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Community Involvement in Health Care Financing

A Survey of the Literature on the Impacts, Strengths, and Weaknesses

Melitta Jakab and Chitra Krishnan

September 2001

COMMISSION ON MACROECONOMICS AND HEALTH

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Health, Nutrition, and Population Discussion Paper

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Abstract: The paper reviews 45 published and unpublished reports on community financing completed between 1990 and 2001. The main objective of the study was to explore performance measures reported in the literature regarding community financing. The study concluded that the reviewed literature is rich in describing scheme design and implementation. At the same time, evidence on the performance of community financing schemes is limited.

The study focused on reporting measures on three indicators in particular:

- *Resource mobilization capacity*. Community financing mechanisms mobilize significant resources for health care. However, there is a large variation in the resource mobilization capacity of various schemes. This review did not find systematic estimates about how much community financing contributes to health revenues at the local and/or national level.
- *Social inclusion*. Community financing is effective in reaching a large number of low-income populations who would otherwise have no financial protection against the cost of illness. There is large variation in the size of various schemes. At the same time, there are no estimates about the total population covered through community financing. There are indications that the poorest and socially excluded groups are not automatically reached by community financing initiatives.
- *Financial protection*. Community-based health financing schemes are systematically reported to reduce the out-of-pocket spending of their members while increasing their utilization of health care services.

Keywords: health financing, community financing, access, financial protection, social inclusion

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.

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PREFACE

In January 2000, Dr. Gro Harlem Bruntland, 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 form 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
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The authors of this report are grateful to the World Health Organization (WHO) for having provided an opportunity to contribute to the work of the Commission on Macroeconomics and Health and to the World Bank for having published the report as an *HNP Discussion Paper.*

Many individuals from various organizations helped us compile an extensive list of published and unpublished studies for this review. We are grateful to all who helped us with this exciting investigative work. We would particularly like to thank Chris Atim (Abt Associates) for his insights comments, and suggestions. We are grateful to Christian Baeza (International Labour Organisation) who shared with us ILO's extensive experience and research results. Andrew Creese (WHO) and Sara Bennett (Abt Associates) greatly helped our work by making available the database of their research on health insurance in the informal sector.

I. EXECUTIVE SUMMARY

Objective. To review the literature to date on community financing in order to: (a) explore what community financing is; (b) assess the performance of community involvement in health financing in terms of the level of mobilized resources, social inclusion, and financial protection; and (c) establish the determinants of reported performance results, including technical design characteristics, management, organizational, and institutional characteristics.

Study selection. Forty-five published and unpublished reports and conference proceedings completed after 1990 were selected for review. All studies with focus on community-based resource mobilization were included.

Findings. (a) *Community financing* is an umbrella term used for several different resource mobilization instruments. The instruments vary in the extent of their prepayment and risk sharing, in their resource allocation mechanisms, organizational and institutional characteristics. Nevertheless, the common features they share include the predominant role of the community in mobilizing, pooling and allocating resources, solidarity mechanisms, poor beneficiary population, and voluntary participation.

(b) *Performance of community-based financing*. (i) Community financing mechanisms mobilize significant resources for health care. However, there is a large variation in the resource-mobilization capacity of various schemes. This review did not find systematic estimates about how much community financing contributes to health revenues at the local and/or national level. (ii) Community financing is effective in reaching a large number of low-income populations who would otherwise have no financial protection against the cost of illness. There is large variation in the size of various schemes. At the same time, there are no estimates about the total population covered through community financing. There are indications that the poorest and socially excluded groups are not automatically reached by community financing initiatives. (iii) Community-based health financing schemes are systematically reported to reduce the out-of-pocket spending of their members while increasing their utilization of health care services.

(c) *Determinants of performance*: The key determinants of successful resource mobilization and effective financial protection include (i) ability to address adverse selection and rent-seeking provider behavior through revenue collection, pooling, and purchasing instruments; (ii) active community involvement in scheme management; (iii) durable relationship between scheme and providers to achieve better value for their members' money; and (iv) sustained donor and/or government support.

Conclusions. The reviewed literature is very rich in describing the phenomenon referred to as community financing in terms of scheme design and implementation. Although this review found several systematic patterns of performance, there continues to be a need for a stronger evidence base regarding the performance of community-based resource mobilization mechanisms as health care financing instruments

II. INTRODUCTION

Community-based health care financing (CF) mechanisms play an increasingly important role in the health system of many low- and middle-income countries. The expectation is that CF mechanisms reach population groups that government and market-based health financing arrangements do not. Populations with low income, obtaining their subsistence in the informal sector (urban and rural) and/or socially excluded groups (due to cultural factors, physical or mental disability, other chronic illness) are often not able to take advantage of government and/or market-based health care financing arrangements. Thus, CF has been attracting widespread attention for its potential to provide vulnerable population groups with increased financial protection and access to health care.

With increasing interest in CF in academic, development, and policy circles, the relevant literature has also been growing. In the past decade, there has been an exponential growth in the number of conceptual works, country case studies, comparative papers, and empirical papers describing and analyzing various aspects of community-based health care financing.

Despite the diverse nature of the literature, the papers reviewed for this study address many similar questions. What is community financing? How to describe this phenomenon that has been discussed under many different terms? What explains growing enthusiasm for community financing? Are these initiatives successful in raising resources for health care, reducing the financial burden of seeking care, and increasing access to health care? If so, what allows these schemes to succeed where the more entrenched institutions of governments and markets have failed?

This paper provides a comprehensive review of the literature on community-based health care financing dated betweem1990 and 2001. The paper seeks to answer three specific questions: (i) what is community-based health care financing and what are the main modalities; (ii) how do community financing schemes perform as health financing instruments in terms of mobilizing resources, including from the poor, providing financial protection by removing financial barriers to access; (iii) what are the key structural determinants that explain the performance of community financing.

In addition to addressing these specific questions, we hope to determine the focus of studies completed to date; integrate common findings; identify knowledge gaps; and present key contested issues requiring further research.

The paper is structured as follows: section 2 discusses the methodology of the review; section 3 discusses the definition and possible modalities of CF; section 4 reviews the performance of CF with regards to resource mobilization capacity, social inclusion, and financial protection; section 5 discusses the performance determinants of CF with regard to key technical design features, management, organizational, and institutional characteristics; section 6 presents the conclusions.

III. METHODS

Forty-five papers were reviewed for this study. Broad selection criteria were applied: studies were included in the review if their main objective was to discuss health financing arrangements where the community was actively involved in some form. The selected papers included articles

published in peer-reviewed journals, reports published in formal publication series of international organizations (e.g., WHO, ILO, UNICEF), internal unpublished documents of international organizations and academic institutions, and conference proceedings. Table 1 presents the breakdown of the reviewed studies according to publication type.

Table 1. Summary statistic of the literature reviewed by publication type

	Peer reviewed journal article	Published report	Internal document of international organizations or academic institutions	Conference proceeding
Number of studies	20	16	5	4

Of these 45, 6 were conceptual in nature, 8 were large-scale comparative papers (analyzing 5 or more community-based health financing schemes) and the remaining 31 were case studies. The regional breakdown of the case studies is fairly even between Africa and Asia (15 and 11, respectively) but only 4 on Latin America. This breakdown reflects selection bias: literature available only in Spanish was not included in the review. We present the list of reviewed studies in Table 2 according to this break-down.

The analytical approach applied to the 45 papers followed the framework proposed by Preker et al. (Preker et al 2001) (Figure 1). Health care financing through community-based involvement can be seen as having three independent objectives: (a) it provides the financial resources to promote better health and to diagnose, prevent, and treat known illness; and (b) it provides an opportunity to protect individuals and households against direct financial cost of illness when channeled through risk-sharing mechanisms; and (c) it gives the poor a voice and makes them active participants in breaking out of the social exclusion in which they are often trapped. These three objectives can be influenced through the design of CF schemes in terms of (i) technical characteristics of revenue collection, pooling, and purchasing, (ii) management characteristics, (iii) organizational characteristics, (iv) institutional characteristics.

To approximate the three objectives of CF as proposed above, the review defined the following research questions that can be answered from available studies:

(a) What is the potential of community-based health financing schemes to mobilize resources in a sustainable manner?

- What is the contribution of community financing to the resources available for local health systems?
- What is the share of community financing in total health revenues (of a district, state, country)?
- How does community financing compare to other resource mobilization instruments in terms of per capita amount of resources mobilized?

(b) Is CF inclusive of the poor?

- Do community financing schemes reach the poor? What is the socioeconomic composition of schemes?

(c) How effective are community-based health financing schemes in preventing impoverishment due to the cost of illness?

- Do CF scheme members have better access to health care than nonmembers?
- Does CF eliminate the financial barriers to health care?

Of the 45 studies, 31 were included in the review of performance. Table 3 presents the list of variables we used as selection criteria for the performance section and the number of studies that reported the selected performance variable. Of the 45 studies, 26 provided some information to assess resource-generation capacity of CF, 13 provided information on social inclusion, and 20 studies provided useful information to assess financial protection. Appendix A presents the detailed list of the 45 reviewed studies and the kind of performance variables they report.

Table 3 Selection criteria to assess the performance of community-based health financing

Performance variable of interest	Number of studies reporting selected performance variable[1]
Resource mobilization capacity	
Contribution of CF to the resources of local health systems (providers)	26
Share of CF in total health revenues (of district, state, country)	1
Per capita amount of resources mobilized through CF	2[2]
W/ Control relative to other health financing instruments	2
Social inclusion	
Socioeconomic composition of reviewed schemes	13
Financial protection	
Utilization rate of scheme members w/ control	16
OOP payment of CF members w/ control	9

A number of studies offered conclusions on resource mobilization, social inclusion, and financial protection based on the experience of authors or review of other studies and schemes but did not provide actual evidence in support of their conclusions. We excluded these studies from the analysis. We also dropped studies that reported performance figures for the scheme(s) they analyzed but did not present controls that would enable us to make unbiased conclusions.

The direct and indirect determinants of financial protection, health, and social inclusion are complex. To assess these determinants, this paper reviewed four characteristics of community financing arrangements:

- Technical design characteristics

[1] Studies that offered conclusions about various performance criteria but did not present supporting evidence in the study were not included in this count.

[2] Dave (1991) provides total expenditures and covered populations for 12 schemes and thus the per capita amount could be calculated based on these figures. However, the author does not present them in this format.

- Management characteristics
- Organizational characteristics
- Institutional characteristics

Nearly all the studies reviewed provided some insight into these characteristics. The literature is particularly rich in describing the functioning, design, and implementation of CF arrangements.

Table 2. Summary of literature reviewed on community-based health financing schemes based on nature of study and by region

Conceptual studies

1. Dror D et al. 1999. "Micro-insurance: extending health insurance to the excluded"
2. Brown W et al. 2000. "Insurance Provision in Low-Income Communities-Part II. Initial lessons from Micro-insurance Experiments for the Poor."
3. Ziemek S et al. 2000. "Mutual Insurance Schemes and Social Protection."
4. Criel B. 2000. "Local Health Insurance systems in developing countries: a policy research paper."
5. Ekman B. 2001. "Community-based Health Insurance Schemes in Developing Countries: Theory and Empirical Experiences."
6. Hsiao WC. 2001. "Unmet needs of 2 billion: Is Community Financing a Solution?"

