. Second, a village is too small a unit to support an entire scheme and to provide management know-how and risk pooling.

Community-sponsored third-party insurance. A social experiment was conducted in China, designed and operated by the Rand Corp. The experiment aimed to assess how many people were willing to join a voluntary community-based health insurance plan, what premium the Chinese peasants were willing to pay without government subsidy, and the price elasticity of demand. The Rand experiment set the premiums at 1.5 percent of average income. Designed as an insurance plan, the insureds paid a significant copayment or coinsurance when they sought health care from village and township and county health facilities. They could visit county hospitals only in an emergency or with the approval of the township health center. More than 90 percent of households in the test areas voluntarily joined the program, and 95 percent reenrolled after the first year. Administrative costs were kept low (8 percent of total reimbursements).

Provider-sponsored prepayment. The Dhaka Community Hospital (DCH) Plan represents this generic model, a provider-sponsored prepayment plan. The DCH system operates a health insurance scheme at its clinics, known as the “Health Card Program.” There are five types of health cards. The Family Health Card, intended for rural households, costs 40 taka per month (about US\$1) for an initial enrollment and 20 taka for renewal, covering up to 12 members per household, including servants living in the households. This plan entitles the whole household to consult the clinic doctor at any time and to monthly home visits by DCH-trained health workers. Patients with the health card do not pay additional fees for consulting a doctor but have to buy medicines outside the clinic. The School Children Card, free to school children living near the health clinics, offers children free physical examinations and health education. The Worker Health Card, for workers in enterprises near the clinics, costs 2 taka per month per worker. Premiums are paid by the companies or the Owners Associations. The benefit package includes free consultation but no monthly home visits by health workers. The Sport Card, for professional sport players, is intended mainly to publicize the clinics. No premium is charged for enrollment, and medical consultations are free. Poor families in the communities received a special Destitute Card at no cost, which allows members of poor households to visit the clinic at 5 taka per visit. The community committees decide which families in the village qualify as “poor” and should receive Destitute Cards.

Consumer or producer cooperatives. The Grameen Bank (GB) represents this generic model. GB is internationally known for its successful group-based credit program and as a provider of credit to the rural poor, particularly women, who own less than a half acre of land or whose assets do not exceed the value of one acre of land. Grameen has 2.3 million members and, through its 1,167 branches, covers almost half of the villages in the country. GB established the Grameen Health Program (GHP) to provide basic health care services to its members as well as nonmembers living in the same operational area and to provide insurance to cover the cost of basic care. The GHP functions as an insurer as well as a health care provider. The GHP’s prepaid health insurance program is open to everyone covered by a GB branch regardless whether they are GB members or not. The insurance scheme utilizes the organization structure of the GB credit program.

At GB branch operational level, which normally has 2,500 GB families and 3,500 non-GB families, GHP organizes health centers to provide outpatient services, routine pathological tests, and basic drugs. Each center is staffed with a doctor, who also acts as the center director, a paramedic, a lab technician, and an office manager. Some centers have subcenters, usually staffed by one paramedic and two health workers (Grameen Bank (1995) Preparatory Report on the establishment of the Grameen Health Program. Grameen Bank, Dhaka). The number of Grameen health centers gradually expanded from 5 in 1993 to 10 in 1997. The families enrolled in the insurance increased from 13,000 in 1994 to 25,935 in 1996. About 85 percent of subscribers are GB members. This ratio did not change much over the years.

In summary, we can classify community financing schemes into five types:

- i. Direct Subsidy to Individual*
 - Thai Health Card
 - Tanzania Community Health Fund
- ii. Cooperative Health Care*
 - High-Income Communities: Jiangsu Province
 - Middle-Income Communities: 14 County (WHO)
 - Low-Income Communities: 30-county Study
 10-county Experiment
 Tibet
- iii. Community-Based Third-Party Insurance*
 - Rand Experiment in Sichuan Province
 - Dana Sehat
- iii. Provider-Sponsored Insurance*
 - Dkaha Community Hospital
 - Gonoshasthya
 - Bwamanda
- iv. Producer or Consumer Cooperative*
 - Grameen

D. GENERAL FINDINGS

- Rural households and urban poor households are willing to prepay a portion of their health services. The amount they are willing to prepay depends on economic and social factors. The economic factors include the household's ability to pay, the size of out-of-pocket payments they have made if not enrolled in a CF, direct subsidy given, and who controls the funds and delivery of basic primary care services. The social factor includes the sense of kinship and mutual concern for each other in a community (social capital).
- The poor and near-poor need simple and direct government or donor subsidy to make the economic gains very visible to motivate them to prepay. The subsidy could be as low as half the prepayment amount to be paid by the people. Poverty households need almost full subsidy.

- The revealed preference seems to show that people prefer to have both primary care and insurance and are willing to make a trade-off. Among the CFs in Asia, people most wanted coverage of primary care and drugs. This is logical because people want to have a direct payoff. Understanding and appreciation for risk pooling is rudimentary.¹¹ Also, greater coverage of primary care reduces adverse selection by including individuals who have no serious health problem, but they may drop out once they learn their prepayment has little immediate direct payoff.
- In most communities, a CF must have its members' trust and confidence. This means the community must have reasonable control over the CF and the services delivered at the village level.
- CMS and many Dana Sehat plans have demonstrated that they can produce measurable economic gains and improvements in service quality.
- Government or an established nongovernmental organization (NGO) must initiate the scheme and conduct training.
- Community-sponsored third-party insurance schemes have seldom succeeded in covering a significant percentage of the target population.
- Some nations rely on community cooperatives and have found that consumer cooperatives have done better than producer cooperatives in looking out for the patients' interest.¹²

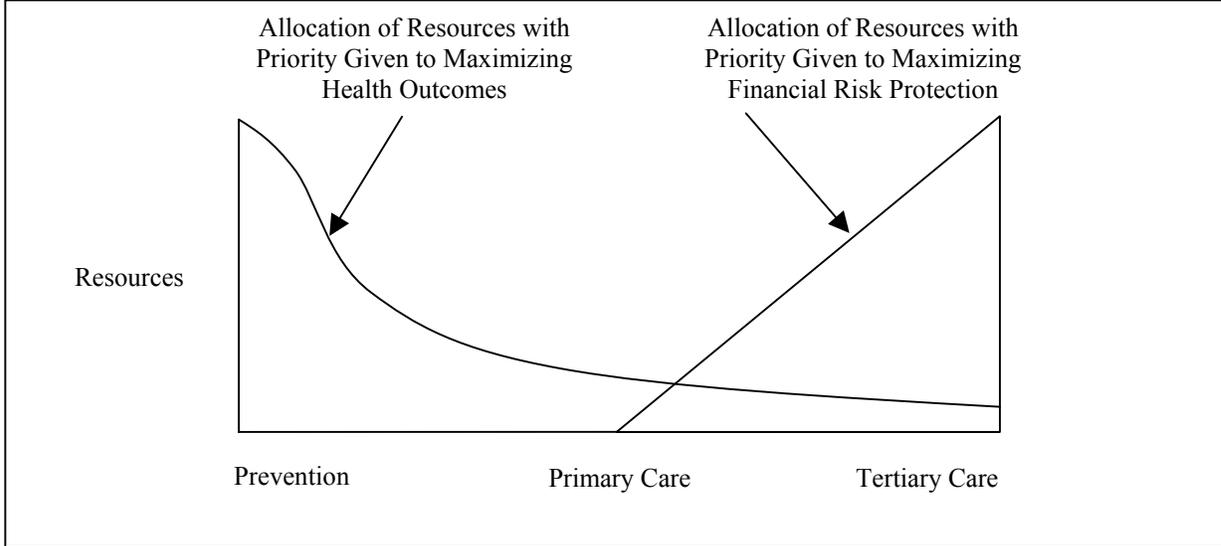
E. CLASSIFY AND ASSESS COMMUNITY FINANCING SCHEMES BY OUTCOMES

Another approach in analyzing and assessing CFs is by their impacts on the health system outcomes. Outcome data by community have seldom been collected. A few studies have found measurable improvements in health outcome and financial risk protection after the introduction of certain types of CF at regional or national level. The Chinese experience is a good example. In the absence of reliable data, we can examine the health services that are provided under a CF and infer the potential impacts on health and risk pooling. The relationship between covered health services and health outcomes and risk pooling are shown in Figure 3. It also illustrates the trade-offs when resources are very limited. The most painful trade-off is between improvement of health status and prevention of impoverishment.

¹¹ Even in advanced economies, where people are better educated and do buy other types of insurance, initially insurance companies found little willingness to buy health insurance. From the 1930s to the 1960s, it was often said that health insurance has to be sold, not bought.

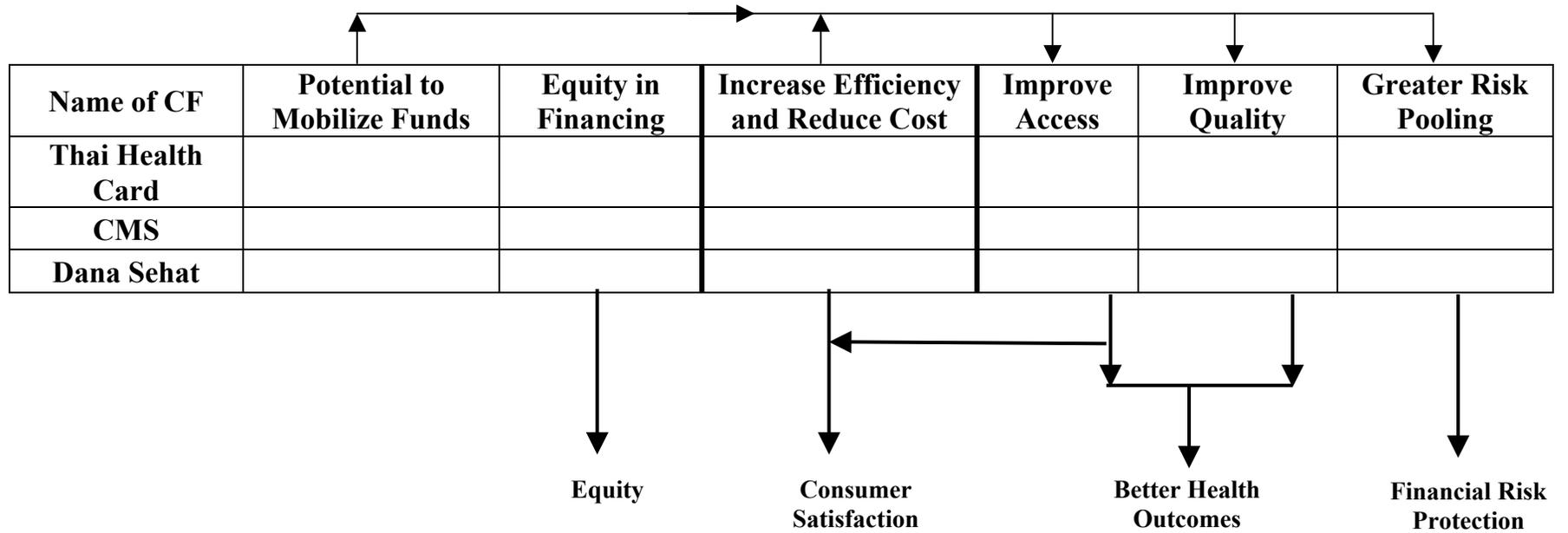
¹² In several countries, particularly in Africa, church-sponsored and -managed hospitals have enjoyed the people's confidence and have been successful in starting hospital-based prepayment plans.

Figure 3: The Trade-offs between Health Gains and Risk Protection by Type of Service Funded



The CFs can be compared by their likely impacts on health status and risk pooling. Table 3 summarizes the outcomes by which the CFs should be assessed, and we illustrate the use of this framework with several selected CFs.

Table 3: Assessment of Potential Value Added by Selected Types of Community Financing Schemes



III. A SUMMARY OF THE VALUE ADDED BY TYPES OF COMMUNITY FINANCING SCHEMES

1. For low-income countries, CFs have only modest ability to increase the **total amount of funds** for health care. The reason is straightforward. The target population consists of largely poor and low-income households whose ability to pay is modest. CFs major value added is to *organize* what households and government are already spending directly and use the funds to buy more and better services.
2. Properly structured CFs can **significantly** improve efficiency, reduce the cost of health care, improve quality and health outcomes, and pool risks.
3. Community-financing schemes could improve preventive services and reduce the incidence of disease. It could also improve people’s access to health care and the quality of services, thus improving their health status. CFs could also improve risk pooling and reduce health-induced impoverishment. .
4. CFs can be grouped by their basic purposes:
 - a) Mobilize additional funds for government facilities and improve access—*prepaid user fees* (e.g, Community Health Funds in Tanzania, Health Card in Thailand)
 - b) Mobilize funds from rural population and urban poor and improve access, efficiency, and quality of care with modest risk pooling—*cooperative healthcare* (e.g., CMS, Dana Sehat, Grameen Kalyan, Boboye, Abota)
 - c) Assure more stable funding for providers—*provider sponsored insurance* (e.g., Dhaka Hospital, Nkoranza, Bwamanda).