Large scale comparative studies (> 5 schemes)

7. Dave P. 1991. "Community and self-financing in voluntary health programmes in India."
8. McPake B et al. 1993. "Community Financing of Health Care in Africa: An Evaluation of the Bamako Initiative."
9. Gilson L. 1997. "The lessons of user fee experience in Africa."
10. Atim C. 1998. "Contribution of Mutual Health Organizations to Financing, Delivery, and Access to Health Care. Synthesis of Research in Nine Western and Central-African Countries."
11. Bennett S et al. 1998. "Health Insurance Schemes for People outside Formal Sector Employment."
12. Musau SN. 1999. "Community-based health insurance: Experiences and Lessons learned from East and Southern Africa."
13. CLAISS. 1999. "Synthesis of Micro-insurance and other forms of extending social protection in health in Latin America and the Caribbean."
14. Narula IS et al. 2000. "Community Health Financing Mechanisms and Sustainability: A Comparative Analysis of 10 Asian Countries."

Case studies—AFRICA

15. Arhin, D. 1994. "The Health Card Insurance Scheme in Burundi: A social asset or a non-viable venture?"
16. Diop FP et al. 1994. "Evaluation of the Impact of Pilot Tests for Cost Recovery on Primary Health Care in Niger."
17. Arhin DC. 1995. "Rural Health Insurance: A Viable Alternative to User Fees."
18. Diop F et al. 1995. "The impact of alternative cost recovery schemes on access and equity in Niger."
19. Ogunbekun I, Adeyi O, Wouters A and Morrow RH. 1996. "Costs and Financing of improvements in the quality of maternal health services through the Bamako Initiative in Nigeria."
20. Roenen C et al. 1997. "The Kanage Community Financed Scheme: What can be learned from the failure?"
21. Soucat A et al. 1997. ''Health seeking behavior and household expenditures in Benin and Guinea : The Equity implications of the Bamako Initiative."
22. Soucat A et al. 1997. " Local cost sharing in Bamako Initiative Systems in Benin and Guinea :Assuring the Financial Viability of Primary Health Care."
23. Atim C. 1999. "Social movements and health insurance : a critical evaluation of voluntary, nonprofit insurance schemes with case studies from Ghana and Cameroon."
24. Criel B et al. 1999. "The Bwamanda hospital insurance scheme: effective for whom? A study of its impact on hospitalization utilization

patterns.”

25. Atim C et al. 2000. “An External Evaluation of the Nkoranza Community Financing Health Insurance Scheme, Ghana.”
26. Jütting J. 2000. “Do mutual health insurance schemes improve the access to health care? Preliminary results from a household survey in rural Senegal.”
27. Schneider P et al. 2000. “Development and Implementation of Prepayment Schemes in Rwanda.”
28. Gilson L et al. 2000. “The Equity Impacts of Community Financing Activities in three African Countries.”
29. Okumara J et al. 2001. “Impact of Bamako type revolving drug fund on drug use in Vietnam.”

Case studies—ASIA

30. Hsiao WC. 1995. “The Chinese Health Care System: Lessons for other Nations.”
31. Ron A et al. 1996. ‘‘A Community health insurance scheme in the Philippines: extension of a community-based integrated project.”
32. Liu Y et al. 1996. “Is community financing necessary and feasible for rural China?”
33. Supakankunti, S. 1997. “Future Prospects of Voluntary Health Insurance in Thailand.”
34. Supakankunti S. 1998. “Comparative Analysis of Various Community Cost Sharing Implemented in Myanmar.”
35. Carrin G et al. 1999. ‘‘The reform of the Rural Cooperative Medical System in the People’s Republic of China: interim experience in 14 pilot counties.”
36. Desmet A et al. 1999. “The potential for social mobilization in Bangladesh: the organization and functioning of two health insurance schemes.”
37. Chen N et al. 2000. ‘‘Study and Experience of a Risk-based Cooperative Medical System in China : Experience in Weifang of Shandong province.”
38. Gumber A et al. 2000. “Health insurance for informal sector: Case study of Gujarat.”
39. Xing-yuan G et al. 2000. “Study on Health Financing in Rural China.”
40. Preker, A. 2001. “Philippines Mission Report.

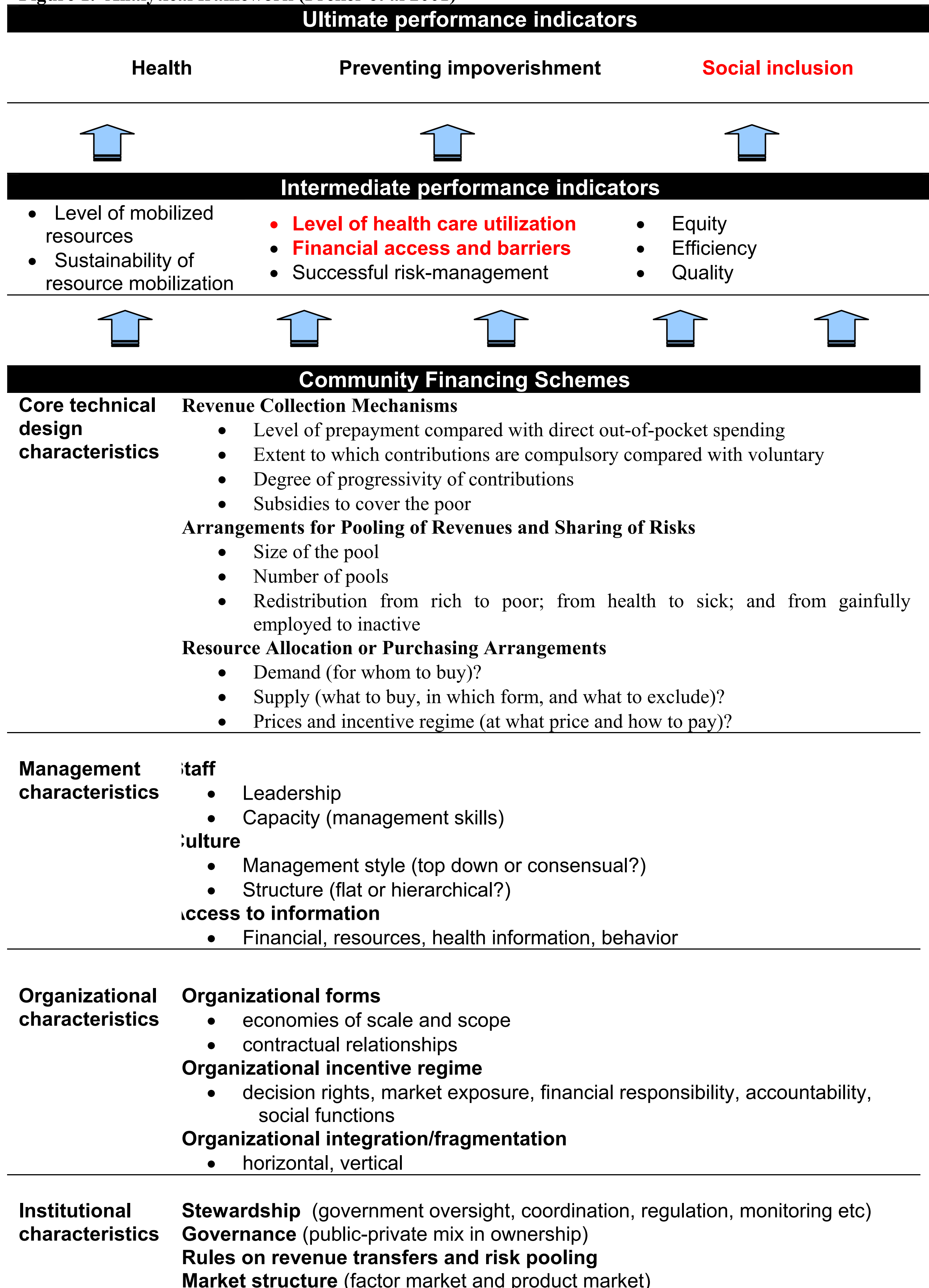
Case studies—LATIN AMERICA AND THE CARIBBEAN

41. Toonen, J. 1995. “Community Financing For Health Care. A Case Study from Bolivia.”
42. DeRoeck D et al. 1996. “Rural Health Services at Seguridad Social Campesino Facilities: Analyses of Facility and Household Surveys.”
43. Fiedler JL et al. 1999. “An Assessment of the Community Drug Funds of Honduras.”
44. Fiedler JL et al. 2000. “Financing Health Care at the Local Level: The Community Drug Funds of Honduras.”

Case studies—MIXED REGIONS

45. Ron A. 1999. “NGOs in community health insurance schemes: examples from Guatemala and Philippines.”

Figure 1. Analytical framework (Preker et al 2001)



IV. WHAT IS COMMUNITY-BASED HEALTH FINANCING?

The term community-based health financing has evolved into an umbrella term that covers a wide spectrum of health financing instruments. (Hsiao 2001, Dror 1999) Microinsurance, community health funds, mutual health organizations, rural health insurance, revolving drug funds, community involvement in user fee management have all been loosely referred to as community-based health financing.

The rationale of referring to these diverse financing instruments under the same heading is that they exhibit a number of similarities that effectively distinguish them from other resource mobilization instruments such as general taxation, social insurance and out-of-pocket payments. At the same time, there are important distinctions among them in terms of their core characteristics, organizational structure, management, and institutional environment. These differences make these arrangements dissimilar enough to make comparisons impossible without some kind of typology. In this section, we present definitions and categorizations from the 45 reviewed papers and establish a typology that we will use throughout the analytical part of the paper.

A number of studies offered an explicit definition for the type of community financing they investigated (Atim 1998, Ziemek 2000, Hsiao 2001, Dror 1999, Musau 1999, McPake 1993). Box 1 presents these definitions. Regardless of the terminology used, the definitions converge on several points. In particular, the role of the community, the nature of the beneficiary group, and the social values underlying the design of the schemes stand out as key important descriptors of the investigated health financing arrangements. Each of these common characteristics is reviewed in turn.

The first important common feature of the definitions is reference to the predominant role of *community* in mobilizing, pooling, allocating, managing and/or supervising health care resources (Atim 1998, Ziemek 2000, Hsiao 2001, Musau 1999, McPake 1993). The Oxford dictionary defines community as the quality of (a) "joint or common ownership, tenure or liability"; (b) "common character"; (c) "social fellowship: (d) "life in association with others"; (e) "common or equal rights or rank"; and (f) "people organized into common political, municipal or social unity." Thus, community—according to this definition—is a broader concept than commonly used to refer to a geographic entity defined for political and administrative purposes.

Various forms of community-based health care financing reflect most of the concepts in the above definition. Members of many CF schemes are bound together not only by geographic proximity but by shared professional and cultural identity. A narrow geographic definition would exclude many CF schemes whose members are not geographically linked but rather are members of the same craft, profession, religion or share some other kind of affiliation that facilitates their cooperation for financial protection. This is particularly reflected in the tradition of mutual health organizations in francophone Africa, or microfinance organizations that provide health insurance to their borrowers.

The predominance of community action does not mean that community-based health financing mechanisms do not rely on government, donor, or other external support. On the contrary, reviewers of successful community initiatives often point to the role of government and donor support—both financial and nonfinancial—as a key determinant of sustainability (Carrin 1999, Criel 1999, Supakankunti 1997, Atim 1998). However, the community has a predominant role in

designing the rules of the game, managing and supervising the schemes in raising resources, pooling, and allocating them.