5. *Summary*

We summarize the five types of CFs and their potential impact on the final outcomes of a health system. Table 4 gives our evaluation, based on studies of a limited number of CFs.

Table 4: Potential Value Added by Types of Community Financing Schemes

Type of CF	Who controls use of fund	Potential pop to be covered & raise fund	Equity in financing	Increase efficiency and reduce cost	Improve access	Improve quality	Greater risk pooling
Prepay User Fees	Government	Low	Low	None	Low	Low	Low
	Ind. househ	Modest	Low	None	Modest	Low	Low
Cooperative Healthcare	Local comm and special purpose NG	High	Low	High	High	High	Modest unless govt sub
Community based 3 rd party Insurance	Community	Cover Higher Income families	Low	Low	High for those insured	Low	High
Provider sponsored Insurance	Hospitals	Cover higher income families	Low	Low	High for insured	Low	High
Provider or consumer cooperative	cooperatives	Cover member	Low	High	High	High	medium

IV. PART II: A REVIEW OF SELECTED ASIAN COMMUNITY-FINANCING SCHEMES

Community financing is an ambiguous term that has been used loosely over the years to describe some level of community involvement in financing healthcare. Community involvement alone, however, cannot be used as the single dimensional factor for all the various schemes, including copayment for government services, prepayment schemes for hospital services, financing schemes for immunization, private insurance schemes, and even revolving drug funds.

Community financing can be broadly defined as any scheme that has two features: *a community base*¹³ and *prepayment* into an identifiable fund by the community members¹⁴ that entitles them to some health benefits (Creese and Bennett 1997). This definition would exclude some financing schemes such as regional social insurance plans and community-managed user fee programs. Using this definition, we selected several well-known national and local financing schemes for analysis. These case studies may shed light on why some schemes have succeeded and others have failed.

A. NATIONAL SCHEMES

(1) China's Cooperative Medical System

(a) History:

In China, about 800 million people live in rural areas, most of them engaged in farming. Most of them were living on bare subsistence before the 1979 agriculture reform. The average disposable income per person was roughly equivalent to US\$115 in 1985, ranging from under US\$25 per capita for the poorest households to US\$175 (1390 yuan) for those in the highest income quartile [2].

Since the late 1950s, health care for China's rural population was organized and financed through the Cooperative Medical System (CMS), an integrated part of the overall system of collective agriculture production and social services.

Health care for the rural population was organized into a three-tier structure. Village health stations serve an average of 500 to 1,000 residents; township health centers serve 15,000 to 20,000 people, and county hospitals serve a catchment area of 200,000 to 300,000 people. Village stations are staffed by part-time village doctors whose training consists of 3 to 6 months' basic medical education after junior middle school. Their role is to provide basic preventive care (e.g., immunization, prenatal consultation) and simple curative services (treating common illnesses and injuries). Most township health centers are owned and operated by the town government. An average facility has 7 to 10 beds and 10 staff members, led by

¹³ *Community* is defined as a group of households living in close proximity to each other such as a village or a neighborhood. Often for risk pooling and managerial purposes, the villages might be grouped. A community can also be a group of people formally organized to advance some common interest (e.g., agricultural and consumer cooperatives).

¹⁴ Prepayment can be for two types of health expenses: high cost and low frequency; and low cost and high frequency. The former involves much greater risk pooling (i.e., insurance) than the former. Insurance literature has long documented that most people lack appreciation for the benefits of insurance, which lead to a common saying, "insurance is sold not bought." In advanced economies, voluntary private health insurance is being sold to affluent risk-averse households, but not in low-income countries.

a physician with a three-year medical school education after senior middle school. County hospitals, serving as medical referral centers for the rural residents, are owned and operated by the county government and staffed by physicians with four to five years of medical school training. The typical county hospital has 135 beds and 186 staff members, of whom 8 percent have Bachelor of Medicine degrees. County hospitals have at least the basic five specialty services—OB/GYN, pediatrics, internal medicine, general surgery, and radiology. Under this system, village health stations, township health centers, and county hospitals were integrated within the three-tier system by a vertical administrative system. County hospitals and township health centers provided regular technical assistance and supervision to the lower level organizations.

At its peak, 90 percent of the rural population was covered by CMS schemes. Health services, financed through CMS, relied on prepayment plans. Most of the villages funded CMS from three sources:

- *Compulsory prepayment by the residents.* Depending on the benefit structure of the plan and the local community's economic status, 0.5 to 2 percent of a peasant family's annual income (4 to 8 yuan) was to be paid into the fund as premiums.
- *Village contributions.* Each village contributed a certain portion of its income from collective agricultural production or rural enterprises to a welfare fund, and a portion of this fund was used toward financing healthcare.
- *Government subsidies.* Subsidies from higher level governments funded the compensation of health workers and capital investments.

China achieved remarkable health improvements for its rural population before 1985. The CMS was characterized by its collective financing, prepayment, and organization of health services through a three-tier system. This community financing and organization model of health care was believed by many to have contributed in a significant way to China's success in accomplishing its "first health care revolution" by providing preventive and primary care to almost every Chinese and reducing infant mortality from about 200/1,000 live births (1949) to 47/1,000 live births (1973–75), increasing life expectancy from 35 years to about 65.

In the early 1980s, when China's rural reforms decollectivized Chinese agricultural production, most CMS schemes collapsed. Most villages had to dissolve their CMSs after the main source of financing, the welfare fund, supported by collective farming income, had disappeared. An ideological shift prompted some high government officials to declare that the remaining *CNIS* programs should be abolished. Thus, most communities that still had *CNIS* were forced to disband their system by the mid-1980s, much to the dismay of local people [9]. Last but not least, patronage, corruption, and poor management contributed to the downfall of the CMS. The CMS, though based in local communities, was controlled and managed by local officials who were not held accountable to the people. Some of these officials abused their power for selfish ends. As a result, people lost confidence in the government-run *CNIS* program and refused to make financial contributions once the system became voluntary in the early 1980s.

The health status of the rural population in China has deteriorated. This deterioration has been closely related to the collapse of CMS. For example, a World Bank study found that China's earlier progress in improving child health appears, in the aggregate, to have come to a stop, despite rapid economic growth since the early 1980s. The analysis found that mortality of children under 5 years of age (under-5) declined steadily until the early 1980s and then began a slight upward drift. Experiences from other countries suggest that the under-5 mortality rate need not reach a plateau, as China's has done. This indicates that China's performance has deteriorated not only in absolute terms but also relative to other countries. The China Network/Harvard study of 30 poor counties confirmed the World Bank's study. China's poverty areas have experienced steady economic growth since the beginning of the economic reform, in 1980; per capita GDP (in real terms) increased from US\$56 in the late 1970s to US\$88 in the

late 1980s. However, the median infant mortality rate in the surveyed counties increased from about 50 per 1,000 live births to 72 per 1,000 live births during the same period of time.

Preventive services provided under CMS, financed out of central government and local welfare funds, were essentially free. Now, the vast majority of the rural population obtain their health services on a fee-for-service (FFS) basis instead of the previous prepaid basis.

B. CMS SCHEMES THAT SURVIVED—A NATURAL EXPERIMENT

Despite the government’s policy to abolish the CMS and the absence of central and provincial government support, some CMSs survived. As voluntary schemes, this underscored the fact that it was principally because peasants in those communities had chosen to continue the schemes. However, these natural experiments have several biases. The peasants were already familiar with CMS; they knew the scheme and its possible benefits and drawbacks. It is important to bear in mind that this level of awareness makes the experiment unrepresentative.

How many CMSs survived ?

A survey of five poor provinces in China, conducted in 1993 in the preparation for the World Bank’s loan for the Rural Health Workers Development Project, found that among the five provinces, one relatively poor province, Shanxi, had the greatest coverage—close to two thirds of the villages maintained some form of community financing (Table 5). But in another very poor province, Guizhou, few villages had community financing (0.8 percent). In these poor provinces, the schemes were financed largely by household contributions, and benefits covered only primary care services because the very poor households could make only small contributions.

Table 5: Prevalence and benefits of community health financing in five provinces 1991
(percent)

Province	Number of villages with community financing	Percent of villages with community financing	Percent of schemes with comprehensive coverage	Percent of schemes with primary care services only
Hebei	3,992	13.1	42	58
Shanxi	4,727	65.6	15	85
Fujian	512	6.3	25	75
Guizhou	160	0.8	6	94
Henan	1,590	6.2	7	93
Total	10,981	12.2	24	76

Note: Data from the Study of Thirty Poor Counties indicate that almost 80 percent of the category “services and drugs coverage” is comprehensive coverage. Therefore, for the purposes of this table, the Five Province Survey data were recategorized, with services and drugs plans counted as comprehensive coverage and the remaining categories (services only, drugs only, other) counted as primary care services coverage only.

Source: World Bank 1993a.

The Study of Thirty Poor Counties was conducted in 1993–95 by a network of Chinese universities and Harvard University. It found that 16.5 percent of the villages it surveyed still maintained some type of community-based health finance scheme, covering 11.6 percent of the sampled population (Table 6). About two thirds of the schemes covered only primary care services at the village level; a third covered comprehensive services, ranging from primary care to inpatient services. The benefit structures all incorporated coinsurance and often set high copayment rates for inpatient services. The study found that the most prevalent type of community fund management was by village committee or by the village and township jointly (Table 7).

Table 6: Prevalence and benefits of community health financing in thirty poor counties 1993

Type of benefits	Number of villages covered	Percentage of villages covered	Percentage of population covered
Comprehensive	29	5.1	4.4
Primary Care Services only	59	11.4	7.2
Total	88	16.5	11.6

Note: Comprehensive benefits refers to schemes that reimburse 30-100 percent of hospitalization charges for township and county-Level hospitals and 50-100 percent of outpatient fees. *Primary care services* refers to coverage of fees (or discounted prices) for most village-level services with fees at the township and county levels paid out of pocket by patients. Source: China Network and Harvard School of Public Health 1996.

Table 7: Management of community health financing in thirty poor counties 1993 (percent)

Form of management	Type of benefits	
	Comprehensive	Primary Care services only
Township government	17.2	3.4
Township health center	20.7	6.8
Village and township jointly	20.7	10.2
Village committee	34.5	47.5
Village and township doctors	6.9	32.1

Source: China Network and Harvard School of Public Health 1996.

A summary of results:

Overall, about 13 percent of the rural villages continued with CMS. More affluent areas with rural industries and a higher tax base got financial support from both the government and rural industries. Why some poorest villages continued with CMS remains a puzzle. Despite the government edict in the mid-1980s to abolish the Cooperative Medical System, close to 10 percent of the rural villages continued to maintain their system. This empirical evidence suggests that there is a significant amount of public support in many villages for establishing community-financing schemes. However, voluntary development of CMS is very limited even in affluent areas. For example, only about 6 percent of the villages have established CMS in Fujian, a high-income province in China. In our 30-county poverty study survey, 70 percent of villages that reinstated CMS did so at the request of the government. Experience from China and other countries demonstrated that government could play a significant role as initiator and enabler of community financing.

Why People Prefer to have CMS?

Several large household surveys have found that a majority of Chinese peasants want cooperative financing established in their communities. The study of 30 poor counties involving 11,044 randomly selected households found strong support for reestablishing community-financed health care. Of the households not covered by community financing or maternal and child immunization prepayment schemes, 70 percent responded that they would like to see an improved scheme established, similar to the cooperative medical system. Of those covered by community financing schemes, 88 percent stated that they would like them to continue.

Several possible reasons could explain why people wish to maintain the CFs. We briefly enumerate the major ones.

- Financial barriers reduced access to primary health care for rural populations. Another is physical supply especially since 80 percent of the rural poor live in mountainous areas. The number of medical personnel, including barefoot doctors and township and village health workers have been reduced significantly. The 30-county study also showed that the number of villages with functioning health stations dropped from 71 percent in 1979 to 55 percent in 1993. Between 1983 and 1993, the costs of health care also rose at an average of 10 to 15 yuan per year, twice the average growth rate of farmers' disposable income in China.