The second common feature of the definitions is the description of the *beneficiary group*. Typically, it is expected that community financing will attract those with no access to financial protection and access to other health care financing arrangements. In other words, those who are not employed in the formal sector and thus are not eligible to be part of social insurance schemes; those who cannot take advantage of general tax financed health services because of geographic access barriers, unavailability of needed care and drugs; and those who cannot pay for market-based private health care.

Box 1. Definitions of community health financing

Mutual Health Organizations (MHO)::"A voluntary, nonprofit insurance scheme, formed on the basis of an ethic of mutual aid, solidarity, and the collective pooling of health risks, in which the members participate effectively in its management and functioning. … they are nonprofit, autonomous organizations based on solidarity between, and democratic accountability to, their members whose objective is to improve their members' access to good quality health care through their own financial contributions and by means of any of a range of financing mechanisms that mainly involve insurance, but that may also include simple prepayments, savings and soft loans, third-party subscription payments, and so on." (Atim 1998)

"Mutual insurance schemes can be broadly defined as systems based on voluntary engagement and the principles of solidarity and reciprocity. Members usually have to meet certain obligations, e.g., payment of premiums and are bound together by a common objective and a strong local affiliation. Many times, these schemes evolve out of traditional systems or form as a response to the low coverage provided by formal systems." (Ziemek and Jutting 2000)

"***Community financing*** can be broadly defined as any scheme that has three features: community control, voluntary, and prepayment for health care by the community members. This definition would exclude financing schemes such as regional compulsory social insurance plans and community-managed user fee programs." (Hsiao 2001)

Micro-insurance is "…voluntary group self-help schemes for social health insurance. …The underpinning of microinsurance is that excluded populations have not been covered under the existing health insurance schemes because of two concurrent forces. The first is that […] insurers have done little to include these population segments. The second factor has been that excluded people have forgone claiming access because of their disempowerment within society. Microinsurance proposes to change both factors." (Dror and Jacquier 1999)

"The term ***community-based health insurance*** is used in this study to refer to any nonprofit health financing scheme. It covers any not-for-profit insurance scheme that is aimed primarily at the informal sector and formed on the basis of an ethic of mutual aid and the collective pooling of health risks, and in which the members participate in its management." (Musau 1999)

… "the term ***community financing*** to mean a system comprising consumer payment (either as a user fee, some form of prepaymentmechanism, or other charge) for health services at community level, the proceeds from which are retained within the health sector and managed at local level. […] In addition it is sometimes argued that community financing is a form of community participation which ensures that communities are not just passive recipients of services." (McPake

These population groups include the poor with no means of subsistence, those engaged in economic activity in the informal sector and in agriculture; and the socially excluded due to ethnicity, religion, mental and physical disability, other illness (Musau 1999, Dror 1999, Atim 1998, Atim and Sock 2000, Gumber 2000).

Finally, the third common feature of the definitions is reference to the *social values and principles* underlying the design of community-based financing. This includes the principles of voluntary participation, built-in solidarity mechanisms, and reciprocity. In many societies, these principles originate from the traditional self-help mechanisms of the poor that have long existed, embracing not only health (or primarily not health) but also many other risks with potentially devastating financial implications (Atim 1999, Musau 1999, DeRoeck 1996).

Based on the above, we adopted a broad definition of community financing that reflects all three of these common characteristics. For the purpose of this review, we included studies of health financing arrangements characterized by the following:

- The community (geographic, religious, professional, ethnic) is actively engaged in mobilizing, pooling, and allocating resources for health care.
- The beneficiaries of the scheme have predominantly low income, earning a subsistence from the informal sector (rural and urban); or are socially excluded.
- The schemes are based on voluntary engagement of the community (although not necessarily of the individual community members).
- The structure of resource mobilization and benefits reflect principles of solidarity.
- The primary purpose of the schemes is not commercial (i.e., not-for-profit).

The advantage of this broad definition is that it is inclusive of many different health financing arrangements with these common characteristics. Further, it effectively distinguishes community-based health financing from other resource mobilization instruments, including out-of-pocket payments, voluntary private insurance, social insurance, and general taxation.

At the same time, the disadvantage of this definition is that it does not address the problem of "apples and oranges." In other words, this definition does not facilitate comparability across the schemes. Health financing arrangements that meet the above definition can still significantly differ from each other in terms of their objectives, structure, management, organization, institutional characteristics. For example, community-level revolving drug funds in Honduras would qualify as CF, and so would the hospital-based prepayment/risk-sharing scheme of Bwamanda (DRC), or the individual savings account for pregnant women in Indonesia. Yet, these various arrangements have different capacities to mobilize resources, to provide financial protection and include the poor.

We aimed to address this problem by grouping community financing schemes. The possibilities for creating a typology are endless and this is reflected in the reviewed papers. Four of the 45 papers reviewed propose a typology, and each proposes different ways of grouping CF. The common characteristics in the proposed typologies are that they combine (i) the technical health financing characteristics of the schemes with (ii) descriptors of the organizational structure that governs the operation of the schemes.

- ❑ Bennett et al. (1998) separate the schemes based on the nature of the health risks they cover and their ownership. They distinguish between high-cost, low-frequency events (type 1) and low-cost, high-frequency events (type 2). Additionally, schemes are also presented by ownership arrangements distinguishing among ownership by health

facility, community, cooperative/mutual, nongovernmental organization (NGO), government, and joint.

- Atim (1998) reviews the experience of mutual health organizations in Western and Central Africa and separates schemes based on their ownership (traditional clan or social network, social movement or association, provider and community co-managed, community) and their geographical and socioprofessional criteria (rural, urban, profession/enterprise/trade union–based).

- Criel (1999) distinguishes between two poles of voluntary health insurance systems: the mutualistic or participatory model, and the provider-driven or technocratic model. His starting point is the risk categorization offered by Bennett et al., and he arrives at these two typologies by adding three additional characteristics: size of target population, degree of overlap between the scheme and the existing providers, intermediary institutions between the source of funding and the destination of the funds.

- Hsiao (2001) distinguishes among five types of community-based health financing initiatives: direct demand-side subsidies channeled to individuals (e.g., Thai health card); cooperative health care, community-based third-party insurance, provider-sponsored insurance, producer or consumer cooperative. The categorization takes into account not only whether community involvement is present but also the *strength* of community involvement.

From our review of three dozen case studies, four commonly encountered and well identifiable modalities emerged that proved useful for our analytical purpose. The first modality groups schemes where the resource mobilization instrument is out-of-pocket payments but the community is actively involved in fee design, collection, allocation, and management. We refer to this modality as "community cost-sharing" to distinguish it from cost-sharing arrangements where the community is not involved in any aspect of health financing. The second modality is the community-based prepayment scheme or mutual health organization. The third one is provider-based community health insurance. We label the final category as community-based prepayment scheme linked to government or social insurance system. Table 4 summarizes these four types of schemes based on their core design features, management, organizational, and institutional characteristics.

(a) *Community cost-sharing*. In these types of arrangements, the community participates in mobilizing resources for health care through user fees. The health financing instrument in this case is out-of-pocket payments, but the community is involved in setting user fee levels, allocating the collected resources, developing and managing exemption criteria, and general management and oversight. The community may also be involved in management of at least the first level of health care, the health centers, through participatory structures. The most important characteristics that distinguishes this type of financing arrangement from the other three modalities is the lack of prepayment and risk sharing. The Bamako Initiative is a good illustration of this kind of health financing mechanism.

(b) *Community prepayment or mutual health organizations*. These schemes are characterized by voluntary membership, prepayment of usually a one-time annual payment, and risk sharing.

Some of these schemes cover catastrophic benefits (including hospital care and drug expenditures); others do not. The community is strongly involved in designing and managing the scheme. Schemes are typically not-for-profit. Examples include: Grameen Health Plan in Bangladesh, Boboye District Scheme in Niger.

(c) *Provider-based health insurance*. These schemes are often centered around single provider units such as town or city or regional hospital. They are characterized by voluntary membership, prepayment of usually a one-time annual payment, risk sharing, and coverage of catastrophic risks. They are often started up by the providers themselves or through donor support. The involvement of the community is often more supervisory than strategic. Examples include: Bwamanda Hospital insurance scheme in the Democratic Republic of the Congo, Nkoranza Community Health Financing Scheme in Ghana.

(d) *Government or social insurance-supported community-driven scheme*. These community-based health financing schemes are attached to formal social insurance arrangements or government run programs. The community actively participates in running the scheme but the government (Thailand) or the social insurance system (Ecuador) contributes a significant amount of the financing. These schemes are not always voluntary (Burundi) and some have referred to this category as district or regional health insurance. Often such financing initiatives are initiated by the government and not the community. Examples include Ecuador's Seguro Social Campesino.

Table 5 below presents the list of reviewed papers grouped by the modalities above. The comparative studies review several types of schemes of varying modalities.

Table 4. Often encountered forms of community financing

	Community involvement in user fee collection	Community prepayment scheme or mutual health organization	Provider-based community health insurance	Community-driven prepayment scheme attached to social insurance or government -run system
Example	❑ Bamako Initiative in Benin and Guinea	❑ Grameen in Bangladesh ❑ Mutual health organizations in Thiès, Senegal ❑ CMS in China	❑ Bwamanda in Democratic Republic of Congo ❑ Nkoranza in Ghana	❑ Seguro Social Campesino, Ecuador ❑ Thai health card scheme ❑ Indonesia ASKES
Technical design characteristics	❑ Point-of-service payment ❑ No risk sharing ❑ Preventive care subsidized by curative care	❑ Prepayment ❑ Risk sharing ❑ Typically primary care; also some drug and some times hospital care	❑ Prepayment ❑ Risk sharing ❑ Hospital care	❑ Prepayment ❑ Risk sharing ❑ Primary and hospital care
Management characteristics	❑ Community involvement in setting fees and exemptions schedules and allocation of collected resources	❑ Strong community involvement in management and strategy ❑ Community not necessarily defined in geographic sense but also professional associations	❑ Community involvement is more informational and supervisory than managerial	❑ Community involvement in decision making
Organizational characteristics	❑ No formal organizational form but informal links with health centers.	❑ Separated financing and provision ❑ Varying degree of linkages between schemes and providers ranging from third-party payment to durable institutionalized relationships	❑ Integrated financing and provision ❑ Often poor linkages with primary care if not included	❑ Durable organizational structures ❑ Linkages with social security and government entities
Institutional characteristics	❑ Government commitment to Bamako ❑ Donor support	❑ Often started and supported by donor and government initiatives	❑ Often donor initiated and donor supported	❑ Very strong government involvement (financial, supervisory)

Table 5: Summary of case studies by modalities

Modality 1: Community involvement in user fee collection

1. McPake B et al. 1993. “Community Financing of Health Care in Africa: An Evaluation of the Bamako Initiative.”
2. Ogunbekun I. Et al. 1996. “Costs and Financing of improvements in the quality of maternal health services through the Bamako Initiative in Nigeria.”
3. Soucat A et al. 1997. ‘‘Health seeking behavior and household expenditures in Benin and Guinea : The Equity implications of the Bamako Initiative.”
4. Soucat A et al. 1997. ‘‘Local cost sharing in Bamako Initiative Systems in Benin and Guinea :Assuring the Financial Viability of Primary Health Care.”
5. Gilson L. 1997. “The lessons of user fee experience in Africa.”
6. Supakankunti S. 1998. “Comparative Analysis of Various Community Cost Sharing Implemented in Myanmar.”
7. Fiedler JL et al. 1999. “An Assessment of the Community Drug Funds of Honduras.”
8. Fiedler JL et al. 2000. “Financing Health Care at the Local Level: The Community Drug Funds of Honduras.”
9. Gilson L et al. 2000. “The Equity Impacts of Community Financing Activities in three African Countries.”
10. Okumara J et al. 2001. “Impact of Bamako type revolving drug fund on drug use in Vietnam.”