The change to a fee-for-service system brought several changes, which factored heavily in determining the increased costs and limiting access in the process. Under the current fee-for-service system, the income of village doctors and health facilities depends on the profits they can earn on drugs. The government sets very low prices for services, in compensation, practitioners are allowed to mark-up the wholesale price of drugs by 15 percent to 20 percent, which provides an incentive to overprescribe drugs. Moreover, user fees charged for previously free preventive services have had detrimental effects on public health through reduced demand for and supply of preventive services. The Epidemic Prevention Service workers shifted their attention to services for which high fees could easily be charged--such as cosmetic product inspection and food safety--which were not necessarily the highest priority and the most cost-effective activities.

The average charge per outpatient visit for uninsured patients is almost three times that of the patients under CMS. Community-financing schemes can exercise their bargaining power in demanding discounted prices or providers can be paid on a partial capitation basis.

The increase in cost from the new fee-for-service system created a financial access barrier for the people. In the 30-county study, 28 percent of seriously ill farmers did not seek health care, and 51 percent of rural patients refused hospitalization, mainly for financial reasons. The financial burden can be illustrated by one fact. A poor farmer would have to spend 1.2 years of his disposable income to pay for an episode of hospitalization at a county hospital.

- The higher cost of health services and drugs also impoverished many families. Eighteen percent of the households using health services incurred health expenditures that exceeded their total household income in 1993. Of the households interviewed, 24.5 percent borrowed or became indebted to pay for health expenses. Another 5.5 percent sold or mortgaged properties to pay for health care. High health expenses are a major cause of poverty in rural areas. In our 30-county survey, 47 percent of the medically indebted households reported having suffered from hunger. This interaction between health and income could start a vicious cycle of illness, poverty, and more illness.

- Beside inefficiency, quality also suffered. The inter-connection and cooperation among different rural health facilities weakened or disappeared after reforms. Under CMS, county hospitals and township health centers provided regular technical assistance and supervision to the lower level organizations with a referral system that managed patients at a lower level when possible. After the collapse of CMS, however, these health care organizations became independent institutions, often competing for patients to increase revenue. This disintegration of the three-tier system may also have implications for the quality of services provided by uncoordinated rural health workers. The collapse of CMS also led to overprescribing drugs and overuse of injection and profitable tests.

Who Should Control and Manage CMS?

There was a clear preference for community control in the management of CMS. Of the households without coverage that favored reestablishing community financing schemes, about 62 percent of the peasants wanted the village residents to have a strong voice. Only 17 percent trusted the government to manage it independently. About a fourth preferred the scheme be managed by the village, a fourth preferred township management, and the rest preferred joint management by the township/village and the health facility management.

How Much Are People Willing to Pay and for What?

Response to the household surveys indicated a wide range of preferences for services, from drugs and village doctors to township health centers. There was also a preference for coverage of hospital inpatient services (catastrophic expenses) with willingness to accept coinsurance.

World Health Organization Study

To learn how to improve organization, financing, and service delivery, the World Health Organization studied community financing schemes in 14 counties in Beijing, Henan, Jiangsu, Zhejiang, Jiangxi, Hubei, and Ningxia. In each county, a research team interviewed 540 households and surveyed health services.

The study found that a typical community fund might collect 5 yuan (US\$0.63) per person from families, 1 yuan per person from the village's social welfare fund, and 1 yuan per person from the township. Patients typically must pay a deductible (e.g., 100 yuan) and make a copayment on expenditures above the deductible. The schemes limit drug coverage to 120 kinds of medicines, including traditional Chinese medicines, and set a limit on reimbursement for diagnostic tests.

Rand Experiment

In the Rand experiment, premiums were set at 1.5 percent of average income. Insured individuals could freely visit village and township facilities but could visit county hospitals only in an emergency or with the approval of the township health center. More than 90 percent of households in the test areas voluntarily joined the program, and 95 percent reenrolled after the first year. Administrative costs were kept low (8 percent of total reimbursements). The study also found that:

- Coinsurance (or copayment) exerted a significant negative effect on demand for care across different population groups. There were no interactions between the effect of coinsurance and age, income, or health status.
- Users in all but one village reported high satisfaction with the insurance arrangement (Mao 1995, p. 16).

- Services were used less when there was no functioning village health station, underlining the importance of an adequate supply of basic services (Mao 1995; Sine 1994).

As in other countries, a small share of the population (about 11.5 percent) accounted for a large share of total health expenditures (70 percent), underscoring the need for catastrophe insurance.

In most rural areas, particularly poor areas, adequate revenues for any organized financing scheme cannot be derived solely from households. Funding must come from multiple sources. According to the Study of Thirty Poor Counties, about half the financing for existing community-financed health plans came from household contributions, about a fourth from village social welfare funds, and about 10 percent from the government (Table 8).

Table 8: Community health financing by source in selected counties and provinces 1991 and 1993
(percent)

	Government	Village social welfare fund	Households	Other
Funds surveyed in Study of Thirty Poor Counties (1993)	16.1	20.3	48.1	15.5
Funds surveyed in Five Province Survey (1991)	8.0	30.3	58.7	3.0

Source: China Network and Harvard School of Public Health 1996; World Bank 1993a.

Affordability of Hypothetic Basic Benefit Packages

Whether community financing is feasible for rural China will depend first of all on its benefit structure: a low benefit package (e.g., covering only cost-effective preventive services) is affordable but may not meet the rural population's need for protection from catastrophic medical expenses. On the other hand, a high benefit package, though desirable, may not be feasible because people's willingness and ability to pay is limited. Illnesses are uncertain, and thus the payoff from participating in community financing schemes is also uncertain for the households. We found that about 11 percent of the rural population consumed 70 percent of the total medical expenditure. This finding illustrates the need for catastrophe insurance and the potential problems of adverse selection and risk selection under a voluntary insurance program. The core issue in designing an appropriate and feasible basic benefit package is the balance between three considerations: the cost-effectiveness of the services covered, people's desired coverage, and the financial constraints on those paying for the coverage.

For illustrative purposes, we developed several basic benefit packages for the low-income rural population, based on data from the 30-county poverty survey. We used the following principles and assumptions in designing the benefit packages: (a) first cover the most cost-effective services, but take into account that health care delivery is not organized by disease; (b) coinsurance should vary for different services depending on demand elasticity; (c) people are risk averse and demand coverage for catastrophic expenses. From a societal perspective, the coverage of catastrophic medical expenses also reduces the poverty rate.

The simulation results are shown in Table 9. Depending on the coinsurance level, the estimated per capita cost is between 28 yuan and 31 yuan (about US\$4 to US\$5) for providing a basic benefit package which

includes specified maternal and child health care services and a stop-loss provision of about 500 yuan to 600 yuan for patients in 1993.

Table 9: Two prototype benefit packages for China's rural poor (benefit structure and costs)

<u>Type of expenses covered</u>	<u>Level of coinsurance</u>	
	<u>High</u>	<u>Low</u>
Village post—service fees	20%	10%
drug expenses	50%	40%
Township health center—outpatient service fees	30%	30%
outpatient drug expenses	50%	40%
inpatient	35%	30%
County hospital—outpatient service fees	40%	35%
outpatient drug expenses	50%	40%
inpatient	45%	35%
Catastrophic protection—cap patient's payment at:	600 yuan	500 yuan
<u>Estimated per capita costs</u>	<u>28 yuan</u>	<u>31 yuan</u>

Can the low-income population afford these basic benefit packages? In poverty areas, households already spend a significant amount of their income on health care. According to our survey, annual medical expenditures by such households were 23 yuan per capita in 1993 (Table 10). However, it would be unrealistic to expect that people are willing to prepay this amount to support an organized financing scheme. Although the majority of individuals surveyed expressed their support for CMS, their willingness to prepay into the system was only about 5 yuan per capita. Per capita contributions to existing community financing schemes range from 1.05 yuan to 6.14 yuan. With effective social marketing, it might be expected that 10 yuan per capita could be obtained from households.

Therefore, potentially 12 yuan could be collected from individuals and local communities, covering less than half the expected costs of a comprehensive package. The rest of the resource gap will have to be filled by public assistance. Without government support, community financing schemes in the poverty regions can finance only a very limited package for the low-income households.

Table 10: Current financing of health spending by source in China's poverty regions

<u>Source of payment</u>	<u>Expenditure per capita in 1993 (yuan)</u>	<u>Percent</u>
Household	23.41	59.32
Government for public employees	13.18	33.40
Community financing	2.31	5.85
Welfare fund	0.31	0.80
Other	0.25	0.63
Total	39.46	100.00

Why Most Communities Did Not Have A CMS?

When asked about the major reasons for lack of community financing initiatives, 53 percent of the community leaders cited financial difficulties. However, about a third of the interviewed leaders listed

non financial reasons such as lack of organizational capacity and lack of policy support from higher-level government (Table 11).

Table 11:. Percentage of 2236 Surveyed community leaders citing major reasons for lack of rural community financing.

Inadequate Organizational Capacity	22 percent
Inadequate Policy Support	12 percent
No Mass Support	8 percent
Inadequate Financial Resources	53 percent

Indonesia's Dana Sehat and Health Card schemes

Indonesia has the world's fourth largest population, around 210 million people, living on 5 major islands and 30 groups of small islands. In 1990, the urban-to-rural ratio was 30:70, placing the number of people living in the rural areas of Indonesia close to 145 million people. In 1996, GDP per capita reached US\$1,155; however, after the economic crisis of 1997, income per capita fell to US\$380, impairing the people's ability to pay basic needs, including health service, family planning services, and food.

Since the early 1970s, the Ministry of Health has encouraged the Dana Sehat (the Village Health Fund) program. The objective of this program has been to improve the coverage of health services in Indonesia by accelerating community participation in financing and maintaining their own health. In 2000, the total membership of Dana Sehat was 23 million people, about 11 percent of the total population. The Dana Sehat, a voluntary community-based, prepaid health care program is most common in the rural areas of Indonesia. The prime movers were health centers, local government, and NGOs such as cooperatives, pesantrens (muslim teaching units). Those covered are primarily farmers, fishermen, and students. Every household is obliged to pay the premium either in kind or in cash to the bank or the committee of the dana sehat.

Contributions come from local economic activities; some schemes generate funds through coops of crops or handicrafts, while others are paid in cash. Every household is obliged to pay the premium either in kind or in cash to the bank or the committee of the Dana Sehat. Open management, trust, and community leadership form the basic culture of the Dana Sehat. Vision, mission, objectives, and program identification are based on deliberation and agreement among community members. Community control comes primarily from its members through periodic meetings to discuss the program, for which the government provides tools and guidance such as Dana Sehat operation, monitoring as well as supervisory procedures.

There are many levels of Dana Sehat. On the smallest scale, the Dana Sehat operates with simple management, organized by the village, often run by various local institutions. Membership is between 50 and 499 households, the premium is relatively low, the highest contribution is Rp 100 per household per month. The health benefits are limited to Health Center Services because of the low contribution of the community. On a larger scale, Dana Sehat has a larger membership and is run by a consolidated organization, organized by several villages (i.e., township). It has an organizational structure and job description for the providers. The premium is about Rp 500 per household per month. At this level, Dana Sehat can provide more health benefits, including primary care as well as inpatient services. Payments to the providers are based on the number of consultations (700 Rp per consultation).

Government officials usually initiate the process by organizing meetings between health providers, local authorities, religious organizations, and key persons in the community and also community-wide meetings. Community self-survey and then government officials help to train surveyors as well as assist with analysis and presentation of the results to the community. At second round of community meetings

facilitated by government authorities, community members choose the services to be covered by the fund, balancing their needs against their ability and willingness to finance the package. Poor rural communities often choose a package of basic outpatient and curative care, combined with free preventive services. Continued government supervision and monitoring, combined with monthly or bimonthly community meetings, guide fund management.

(2) Indonesia Health Card

The Health Card program, begun in 1996, is a national commitment to assure health care access for the indigent. The target population is eligible people in villages. In 1999, the estimated number of participants was 11,096. The Health Card program is administered by the Municipality Health Office (MHO). The premium is fully subsidized; the beneficiaries do not have to pay any premiums or fees. Services at the health center and certain services in public hospitals are covered. Payment to the providers is 10,000 Rp per year by capitation of the designated poor. The basic funding comes from SPSDP and MHO: 580,000,000/year and public hospitals 600,000,000/year. The government seems to be in charge of this program.

Some explanatory factors for Dana Sehat's success

The community is heavily involved in the supervision and monitoring of health care activities of the Dana Sehat. However, at village level, there are insufficient management capabilities, risk-pooling capacity, and ability to monitoring the technical quality of services. As a result, many village-managed Dana Sehat rely more on fee-for-service than on prepayment.

The township level, Dana Sehat performs better. At this level, the managerial capacity improves and the larger population base allows greater risk pooling. Centralized management has more resources and can offer more benefits and more providers.