Modality 2: Community prepayment or Mutual Health Organizations

11. Arhin DC. 1995. “Rural Health Insurance: A Viable Alternative to User Fees.”
12. Toonen, J. 1995. “Community Financing For Health Care. A Case Study from Bolivia.”
13. Hsiao WC. 1995. “The Chinese Health Care System: Lessons for other Nations.”
14. Ron A et al. 1996. ‘‘A Community health insurance scheme in the Philippines: extension of a community-based integrated project.”
15. Liu Y et al. 1996. “Is community financing necessary and feasible for rural China?”
16. Desmet A et al. 1999. “The potential for social mobilization in Bangladesh: the organization and functioning of two health insurance schemes.”
17. Ron A. 1999. “NGOs in community health insurance schemes: examples from Guatemala and Philippines.”
18. Gumber A et al. 2000. “Health insurance for informal sector: Case study of Gujarat.”
19. Carrin G et al. 1999. ‘‘The reform of the Rural Cooperative Medical System in the People’s Republic of China: interim experience in 14 pilot counties.”
20. Chen N et al. 2000. ‘‘Study and Experience of a Risk-based Cooperative Medical System in China : Experience in Weifang of Shandong province.”
21. Xing-yuan G et al. 2000. “Study on Health Financing in Rural China.”
22. Jütting J. 2000. “Do mutual health insurance schemes improve the access to health care? Preliminary results from a household survey in rural Senegal.”
23. Schneider P et al. 2000. “Development and Implementation of Prepayment Schemes in Rwanda.”

24. Preker, A. 2001. "Philippines Mission Report."
Modality 3: Provider based Community Health Insurance
25. Roenen C et al. 1997. "The Kanage Community-Financed Scheme: What can be learned from failure."
26. Criel B et al. 1999. "The Bwamanda hospital insurance scheme: effective for whom? A study of its impact on hospitalization utilization patterns."
27. Atim C et al. 2000. "An External Evaluation of the Nkoranza Community Financing Health Insurance Scheme, Ghana."
Modality 4: Community driven prepayment scheme attached to social insurance or government run system
28. Arhin, D. 1994. "The Health Card Insurance Scheme in Burundi: A social asset or a non-viable venture?"
29. DeRoeck D et al. 1996. "Rural Health Services at Seguridad Social Campesino Facilities: Analyses of Facility and Household Surveys."
30. Supakankunti, S. 1997. "Future Prospects of Voluntary Health Insurance in Thailand."
Studies that address multiple modalities
31. Dave P. 1991. "Community and self-financing in voluntary health programmes in India."
32. Diop FP et al. 1994. "Evaluation of the Impact of Pilot Tests for Cost Recovery on Primary Health Care in Niger."
33. Diop F et al. 1995. "The impact of alternative cost recovery schemes on access and equity in Niger."
34. Atim C. 1998. "Contribution of Mutual Health Organizations to Financing, Delivery, and Access to Health Care. Synthesis of Research in Nine West and Central-African Countries."
35. Bennettt S et al. 1998. "Health Insurance Schemes for People outside Formal Sector Employment."
36. Musau SN. 1999. "Community-based health insurance: Experiences and Lessons learned from East and Southern Africa."
37. Atim C. 1999. "Social movements and health insurance : a critical evaluation of voluntary, nonprofit insurance schemes with case studies from Ghana and Cameroon."
38. CLAISS. 1999. "Synthesis of Micro-insurance and other forms of extending social protection in health in Latin America and the Caribbean."
39. Narula IS. 2000. "Community Health Financing Mechanisms and Sustainability: A Comparative Analysis of 10 Asian Countries."
40. Hsiao WC. 2001. "Unmet needs of 2 billion: Is Community Financing a Solution?"
Conceptual papers that did not address any specific schemes classified under the modalities
41. Dror D et al. 1999. "Micro-insurance: extending health insurance to the excluded"
42. Brown W et al. 2000. "Insurance Provision in Low-Income Communities-Part II. Initial lessons from Micro-insurance Experiments for the Poor."
43. Ziemek S et al. 2000. "Mutual Insurance Schemes and Social Protection."
44. Criel B. 2000. "Local Health Insurance systems in developing countries: a policy research paper."
45. Ekman B. 2001. "Community-based Health Insurance Schemes in Developing Countries: Theory and Empirical Experiences."

V. PERFORMANCE OF COMMUNITY-BASED HEALTH FINANCING

This section synthesizes the conclusions and evidence presented in the 45 reviewed studies regarding the performance of community financing arrangements. Although there are several interesting performance aspects, this review focuses specifically on three questions:

> ***Question 1***: What is the potential of community-based health financing schemes as sustainable health care financing mechanisms? Which modality of community financing performs better in terms of resource mobilization? (Section 4.1)
>
> ***Question 2***: How inclusive of the poor are CF schemes? Which modality is more inclusive? Do the rich participate in pooling arrangements? (Section 4.2)
>
> ***Question 3***: How effective are community-based health financing schemes in providing financial protection for their members? Which modality of community financing performs better to provide financial protection? (Section 4.3)

Summary findings for resource mobilization capacity

- Community financing arrangements contribute significantly to the resources available for local health care systems, be it primary care, drugs, or hospital care.
- It appears that the involvement of the community—in various forms--allows tapping into more household resources than would be otherwise available for health care.
- At the same time, there is large variation in the share of CF in the total resources of local health systems.
- There continues to be a need for more rigorous evaluation of the resource generation capacity of community-based schemes.

Summary findings for social inclusion

- Community-based health financing is effective in reaching a large number of low-income populations who would otherwise have no financial protection against the cost of illness.
- The poorest and socially excluded groups are not automatically included in community-based health financing initiatives.
- High income groups are frequently under-represented relative to the entire population, undermining redistribution from rich to poor.

Summary findings for financial protection

- Generally, community-based health financing schemes (modality 2-4) are reported to reduce the out-of-pocket spending of their members while increasing their utilization of health care services.

A. RESOURCE MOBILIZATION CAPACITY

The most striking conclusion from the review of the literature is that there is little systematic evidence that would allow assessment of the overall resource generation capacity of various CF initiatives. It is also difficult to assess at this point how the various modalities fare compared to each other as well as compared to other health financing instruments. None of the reviewed studies reported how much resources are raised through community financing arrangements as a share of total health revenues of the country. In a few cases, there are estimates about the per capita expenditures of the schemes. However, in the absence of concurrent estimates about the proportion of the population covered, extrapolation to a national level was not possible.

This lack of evidence is not surprising. In most cases, community-financing arrangements are not registered. For example, 60 percent of 50 reviewed CF in West and Central Africa were not registered with authorities (Atim 1998). Thus, centrally maintained data do not exist. Surveys of a nationally representative nature do not ask questions based on which extrapolation would be statistically appropriate.

In the absence of systematic assessments, the following findings aim to provide a synthesis of authors' conclusions and an approximation of sustainability of resource mobilization through community financing.

Community financing arrangements contribute significantly to the resources available for local health care systems, be it primary care, drugs, or hospital care. Twenty-six studies report the contribution of community financing schemes to the operational revenues of local providers. A few examples are shown in Box 2. The most striking finding is the large variation in the capacity of CF schemes to contribute to the operational expenditures of local providers. Some schemes achieve as much as full financing of the recurrent costs of their local health center, even some drug and referral expenditures. Others, particularly hospital based schemes (modality 3), have a modest contribution to the resources of the facility and external contributions are required.

This large variation in the resource-generation ability holds not only across countries but also within countries. For example, Dave compares the experience of 12 community financing schemes in India (Dave 1991). The Sewagram scheme, for example, was found to generate enough revenues through membership fees to cover 96 percent of all community-based health care costs including salaries, drug costs, mobile costs. On the other hand, the RAHA scheme covered only between 10 percent and 20 percent of the total community costs. The author attributes the difference to the subscription policies: at Sewagram at least 75 percent of the households had to enroll in the scheme before services were reimbursed. This increased the risk-pooling and resource mobilization ability of the scheme. On the other hand, at RAHA, subscription occurred on an individual basis.

It appears that the involvement of the community—in various forms--allows tapping into more household resources than would be otherwise available for health care. Most of the evidence in this regard originates from the analysis of the Bamako Initiative . The Bamako Initiative is categorized in our typology as modality 1: the community is involved in setting the level of user fees, designing and managing exemption schemes, and allocating the collected funds. (See Box 3 for a more detailed description of the Bamako Initiative). The financing instrument still lacks risk pooling and prepayment elements a priori. However, the involvement of the community appears to alleviate the collection difficulties providers have experienced with user-fee mechanisms and the regressivity associated with out-of-pocket payments. In particular, community involvement can lead to better allocation of collected resources to services and drugs that community members value and want (McPake 1993, Diop 1995, Soucat 1997).

Box 3. The Bamako Initiative

The Bamako Initiative (BI) was launched in 1987 by a group of African Ministers of Health in Bamako, Mali, in a meeting sponsored by WHO and UNICEF. The BI was a response to the rapid deterioration of access experienced in several health systems during the 1980s. Deterioration in access was partially attributed to the imposition of user fees on public facilities. In contrast, the BI model emphasizes that revenue should be raised and controlled at the local level through community-based activities that are national in scope. Community participation is seen as a mechanism to build accountability to the users of health care in that the revenues are used in ways that address the persistent quality weaknesses of primary care (Gilson 1997). By late 1994, the BI had been implemented in 33 countries, of which 28 were in sub-Saharan Africa. The other 5 were Peru, Vietnam, Yemen, Cambodia, and Myanmar

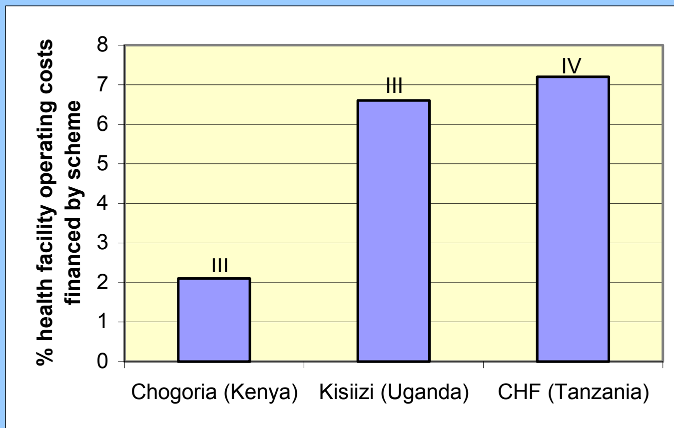
A few highlights:

- Soucat et al. (1997a) analyzed the impact of the Bamako Initiative in Benin and Guinea. They showed that direct household expenditure (through user fees) contributed to 25 percent of the health centers' local operating costs in Benin and 40 percent in Guinea. The revenue was used to cover drug costs, outreach, local maintenance, and replacing supplies, and preventive care is subsidized more than curative care thereby promoting utilization. Another study by the same authors found that in Benin, about half of the local operating costs is covered by the government, 23 percent by donors, and 28 percent by a surplus generated by community financing (1997b). In Guinea, 44 percent of the operating costs are covered by the government, 26 percent by donors, and 30 percent by community financing, with a lower average surplus than Benin.

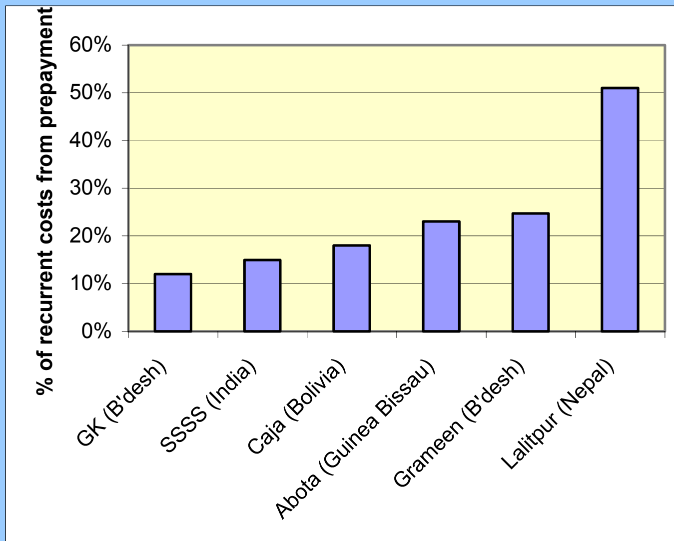
- Pilot studies conducted in Niger compared three resource mobilization methods: (i) newly introduced user fees, (ii) prepayment scheme + user fees against (iii) the control district where health services remained "free" (Diop 1995). Revenues from fees were managed by local providers and by local health committees organized by the population. Revenues were pooled at the district level and used mainly to purchase drugs. The study found that both intervention districts showed substantial increases in revenue collection compared to the control district. It also revealed that the revenue generation per capita under the prepayment method was two times higher than under the user-fee method. The authors add that sustainability of these financing mechanisms critically depends on cost-containment.

There is little evidence from the analysis of other modalities to determine how well modalities 2, 3 and 4 fare relative to each-other in mobilizing resources for health care.

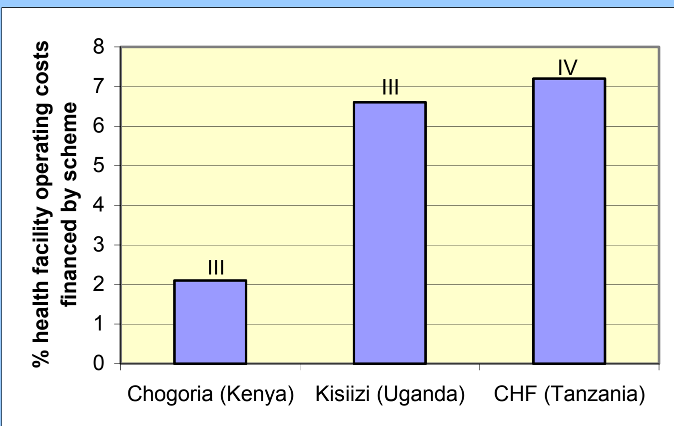
Box 2. Community financing schemes contribute to the resources available to local health systems but there is great variation in their resource mobilization capacity



This graph is based on data from a study conducted by Soucat et al. (1997) on cost sharing in Benin and Guinea. The level of cost recovery from user fees in the health centers of those countries varies from 24 percent to 99 percent of the total local operating costs. This excludes the salaries generally paid by the government. (Soucat et al. 1997)



Based on data from Bennett et al. (1998), this graph shows the cost recovery from prepayment of 6 modality 2 schemes. The range is from 12 percent to 51 percent of recurrent expenditure. This shows that for these schemes, the resources collected do not cover the full recurrent costs thereby necessitating other sources of funding: OOPs, donor, government subsidy (Bennett et al. 1998)



Based on data from Musau, the graph shows the cost-recovery level of three schemes: Chogoria, Kisiizi (modality 3 schemes and Community Health Fund of Tanzania (modality 4). The contribution of the schemes to the financing of the health facility ranges from 2.1 percent to 7.2 percent. Compared to Chogoria, the higher resource mobilization capacity of Kisiizi is attributed to lower premiums, which attracts more members. The CHF scheme is highly subsidized by the government from funds provided under a World Bank project (Musau 1999)

While some of the literature is enthusiastic about the contribution of CF to health care resources, others are less optimistic about the sustainable resource-generation capacity of these arrangements. In the studies where the schemes' contribution was low in the total financing of providers, authors tended to be pessimistic about sustainable resource generation through CF arrangements. (Bennett 1998; Atim 1998; Musau 1999; Arhin 1994; Roenen and Criel 1997, CLAISS 1999) The key factor that undermines the revenue-raising potential of community financing is their predominantly poor contributing population. Whether in rural or in urban areas, community-based health financing schemes reach the poorest half of the population. If most members of community financing schemes are poor, redistribution within the community takes place within a much limited overall resource pool. (Hsiao 2001, Jutting 2000, Atim 1998, Bennett 1998).

- Bennett et al. (1998) recognize that prepaid premiums are important resource-generating instruments, but the authors conclude that "there is little evidence that voluntary prepayment schemes for those outside the formal sector can be "self-financing" for anything other than the short term." They show that for most schemes the resources collected from the combination of prepayment and user fees does not cover the recurrent costs of the scheme, and thus external funding is required. See Table 6 for their findings.

- In six Central and West African countries, Atim (1998) concludes that mutual health organizations (MHO) "have had little impact on the finances of health facilities." For instance, in the Thiès Region of Senegal, 30 percent of the admissions into St. Jean de Die are MHO members, and yet MHO resources account for less than 2.5 percent of hospital revenues. Atim notes, however, that these findings are not surprising, given the recent growth in the MHO phenomenon in the region. He concludes that the potential of MHOs to mobilize resources is much greater than current figures on contribution revenues would suggest.

- Similar experiences are reported from five schemes in East Africa. Two hospital-based prepayment schemes in Uganda and Kenya contributed to 8 percent and 2 percent, respectively to the operational expenditures of their hospitals. Similar results were observed in Tanzania with regard to dispensaries: 5.4 percent of the participating dispensaries' income came from the prepayment scheme (Musau 1999).

- A study of the National Health Card Insurance Scheme (CAM) in Burundi revealed that the revenue generated from "premiums was insufficient to fund even the recurrent costs of outpatient drugs consumed by participating households" (Arhin 1994).

- In the review of Latin-American community financing schemes, 9 out of 10 schemes were found to need large external contributions to ensure future sustainability (CLAISS 1999).

- Roenen and Criel reported that the sum of the premiums generated in the Kanage Community Financed Scheme covered only a fraction of what members spent on care. The scheme was largely financed by the revenues of the Murunda hospital to which the scheme was affiliated (Roenen and Criel 1997).

Table 6. Cost recovery from prepaid premiums from Bennett et al. (1998, p. 40)

No.	Scheme	Country	Cost recovery from prepayment *last date available*
42	SWRC	India	10 percent of recurrent expenditure
25	RAHA	India	10-20 percent off community costs & 100 percent referral costs[a]
24	SSSS	India	15 percent of recurrent expenditure[b]
18	Caja-Tiwanaku	Bolivia	18 percent of recurrent expenditure[c]
31	Abota	Guinea Bissau	23 percent of recurrent expenditure[d]
64	Bajada	Philippines	30 percent of recurrent expenditure
58	CAM	Burundi	34 percent of outpatient drug costs[e]
17	GK	Bangladesh	12 percent of recurrent expenditure[f]
14	Grameen	Bangladesh	24.7 percent of recurrent expenditure[g]
41	BRAC	Bangladesh	50 percent of recurrent expenditure
62	Health Card	Thailand	50.0 percent[h]
67	Bwamanda	former Zaire	65-70 percent recurrent excluding personal allowances
79	SWHI	Thailand	50-60 percent[I]
59	Lalitpur	Nepal	51 percent of recurrent expenditure[j]
21	Kisiizi	Uganda	72 percent of recurrent expenditure[k]
46	KSSS	India	88 percent of recurrent expenditure
60	Boboye	Niger	89 percent of drug and management costs[l]
26	Sewagram	India	96 percent of community health program costs
32	Medicare II	Philippines	100 percent of recurrent expenditure[m]
33	PHACOM	Madagascar	100 percent of drug costs[n]
61	UMASIDA	Tanzania	100 percent of costs
2	ORT	Philippines	100 percent excluding professional salaries
66	Nsalasani	Congo-Brazzaville	100 percent
29	Bao Hiem Y Te	Viet Nam	130 percent[o]

[a] Nonmember fee collections cover roughly 60 percent of community cost

[b] Copayments cover 31percent of costs and balance is financed from fund raising activities

[c] Without the costs associated with expatriate assistance the caja contribution would have been 48 percent of budget

[d] In a study of 18 village schemes the cost recovery ranges from 3 percent-123 percent based on assumption that all communities consume a given amount of drugs estimated by government.

[E] There is no link between prepayment revenues collected and financing of services as revenues revert to government. A study in Muyinga province showed that the revenue from premiums was sufficient to fund approximately 34 percent of drug costs.

[f] The remaining was covered by user fees (24 percent), subsidies from GK commercial ventures (14 percent) and international solidarity (50 percent).

[g] The remaining was covered by user fees (41.3 percent members and nonmembers) and a long-term loan from Grameen Bank (34 percent).

[h] The scheme is currently half financed by government budget and half by cardholders, this is a relatively recent reform, and previous estimates show recovery of approximately 35 percent of recurrent costs.

[I] Balance from cross-subsidy from richer households.

[J] Cost recovery from prepayment ranges from 30 percent to 56.6 percent.

[k] Average cost recovery for the hospital as a whole is 48 percent.

[l] 149 percent of drug costs only.

[m] Fund utilization is relatively low, ranging from 38-78 percent of total collections. Only in 1992 after a large drop of membership disbursement exceeded collection in Unisan, Quezon pilot scheme.

[n] Drugs are bought with membership fees but often only last three months of the year.
[o] The 130 percent includes a cross-subsidy from formal sector workers to informal sector workers.

B. Social inclusion

In this section, we explore whether CF schemes are effective in reaching the poor and socially excluded groups. To address this question, we looked at the socioeconomic composition of CF scheme membership. In particular, we were interested in whether CF arrangements reach the poor and whether higher income groups participate in pooling and income redistribution arrangements.

Of the 13 studies that report evidence regarding the socioeconomic composition of CF members, the findings appear to be consistent. ***Community-based health financing schemes extend coverage to a large number of people who would otherwise not have financial protection. However, there seems to be some doubt whether the poorest are included in the benefits of community-based health financing.*** Where data are available, the most frequently cited reason for not being included in a community-financing scheme is lack of affordability. Distance to scheme hospital is also reported to affect the decision to enroll in the scheme in several cases. These findings do not show systematic variation with the modality of the reviewed scheme. Table 7 summarizes these findings.

Table 7. Summary of findings: Who is covered by CF arrangements?