One major barrier for establishing Dana Sehat is the absence of government subsidy. The poor community simply cannot afford it. Only communities with rural enterprise or producer cooperatives have the potential to obtain some funds to subsidize the very poor and perhaps the poor and near-poor as well to induce them to join.

(3) Thailand's Health Card

The population of Thailand is estimated at 59 million, of whom 31.5 percent are urban, hence the ratio of urban to rural population is about 1:2. Income distribution has worsened; in 1992, the highest income quintile held 59.5 percent of the national income while the lowest income quintile held merely 3.8 percent. The 1994 per capita income was US\$2,410.

The Health Card program was implemented in 1983 as a voluntary scheme, primarily to promote maternal and child health. Purchase of the card meant prepayment of a certain fixed premium, capitation to the provider, in return for free services over the period of a year. Proceeds from the card sale went into the health card fund, was managed by a village committee. Upon inception, the program's primary objective was to improve health among rural populations, with an emphasis on primary health care, including health education, environmental health, maternal and child health, and provision of essential drugs. The system incorporated a referral system from primary care to tertiary care. The program was also intended to involve local villagers in self-help as well as participation in managing the health card fund.

As time went by, various cards were introduced for different purposes but, by 1991, they were discontinued, and only family cards priced at 500 Baht were offered. A major change in the program since 1994 is the explicit contribution of the MPH: an equal contribution of 500 Baht. In addition, no

limits were imposed on the number of episodes or the cost coverage per visit. Flexibility was built into the referral system, and each province could impose any conditions deemed appropriate for particular situations. Health care funds also became managed by a committee at the district level in coordination with village-level bodies, which was aimed at expanding the enrollment base to the district level. As for the share of funds, 80 percent of the card price was earmarked for providers for medical care, and the remaining 20 percent was to be retained for marketing and sales incentives. The health card project has evolved over the years and can now be considered a kind of social welfare program, since it now receives an explicit contribution from the government equal to the contribution of the cardholder.

In 1994, free health cards were given to community leaders and village health volunteers to provide free health care for their families. The voluntary card holders consumed more health care than these two types of card holders. The compulsory community leader cards and health volunteer cards provided better risk pooling and compensated for the deficit on operating the voluntary health cards. Considering costs per card in relation to population coverage, provinces with low coverage of health cards were more likely to face higher utilization rates and health expenditure per card than provinces with high population coverage. Therefore, the health card fund provided on average only 50 percent subsidy to the regional and general hospitals, while providing 80 percent subsidy to the community hospitals and the full cost to health centers.

Initially eligible were individuals with a monthly incomes below 1,000 Baht. Now, health card eligibility extends to families with monthly incomes lower than 2,800 Baht per month and individuals with monthly incomes below 2,000 Baht, primarily farmers and informal sector workers at the community level. The cards entitle holders to free medical care at all government health facilities operated by the Ministry of Public Health, the Bangkok Metropolitan Administration, the Red Cross Society, Pattaya City and municipalities. Each card is valid for three years. The government provides block grants to health facilities based on the expected distribution of the eligible population and past records. Health centers are the cheapest source of health care, but inpatient care is available at community, general, and regional hospitals. Specifically, the budget allocation is based on the number of low-income people living in the designated less-developed villages. However, the budgetary allocation is invariably insufficient to cover the cost of providing services.

The health card fund has been changed to manage like a revolving fund. In 1995, the Ministry of Finance set up an accounting system for the central and provincial health card funds that complies with the regulations of the government revolving fund. Risk pooling at the central level facilitates portability of benefits and risk sharing among provincial funds, allowing for cross-boundary services used in different provinces and high-cost services within the same or different provinces. Now there are no benefit limits, and it is targeted to the subgroup of the population with no health benefit coverage.

Some explanatory factors for the success of Thai Health Card

The health card is able to cover a large part of its target population, the near poor, because the government's subsidy is given directly to the eligible household. The subsidy is relatively large—100 percent matching for what the household pays. Currently, it covers about three million people.

The enrollees have unlimited access to free services at the public facilities. Thus it offers high degree of risk pooling also.

C. LOCAL OR TARGET POPULATION SCHEMES

Bangladesh Community *Financing Schemes*¹⁵

In Bangladesh, community participation in health care is increasing. NGOs and the private sector actively organize and finance health care delivery. Community health insurance schemes have emerged as a mechanism for paying providers and mobilizing resources. Examples in Bangladesh include the Grameen Health Program (GHP), Gonoshasthya Kendra-Health Program, and Dhaka Community Hospital Insurance Program. This section describes briefly the three schemes, and the later sections give more details on each scheme and compare them.

The Grameen Health Program

The Grameen Bank (GB), internationally well-known as a successful group-based credit program, provides credit to the rural poor, particularly women, who own less than a half acre of land, or whose assets do not exceed the value of one acre of land. At present, Grameen has 2.3 million members and covers almost half the villages in the country through 1,167 branches. The GB is an institution for financial intermediation and also supports social development programs for poverty alleviation. The Grameen has more than twenty years of operational experience as a financial intermediary. It started a health program only in 1993.

GB became involved in health care mainly because illness was identified as the single largest cause of loan default. A study found that 44 percent of the loan defaults were due to illness and that poor health prevented the borrowers from carrying out their economic activities and therefore from repaying their loans. The poor have limited access to health care and limited capability to pay for health services when health needs occur. Thus, illness and its financial consequences is a serious threat to the Grameen borrowers and the long-term viability of the GB itself. The Grameen Health Program (GHP) was established to provide basic health care services to its members as well as nonmembers living in the same operational area and to provide insurance to cover the cost of basic care. The GHP thus functions as an insurer as well as a health care provider.

The GHP started with five Grameen Health Centers in 1993. Each center is staffed with a doctor, who also acts as the center director, and with a paramedic, a lab technician, and an office manager. Each center is attached to a Grameen Bank branch and covers the branch's operational area, which normally has 2,500 GB families and 3,500 non-GB families. Some centers have subcenters, usually staffed with one paramedic and two health workers (Grameen Bank (1995) Preparatory Report on the establishment of the Grameen Health Program. Grameen Bank, Dhaka).

A health center provides outpatient services, routine pathology, and basic drugs. A television is provided in the waiting room with various health education programs. Health workers provide door-to-door services on health education and health promotion.