	Scheme reaches the poor	Poorest of the poor are not covered	Ability to pay is the main reason for not being covered	Rich do not participate	Distance gradient to scheme provider
Modality 1					
Diop (1995) Niger	✔				
McPake (1993) Burundi	✔	✔	✔		
Gilson (2000) Benin, Kenya, Zambia	✔				
Modality 2					
Desmet (1999) Bangladesh	✔		✔	✔	✔
Jütting (2000) Senegal	✔	✔	✔		
Diop (1995) Niger	✔				
Liu (1996) China	✔				
Carrin (1996) China	✔				
Modality 3					
Criel (1999) DR of Congo	✔	✔		✔	
Atim (2000), Ghana	✔	✔	✔		✔
Modality 4					
Arhin (1994) Burundi	✔	✔	✔		
DeRoeck (1996) Ecuador	✔			✔	✔
Supakankunti (1997) Thailand	✔		✔		
Total number of studies confirming selected finding	**13**	**5**	**6**	**3**	**3**

Findings for modality 2 schemes: Community health fund or mutual health organization

- The Gonosasthya Kendra in **Bangladesh** is effective in reaching the poor. Of the HHs classified as destitute in the area, 80 percent are covered by the scheme, 46 percent of the poor 20 percent of the middle class, and 10 percent of the rich amounting to an overall subscription rate of 27.5 percent. The reason for not subscribing among the destitute and the poor, even after 15 years of operation, is the level of the premium and copayments associated with the scheme. The distribution of the membership of the scheme by income group is as follows: 33.5 percent of the members are classified as destitute and poor; 57.5 percent as middle income and 9 percent as rich. In terms of equity, this suggests that pooling and income redistribution does take place but predominantly between the middle-income and the poor and to a lesser extent form the rich (Desmet 1999).

- Subscription rates to the scheme demonstrate a distance gradient to the GK hospital: subscription rates between the two lowest socioeconomic groups were 90 percent for the villages near the hospital and 35 percent for the distant villages. Lack of transportation to GK hospital was the second most often cited reason among the destitute and the poor for not subscribing to the scheme (Desmet 1999).

- The Grameen Bank (GB) health scheme is operated by the microfinance organization in Bangladesh. The GB scheme covered 57.8 percent of the poor in the areas while only 1.8 percent of the non-poor families signed up for the scheme. This suggests that the scheme effectively enlisted the membership of the local poor. At the same, solidarity and income redistribution is undermined, as the rich do not take part in the pooling arrangement. (Desmet 1999).

- In **Rwanda**, the pilot prepayment scheme increased the utilization rate of members as compared to nonmembers despite a copayment charge.
  - Consultation rates of nonmembers = 0.2 per capita in all five districts.
  - Consultation rates of members = 1.3 per member in Byumba, 1.87 in Kabgayi, and 1.76 in Kabutare.
  - Comparing utilization rates pre- and post-intervention, members' consultation rates were three to six times higher than reported before implementation of prepayment scheme.

- Similar findings are reported for the Thiès district of **Senegal**. Analyzing the membership characteristics of four mutual health organizations, Jütting reports that the average income of members is three times that of nonmembers. He concludes that the poorer people do not participate in mutual health organizations as they do not have the financial resources to pay the regular premium. At the same time, Jütting suggests that this finding does not mean that mutual health organizations increase inequality for the population. Based on the national poverty line, most of the scheme members qualify as poor. Thus, on average it can be concluded that these mutual health organizations have helped poor rural populations cope with health risks, even though they have not been able to include the very poorest (Jütting 2000).

Findings for modality 3 schemes: Provider-based community health insurance

- In the Bwamanda hospital prepayment scheme in the **Democratic Republic of the Congo,** the very low- (< US$20/month) and high-income (>US$200/month) groups were less represented among scheme members than in the nonmember population. Of the member population, 14.9 percent was from very low-income HHs versus 18.7 percent among nonmembers. 5.9 percent of the member population was high-income HHs versus 10.5 percent among nonmembers (Criel et al 1999).

- In the **Nkoranza scheme in Ghana**, being "hard core poor" (defined as those falling below one-third of average income) is one of the reasons for not joining prepayment schemes. Eight percent of the Nkoranza town and 17 percent of the whole district are identified as hard core poor. The most often stated reason for not being a part of the scheme was "financial" and the fact that the registration period coincided with a low financial situation. One focus group also cited distance from the hospital as a reason for being uninsured (Atim and Sock 2000).

Findings for modality 4 schemes: Community financing supported by government and/or social insurance

- Under the Thai health card scheme in Khon Kaen province of **Thailand,** health card holders have significantly lower income than those without a health card. This suggests a pro-poor targeting of the health card program. Separating card holders into new card holders, renewed card holders, and drop-outs, Supakankunti reports that drop-outs have the lowest income suggesting that the health card scheme may pose affordability problems to the lowest income population groups in addition to adverse selection due to lower levels of reported chronic illness in this group (Supakankunti 1997).

- Comparing revolving drugs funds and the pre-paid health card scheme in **Burundi,** 25 percent of the households were reported to be part of the prepayment scheme. Socioeconomic status and membership in the prepayment scheme were positively correlated. The poor were more likely to pay through user charges than purchase a prepayment plan. The low subscription rate in the prepayment scheme was associated with difficulty coming up with one-time large payments in cash-constrained situations and poor quality services at government facilities. These factors were limiting ability as well as willingness to pay (McPake 1993). Arhin's findings corroborate that the primary reason for not purchasing a prepayment plan is financial affordability. She reports that in Burundi 27 percent of survey respondents did not purchase the health card because they could not afford it (Arhin 1994).

C. FINANCIAL PROTECTION

In this section, we explore whether CF schemes are effective in providing protection from the impoverishing effects of catastrophic health care events. Only imperfect measures are available at this point to approximate this question. Specifically, we looked for the following indicators to assess whether community-financing schemes reduce the financial burden of seeking care. What is the level of out-of-pocket payments of members relative to nonmembers? What is the utilization of CF scheme members relative to nonmembers?

Analyzing utilization and out-of-pocket expenditure patterns together allows us to take into account forgone use due to the high cost of seeking health care. Assessing financial protection based only on point-of-service spending information does not allow delayed or forgone care due to high costs to be factored in.

Twenty studies present evidence regarding the financial protection impact of the CF schemes they reviewed. In 13 studies, scheme members are more likely to use health care services than nonmembers, and 2 report no difference between members and nonmembers. One study compared user fees with prepayment schemes (Diop et al. 1995) and found a slight decrease in the use of health care for the user-fee modality compared to prepayment scheme of CF. In 9 of these, members pay less out of pocket. These findings do not appear to systematically vary with the modality of the scheme. We summarize these findings in Table 8.

Table 8. Summary of findings (2): Does CF reduce the burden of seeking health care?

	Utilization of members relative to nonmembers	Level of OOPs for members relative to nonmembers
Modality 1		
Soucat (1997) Benin & Guinea	Higher	
Diop (1995) Niger	Lower	Lower
McPake (1993) Burundi	Higher	
Gilson (2000) Benin, Kenya, Zambia	Higher	
Modality 2		
Desmet (1999) Bangladesh	Same	
Gumber (2000) India		Lower
Arhin (1995) Ghana	Higher	
Diop (1995) Niger	Higher	Lower
Schneider (2000) Rwanda	Higher	
Jütting (2000) Senegal	Same	
Liu (1996) China		Lower
Carrin (1996) China		Lower
Xing-yuan (2000) China	Higher	Lower
Chen (2000) China		Lower
Modality 3		
Criel (1999) DR of Congo	Higher	
Roenen (1997) Rwanda	Higher	
Atim (1999) Ghana	Higher	
Modality 4		
Arhin (1994) Burundi	Higher	Lower
DeRoeck (1996) Ecuador	Higher	Lower
Musau (1999) Tanzania	Higher	
Total # of studies confirming selected finding	**16**	**9**

OOPs out-of-pocket payments.

Findings for modality 1 schemes

- Soucat et al. (1997) have reported the increased utilization of health services after the introduction of the Bamako Initiative in **Benin** and **Guinea.** The authors attribute this development to the availability of drugs and improved quality of services brought about by community involvement. The poor in Guinea had fewer alternative sources of care compared to illegal drug market in Benin that led to the poor in Guinea to opt out of seeking care. This study emphasized that improvements in quality, access to care, availability of drugs, and community involvement play an important role in increasing utilization of schemes that rely on user fees as the predominant health financing mechanisms (Soucat et al. 1997).

Findings for modality 2 schemes

- Pilot studies conducted in **Niger** compared three resource-mobilization methods: (i) newly introduced user fees, (ii) prepayment scheme + user fees against (iii) the control district where health services remained "free" (Diop 1995). Revenues from fees were managed by local providers and by local health committees organized by the population. Revenues were pooled at the district level and used mainly to purchase drugs. In both intervention districts, quality improvements and availability of drugs stimulated use of health care while utilization continued to decline in the control district. The authors conclude that the "positive effects of the quality improvements cancelled out the negative effects of the introduction of use fees." A few details:
    - People using improved services in the fee-for-service district saved 40 percent of the amount they spent on health care for an episode of illness before the intervention.
    - In the prepayment district, out-of-pocket health spending declined by 48 percent, and total health spending (including the tax component) declined by 36 percent.
    - The number of initial visits to the health care facility increased by about 40 percent in the prepayment district. Utilization among the poorest quartile doubled. Utilization decreased slightly in the fee-for-service district.
    - Even for short travel distances, utilization in the fee-for-service district decreased from 45 percent to 37 percent, and increased from 36 percent to 43 percent in prepayment district.

- The SEWA scheme in **India** improves financial protection for its members. Among the rural population, the total cost of seeking care for SEWA members was significantly less than for ESIS members and the uninsured (Rs. 295 vs. Rs. 380 and Rs. 401, respectively, for acute morbidity; and Rs. 451 vs. Rs. 644 and Rs. 697 respectively for chronic morbidity). However, the burden of seeking care on the household budget continued to be higher among SEWA members than those insured by other mechanisms (Gumber and Kulkarni 2000).

- Arhin (1995) in assessing the viability of rural health insurance as an alternative to user fees also found that the scheme in **Ghana** removed a barrier to admission and led to earlier reporting of patients and increased utilization among the insured (Arhin 1995).

- There is no convincing evidence that the two reviewed schemes in **Bangladesh** fare strongly in terms of improving access to hospital care for the poor. They report that the

use of hospital services among members shows a significant income gradient. Hospital admissions per 100 persons per year amount to 2 for the destitute, 2.3 for the poor, 3.72 for the middle-income, and 10.7 for the rich. Whether this is due to over-use by the higher income groups or under-use by the lower income groups needs to be tested. The Grameen Bank scheme does not include hospital care and the lack of coverage for hospital care is the most frequently raised complaint in the implementation committee (Desmet et al. 1999).

- Jütting (2000) finds no significant difference among the contact rates between members of three schemes in **Senegal** and nonmembers. An interesting finding is the low contact rate at one of the schemes, which he attributes to the availability of malaria medication reducing the necessitated contact rate (Jütting 2000).

- In **China**, various attempts to revive the Cooperative Medical System are described in detail in Hsiao 2001. A number of studies assess the success of these experiences in terms of reducing out-of-pocket payments and increasing utilization of its members. A few examples are provided below:

  - In a Shandong province, a study was conducted to determine the level of disease-induced poverty. Disease-induced poverty was measured by calculating average medical expenditures for those diseases classified as contributing to a high economic burden based on income level and disease type. Disease-induced poverty was found to have decreased from 23 percent to 3.7 percent in Shougang county, and from 30 percent to 3 percent in Pingdu county after the introduction of CMS coverage (Chen et al. 2000).

  - Carrin et al. assessed "ratios of insurance protection" in China's Rural Cooperative Medical System (RCMS). It measures the ratio of average health insurance contribution (destined for reimbursement of health care costs) per capita to average health care expenditure per capita. Wide variation was found in the level of insurance protection across counties from as low as less than 10 percent in Lingwu and Xiaoshan counties to as high as more than 30 percent in Yihuang county. However, it was also observed that "on average" health insurance contributions are not enough to offer RCMS members a reasonable health insurance benefit as out-of-pocket expenditures are still associated with seeking care (Carrin et al 1999).

  - Another study based on household data compared out-of-pocket expenses and utilization by members and nonmembers of the Cooperative Health Care Scheme (CHCS) pilot study. The average fees per outpatient visit was 10.1 yuan for CHCS members compared to 21.7 yuan for nonmembers. At the same time, higher utilization of medical care among CHCS members was observed in the two pilot sites. Hospital admission rates were 60 percent among members, compared to 43 percent in the control group. In Wuzhan township, 17.3 percent of the CHCS members used outpatient services compared to 7.4 percent in the control group (Xing-yuan and Xue-shan 2000).

  - Liu et al. compared households covered by community financing schemes and the uninsured in China's poverty regions. They show that the cost per visit is twice as high for the uninsured as for the insured (3 yuan/visit for the uninsured as compared to 1.5 yuan per visit in for a member of a household insured under

community financing schemes (Liu et al. 1996). They also find that the higher average charge per outpatient visit for the uninsured can be attributed to the fact that these "schemes can exercise their bargaining power in demanding discounted prices or the providers can be paid on a partial-capitation basis" (Liu et al. 1996; Hsiao 2001).

Findings for modality 3 schemes

- Criel at al. (1999) looked at the utilization of hospital services associated with the Bwamanda hospital insurance scheme in **Democratic Republic of the Congo**. They found that hospital utilization was significantly higher among the insured population than among the uninsured. The innovative aspect of their study was to assess whether the additional utilization was justified or the result of insurance coverage in terms of moral hazard and induced demand. They concluded that the impact of insurance increased access to justified care in the case of caesarian sections, and hernias. Thus, the Bwamanda scheme succeeded in increasing utilization of high-priority hospital care services (strangulated hernias and C-sections) (Criel et al 1999).

- Further, distance gradient was observed in both insured and uninsured populations, suggesting that insurance can overcome the financial barriers to use but not necessarily geographic barriers. The indirect costs of travel and hospitalization time in rural areas may outweigh the direct costs of hospitalization. When looking at specific high-priority interventions (strangulated hernias and C-sections), the distance gradient is reduced, suggesting that the insurance scheme improved equity in the district. The same impact is not observed for non-urgent care. This suggests that the impact of geographic barriers was more successfully compensated in the case of high-priority service use than in the case of low-priority service use. Further, these findings suggest inelastic demand for high-priority services as well as effective resource allocation practices (Criel et al. 1999).

- In 1993, three-fourths of the consultants at the hospital-clinic level and half of the hospitalized patients were members of the Kanage cooperative scheme in **Rwanda**. Members used the hospital services 8.5 times as often as nonmembers. Although utilization of the services was high among the members, there was a lack of equality, which could contribute to the failure of the system. The size of the premium was independent of income or distance from the hospital. It was not an integrated system and lacked quality care and services, which led to the failure of the scheme (Roenen and Criel 1997).

Findings for modality 4 schemes

- The Health Card Scheme (CAM) in **Burundi** studied by Arhin illustrates that, in the month preceding the study, 27.9 percent of the households who held valid CAM cards had incurred out-of-pocket expenses for medical consultations and/or drug purchases, while of those households without valid cards, the corresponding figure was 39.9 percent. The mean expenditure per treatment was also lower for scheme members (Arhin 1994).

- The formal treatment rate (modern/western care sought outside the home) was more than 50 percent higher for the CAM group than for the non-CAM members. This high rate for the CAM group may be explained by the fact that some government health centers gave

incomplete treatments, delaying recovery and/or requiring visits to collect the remaining drugs. It is also possible that this high utilization among CAM households was the outcome of "supplier-induced demand," i.e., increase in the demand and consumption of health care by patients as a result of the providers' actions. Also, households participating in the CAM scheme were three times more likely to use the government facilities than non-CAM households (Arhin 1994).

- The **Ecuador** Seguridad Social Campesino (SSC) rural health facility significantly increased financial protection for its members: out-of-pocket expenditure for health care of SSC members were only one-third those of nonmembers. Members of the SSC rural health facility were more likely to seek care for illness than nonmembers (80 percent vs. 66 percent). Demand analysis conducted demonstrated that improving the quality of care and increasing the referral rates and availability of drugs would increase the utilization rates of SSC health services. The analysis also showed no significant relationship between household income and distance and travel time to reach the health facility and the decision to seek care outside the home. Lower income households were more likely to belong to the scheme (DeRoeck et al 1996).

D. DISCUSSION OF PERFORMANCE RESULTS

Our review found that community-financing arrangements—regardless of the modality—contributed a significant amount to the resources available to local health systems. At the same time, there was large variation in terms of the share of community financing in the local health revenues. It is also apparent that community financing arrangements alone can rarely fully support hospital-level care and thus other mechanisms of health financing are frequently used in conjunction.

It has to be noted, however, that the evidence base regarding the resource-generation capacity of community financing schemes requires further strengthening. Currently, the total amount of resources mobilized through community-based health care financing is anyone's guess. What is the share of health financing through CF arrangements in total health care financing? How much resources are mobilized through CF arrangements relative to general taxation, social insurance, private insurance, and out-of-pocket payments?

In the absence of more comprehensive information and improved methodologies, it is difficult to assess the global impact and the potential of community financing as resource mobilization instruments to finance health care for the poor. Having a systematic assessment of the volume of resources raised through community financing would allow exploration of the following issues:

- Comparability with other sources of health financing would allow assessment of effectiveness, efficiency, and equity of community financing as health financing mechanisms.
- Assessment of the impact of community financing on the amount of government funding. A critical question is whether community financing complements or displaces government funding. Does the existence of CF make governments allocate fewer resources to a region with a lot of CF initiative, or the reverse?
- Assessment of sustainability of CF arrangements over the long run.

Regarding the impact of CF on social inclusion and financial protection, there is relatively more evidence than on resource mobilization. The targeting outcome of community financing schemes

is impressive although there are indications that the very poorest are not automatically included. In terms of financial protection, CF reduces financial barriers to access through increased utilization by their members, as compared to nonmembers, and reduced out-of-pocket spending. There were no studies that suggested an inverse relationship, and two studies found no difference between use by members and nonmembers.[3]

However, a number of methodological concerns warrant some caution in interpreting the reported results. The most important one is that selection into membership status is nonrandom. People with higher risk for illness and higher propensity to use health care will be more likely to purchase insurance. Thus, the impact of membership on utilization and out-of-pocket payments cannot be validly discerned by looking at sample averages of members and nonmembers. Such measures are biased and magnify the impact of community financing on utilization because these individuals would have also had higher use in the absence of membership.

[3] There may be some bias in the above conclusion resulting from "publication bias." It could be that research that found no difference on performance is less likely to be published. Also, failed schemes are not likely to make their way into studies and successful schemes are more likely to do so.

VI. DETERMINANTS OF SUCCESSFUL RESOURCE MOBILIZATION, SOCIAL INCLUSION, AND FINANCIAL PROTECTION

The key determinants that contribute to successful resource mobilization, combating social exclusion, and financial protection include: (i) ability to address adverse selection, accommodate irregular revenue stream of membership, prevent fraud, and have arrangements for the poorest; (ii) good management with strong community involvement; (iii) organizational linkages between the scheme and providers; and (iv) donor support and government funding. Table 9 summarizes successful and unsuccessful design features.

Table 9. Determinants associated with effective revenue collection and financial protection

	Design features	
	Supporting effective revenue collection and financial protection	**Undermining revenue collection and financial protection**
Technical design characteristics	❑ Addressing adverse selection through group membership ❑ Accommodating irregular income stream of members (allow in-kind contributions, flexible revenue collection periods) ❑ Sliding fee scales and exemptions for the poor make schemes more affordable	❑ Non-compliance, evasion of membership payments ❑ Adverse selection ❑ Lack of cash income ❑ No cash income at collection time
Management characteristics	❑ Community involvement in management can exert social pressure on member compliance with revenue collection rules ❑ Extent of capacity building ❑ Information support	❑ Provider capture—high salary of providers at the expense of service-quality improvement ❑ Weak supervision structures increase the chance of fraud with membership card ❑ Poor control over providers and members contributes to moral hazard, cost escalation, and undermines sustainability of the scheme
Organizational characteristics	❑ Linkages with providers to negotiate preferential rates raises attractiveness of schemes and contributes to successful membership	❑ Fragmentation between inpatient and outpatient care leads to inefficiency and waste ultimately resulting in loss of membership
Institutional characteristics	❑ Government and donor support make the schemes more sustainable and pro-poor.	

A. TECHNICAL DESIGN CHARACTERISTICS

Revenue collection

Most community financing schemes rely on a combination of revenue sources including prepayment, user charges, government subsidy, and donor assistance. For example, in the Kanage Cooperative Scheme in Rwanda, the sum of the premiums collected covered only a fraction of what members spent on care, and the scheme was largely financed by the revenues of the hospital. The share of each these sources widely varied by scheme (Roenen 1997).

Despite large variations in the composition of revenue sources, it appears that schemes can rarely raise enough resources from only prepayment. As a result, user charges are often used in conjunction, and most schemes rely on some form of external financing (government subsidy, donor support). For example, the CLAISS study compared 11 schemes in Latin America and found that 9 schemes received significant external financial support (CLAISS 1999).

Most prepayment schemes collect membership fees on the basis of annual premium rates, which are typically flat rate (community rated). Annual collection is consistent with the agrarian-based structure of income-generating capacities (Diop et al. 1995; Roenen and Criel 1997; Atim and Sock 2000; Bennett 1998, Arhin 1994). Sliding scales; and exemptions for the poor are rare and reported more frequently from Asia than Africa (Desmet et al 1999; Dave 1991). Flat rate contributions simplify the collection procedure and are less subject to manipulation. At the same time, such contribution schemes may prevent the poorest from joining.

Revenue collection appears to be more successful when the contribution scheme takes into account the nature of the revenues of the membership population. Synchronizing the contribution collection period with cash-earning periods makes a difference in terms of the ability of the schemes to raise resources. Some examples include :

- In Central and West Africa, 73 percent of the reviewed 22 MHOs had already designed their contribution scheme to coincide with more a cash endowed period (Atim 1998).

- The Kanage Cooperative scheme in Rwanda scheduled the registration in the coffee-harvesting period between June and September. The authors suggested that this may have been too short a time period and, along with low membership levels, may have contributed to the failure of the scheme (Roenen and Criel 1997).

- The Bwamanda Hospital Insurance Scheme also has a community-rated system of premium collection during the crop selling season. The scheme offers voluntary membership to the family as a subscription unit (Criel et al 1999).

- The Nkoranza community financing scheme in Ghana was found to have low coverage rate of 30 percent. The registration period did not coincide with the cash-earning period of the community. This was one of the main reasons behind a low enrollment (Atim 2000).