The GHP's prepaid health insurance program is open to everyone covered by a GB branch, regardless of whether they are GB members. The insurance scheme utilizes the organizational structure of the GB credit program. The subscription of the insurance scheme for GB members is based on groups of a minimum of five families, the same requirement as for borrowing. In general, GB members participate in the health insurance in the same group as the loan groups. The GHP charges an annual premium of 120 taka (about US\$2.60) per family for GB members and 150 taka (US\$3.30) for non-GB members. However, if non-GB members can organize into a group of five, they pay the same rate as members. The benefit package covers unlimited outpatient visits with a copayment of 2 taka (about US\$0.05) per

¹⁵ This section is taken largely from the paper by Shiyao Chao, "Community Health Insurance in Bangladesh: A Viable Option?"

episode; 50 percent of the cost of basic pathology tests and 15 essential drugs; 15 percent of other drugs sold at the health center; 50 percent of the cost of specialist consultation and more sophisticated tests in referral hospitals; and the reimbursement of up to 500 to 1,000 taka per year for hospitalization.

The number of Grameen health centers grew from 5 in 1993 to 10 in 1997. The number of insured families increased from 13,000 in 1994 to 25,935 in 1996. About 85 percent of the subscribers are GB members. This ratio has changed little over the years.

The Gonoshasthaya Kendra Health Care System

The Gonoshasthaya Kendra (GK) Health Care System is an NGO-run local health care system. It operates in Savar, a rapidly industrializing area with population of 271,448, 40 kilometers away from Dhaka, the capital city of Bangladesh. GK started as a health project in 1971 with donor support and gradually expanded into a two-tier health care system with a 70-bed hospital and 4 subcenters. Each subcenter covers 25,000 to 30,000 inhabitants with a team of 8 to 10 paramedics. A paramedic usually provides door-to-door services, including preventive and simple curative care and health education, to inhabitants under his/her coverage, usually 600 to 700 families. A doctor from the GK hospital visits a subcenter twice a week to see patients referred by the paramedics, and the severely ill are referred to the hospital. The GK system also runs other programs: a pharmaceutical factory, a workshop producing furniture, and a small credit program.

The GK initiated the first community insurance scheme in 1975 to increase access to health care by the poor. GK subscribers pay a premium for a package of benefits, including primary health care and some portion of hospital care.

The GK scheme classifies the population into four socioeconomic groups, and the premium and copayment schedules are set based on these groups (Box 1). The criteria for determining households' socioeconomic status are not accurate measurement of income, but communities' perceptions of poverty. The communities in the catchment areas participated in the exercises for defining socioeconomic groups, and the final classifications were generally accepted by the population in the communities. The sliding fee structure was designed to reflect ability to pay. A household subscribing to the insurance scheme receives a registration card that indicates the household's socioeconomic group. The premium and copayment are charged according to the fee structure for that group. People who are not insured would pay fees based on market prices.

The sliding premium rates are differentiated according to the four socioeconomic status groups in the area. Group 1 encompasses destitute single-headed households (most of them widowed or divorced women) and disabled. Group 2 consists of households that cannot afford two meals a day for all household members; landless farmers (less than an acre of land) and daily wagers. Group 3 includes households that can afford minimum needs but have no savings such as farmers with small land-holdings (two to three acres), small shop owners, and industry labor workers. Group 4 covers households with savings, farmers with more than three acres of land, owners of big shops or businesses; middle and upper class civil servants, and professionals(Desmet and Chowdhury 1996).

The GK insurance scheme covered 12,393 member families, about 33 percent of the target population.

Health Insurance of Dhaka Community Hospital

Dhaka Community Hospital (DCH) offers an innovative approach in health service provision. The DCH differs from other private hospitals by its mission and the set-up. A **group of devoted senior medical practitioners** organized a nonprofit trust in 1989, which later developed into a system with a 24-bed referral hospital and 19 rural health clinics, 12 school health clinics, and 24 industrial health clinics. Their

mission is to provide quality health care services at low cost, so that most of the poor people can afford them. In its system, DCH attempts to integrate the provision of primary, secondary, and tertiary care.

The DCH itself operates on a fee-for-service basis and provides walk-in services at fixed rates lower than equivalent private-for-profit hospitals. The DCH offers a special program called “After Payment” that allows patients who cannot pay at the time of treatment to pay the medical bill in installments after treatment. The patient’s community guarantees payment. The “After Payment Program is very small, two to three cases per clinic per year. Since communities take the responsibility for making sure the fees are paid, no default has occurred so far. The DCH is self-reliant and receives no funds from the government or donors.

The DCH system operates a health insurance scheme at its clinics, known as “health card program.” There are five types of health cards. The Family Health Card, intended for rural households, costs 40 taka per month (about US\$1) for an initial enrollment and 20 taka for renewal, and covers up to 12 members per household, including servants living in the households. This plan entitles the whole household to consult the clinic doctor at any time and to receive monthly home visits by health workers who are trained by the DCH. Patients with the health card do not pay additional fees for consulting a doctor but have to buy medicines outside of the clinic. The School Children Card, free to school children living near the health clinics, offers children free physical examinations and health education. The Worker Health Card, for workers at enterprises near the clinics, costs 2 taka per month per worker. Premiums are paid by the companies or the owners associations. The benefit package includes free consultation but no monthly home visits by health workers. The Sport Card, for professional sport players, is intended mainly to publicize the clinics. No premium is charged for enrollment, and medical consultations are free. Poor families in the communities received a special Destitute Card at no cost, which allows household members to visit the clinic at 5 taka per visit. The Community Committees decide which families in the village are considered poor and should receive destitute cards.

The services provided by field health workers are preventive care, health education, and some simple check-ups such as measuring blood pressure and urine sugar level. Specialists from the DCH visit clinics periodically to treat villagers. The rural health card scheme does not cover inpatient care or the costs of drugs or medical tests. Doctors in the clinics refer patients to the DCH, and patients pay for hospital care at DCH rates. The DCH has begun to provide health cards covering inpatient care at the DCH to some companies in urban area.

As presented above, many communities in Asia have long-established community-based financing schemes for health care. Their sponsors vary, ranging from the government to the community itself, when it perceived the need for an organized way to finance and provide basic health care. These varied schemes offer different benefits, cover different population, and some are more affordable than others. After first classifying the different types of community financing schemes, then evaluating them, we can discover the major factors that determine the success or failure of each type.

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1818 H Street, NW
Washington, DC USA 20433
Telephone: 202 477 1234
Facsimile: 202 477 6391
Internet: www.worldbank.org
E-mail: feedback@worldbank.org

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