In-kind contributions are rarely allowed (Atim 1998; Bennett 1998; Musau 1999; Dave 1991). There are a few exceptions and in all cases the authors appear enthusiastic about the potential of generating resources from in-kind contributions. For example, Preker found in the Philippines that in the Pesos for Health community scheme, when people fell ill and had to visit the hospital, or for members who could not pay the premiums, they monetarized agricultural produce such as chickens into cash in the hospital and were able to pay for health care (Preker 2001).

Dave also found schemes in India where membership payments were accepted in the form of rice

Box 4. Turning potatoes and labor into cash revenues in Bolivia

Toonen (1995) argues that allowing farmers to provide in-kind contributions either in terms of farm products or labor increases the ability of the scheme to attract members and thus resources. He presents the example of a rural prepayment plan from Bolivia where membership dues were in the form of contributing seed potatoes to the community organization. In addition, at least one family member had to work on the community lot for production of potatoes. Some of the harvest was kept for use as seed potatoes for the following year, and the remainder was sold on the market. Proceeds were used to pay for drugs, to pay a bonus to the auxiliary nurse, and to renovate the health centers.

Source: Toonen 1995

and sorghum. In-kind contributions, however, are accepted as payment for prepayment/insurance scheme membership and not as an on-going payment option—RAHA scheme (rice), SEWAGRAM (sorghum), Goalpara (community labor) to ensure that the poor are not excluded. Schemes such as Sewagram employ a community health worker (CHW) to collect the contributions once a year, usually at harvest time, and she then sells the grain in the open market. From the funds generated she purchases drugs, pays Sewagram for mobile support, and retains the difference as his/her salary (Dave 1991).

Pooling

There is wide variation in the size and number of risk-pools. At the two extremes are schemes that start up with a few dozens households (e.g., Guatemala, ASSABA) and schemes that operate with several million members (Burundi, health card scheme). From the database of 82 schemes complied by Bennett et al., the following conclusions emerge about the size of community financing schemes:

- The population covered varied between 40 households and 700 million (Niger)
- The share of eligible population in the total local population also varied from less than 1 percent to 90 percent.
- The average level of coverage of eligible population in the sample amounted to 37 percent.

In addition to small size, pooling is further undermined by adverse selection. As community-based schemes are mostly voluntary and charge a flat premium, adverse selection is often reported as a key difficulty in ensuring financial sustainability (Atim 1998, Bennett 1998, Arhin 1994, Ekman 2001). For example, in the Burundi Health Card Scheme (CAM) the overall low membership rate (23 percent of households) was associated with community-rated premiums that discouraged low-risk individuals from purchasing CAM cards. Non-CAM members referred to higher care often purchased cards prior to the treatment or at the time of the referral to reduce

their financial barrier to expensive curative care without participating in risk sharing. Larger household were also more likely to be current or past card holders (Arhin 1994).

Prepayment schemes apply several mechanisms to increase and diversify their risk pool. These include waiting time between registration and eligibility for benefits; (mandatory) group-based membership at the family or enterprise or professional association levels; and incentives to register entire families (Atim 1998 ; Musau 1999 ; Bennett 1998 ; Dave 1991 ; Atim and Sock 2000). For example, membership in the Chogoria Hospital Insurance scheme in Kenya is open, but the premium structures favor group memberships. Coffee and tea cooperative societies and schools were the target groups in the community. However, coverage fell to only a group of hospital employees in 1998/99 due to inability to attract group memberships, high premium rates for individual memberships, slow services, and insufficient benefits (Musau 1999).

Purchasing and resource allocation

The purchasing and resource allocation function of community financing schemes is less extensively discussed in the literature than other aspects of their operations. Some schemes rely on third-party reimbursement to members, others pay providers directly. Often, sustainable financing is associated with the community's ability to negotiate preferential rates with providers.

Through several mechanisms, the community aims to ensure social control over the doctor-patient relationship and prevent unjustified over-use of services. There are examples of mandatory referrals to use higher level care, treatment guidelines, and various limitations and caps on utilization to prevent moral hazard and induced demand.

For example, the mutual health organization in Senegal is community-based and covers only hospitalization. The membership fee is per person insured, although, in general, the household is a member of the mutual and participates in the decisions. If a member needs surgery, he has to pay 50 percent of the costs of the operation. Any excess stay at the hospital (beyond 10 to 15 days) is initially covered by the mutual, and then the member has to reimburse the mutual. This seems to keep over-utilization of services in check (Jütting 2000).

B. MANAGEMENT CHARACTERISTICS

Besides getting the technical characteristics of the contribution scheme right, good management can also contribute to the success or failure of resource mobilization mechanisms. Good management is often as visible for members as the care they receive. For example, if the claims settlement process and other administrative measures are cumbersome and lengthy, members may be less willing to join the scheme.

Perhaps the strongest agreement among the reviewed articles is regarding the issue of community involvement in management of schemes as a prerequisite for success (Atim 1999; Atim and Sock 2000; Arhin 1995; Roenen and Criel 1997; Gumber and Kulkarni 2000; Carrin et al. 1999; Desmet et al. 1999). Community involvement in scheme management leads to improvements in revenue collection but also in cost containment, access, and quality of services. These performance measures, in turn, are prerequisites for sustaining membership levels and thus revenue flows (Hsiao 2001).

For example, Atim identifies the fact that MHOs owe their success to democratic governance, which is one of the original contributions of these schemes. MHOs represent their communities or members before the health authorities, including the providers influencing decisions of

resource allocation and responsiveness of the health authorities to community concerns, which enhances the sustainability of the schemes (Atim 1998).

The absence of community involvement in management may lead to provider capture and monopoly pricing. For example, the Kanage Cooperative Scheme described by Roenen and Criel did not have any community participation in its governance. There was a lack of adequate and relevant technical information to help in the decision-making process. There was no two-way dialogue between the population and the hospital, leading to a dominant position of the health service. This may have rendered the system fragile and led to its failure (Roenen and Criel 1997).

Even when the community is involved in scheme management, representational issues might arise. Gilson et al reviewed the experience of Kenya, Zambia and Benin. Community structures were often not seen to reflect the views of the wider population, critical decisions often did not take into account the interest of the poorest, and they were rarely directly involved in decision making. The authors conclude that the voice of the poorest within the communities is often not heard or influential. As a result, community mechanisms by themselves may not be adequate to address the lack of financial protection for the poor (Gilson et al 2000).

The problem encountered by most schemes, however, is that community-based schemes lack management and administrative skills specific to the design and operation of prepayment schemes. Such skills would include: calculating premium rates, determining benefits packages, marketing and communication, negotiating with providers, accounting and book-keeping skills, computing skills, and skills to monitor and evaluate the scheme (Atim 1998).

Box 5. Poor Management in the Nkoranza Scheme

The Nkoranza Community financing health insurance scheme was launched in 1992 in the Democratic Republic of the Congo. The scheme is a hospital-based (modality 3) scheme. It was designed in association with Memisa, a Dutch Christian NGO. The scheme is affiliated with a private district hospital, St. Theresa's Hospital, for which the hospital bills are paid and which is paid on a fee-for-service basis. The scheme has voluntary membership based on a community-rated premium. The founding NGO offered to meet any deficits in the first three years of the scheme's operation. The scheme has a low coverage rate of 30 percent of the area's population.

Poor management of the Nkoranza scheme affected the enrollment and attractiveness of the scheme. Staff members were not aware of their formal job descriptions. There was a lack of training for staff in marketing and community participation methods, general management skills, risk-management techniques, negotiation skills, accounting and book-keeping, computing skills, and scheme monitoring and evaluation of the scheme, and some of the hospital staff displayed negative attitudes to the patients. The management approach was also top-down with no supervisory body, reflecting the non-participatory design of the scheme.

The community was not effectively involved in the governance of the project. The community's participation was restricted to education and information campaigns. It was a hospital-based scheme, run as another department of the hospital. However, there are rules and regulations governing membership and access to services, which are revised annually and circulated within the community.

Source: Atim and Sock 2000

On the other hand, hiring some one with adequate skills to run and manage the scheme may cost the scheme too much. For example, in the Kanage Cooperative Scheme, the salary of the person hired to manage the scheme and registration was too much for the scheme to bear (about US$670 a year) and so, the hospital took over. The scheme's total administrative costs were evaluated at 12 percent of its revenues, which may have been grossly underestimated as the rent on the leases was never included (Roenen and Criel 1997).

C. Organizational characteristics

Of the organizational characteristics reviewed, linkages between the scheme and providers is reported to be an important determinant of the performance of community-based schemes. Schemes that have a durable partnership arrangement or contractual arrangement with providers can negotiate preferential rates for their members. This, in turn, increases the attractiveness of the scheme to the population and contributes to sustainable membership levels.

For example, the schemes in the Thiès region of Senegal negotiated preferential rates with the nearby private hospital of St. Jean de Dieu. The hospital is run by a religious organization that is driven by altruistic objectives and has been very supportive of the activities of the Mutual Health Organizations. The negotiated rates allow the schemes to offer considerable benefits with acceptable contribution rates. This makes the schemes very attractive to the population and explains the high penetration rate among the target group (Atim 1998).

Box 6: Linkages in the MHOs of the Thiès Region of Senegal

Since its inception, the mutual health insurance schemes in Senegal's Thiès region have been supported by the nonprofit hospital St. Jean de Dieu. This contract with the hospital enables the members to get a reduction of up to 50 percent for treatment. Any excess stay at the hospital (beyond 10 to 15 days) is initially covered by the mutual, and then the member reimburses the mutual over time. This may be a benefit of the contractual relationship with the hospital. Jütting also stresses the importance of having a viable health care provider for insurance schemes to be sustainable in rural areas of developing countries.

Source: Jütting 2000

Close ties with providers also allow the community to monitor provider behavior and exert social pressure on providers. This can lead to efficiency gains, allowing the schemes to use the resources for noticeable service improvement, which again increases the schemes' attractiveness to the population and is the cornerstone of sustainability. Conversely, inefficiencies due to weak gatekeeping, for example, may lead to moral hazard and wasted resources. In this case, membership may drop if service and quality do not improve and if the costs of the membership are higher than the perceived value of the benefits. The Nkoranza health insurance scheme is an example of this (Atim and Sock 2000).

Another level of organizational linkages is the relationship of the scheme to other schemes, in particular to the national government health system and/or social security system. In the Thai Health Card Scheme, the beneficiaries were allowed to use the health provider units under the Ministry of Public Health via the health center or community hospital and follow the referral line. Providers were compensated for the care they provided to health card holders on a per case basis. They were also reimbursed for administrative expenses incurred by being part of the health card program (Supakankunti 1997).

D. INSTITUTIONAL CHARACTERISTICS

Information is available about certain institutional characteristics of community financing schemes such as stewardship and regulation, ownership forms and related governance structures, and markets. However, better understanding is needed to assess how various institutional characteristics contribute to scheme performance. This is particularly the case regarding issues of ownership where modalities are well formulated, but their impact on performance is less well understood.

Stewardship. The role of government-level stewardship is often hypothesized as a critical determinant of sustainable health financing through community structures. Some argue that government and donor support are critical for successful and sustainable community-based health financing. This support can be in the form of financial support but also in terms of creating a supportive policy environment and providing training and information support opportunities.

In **Thailand**, for example, the government subsidizes half of the cost of the health card. The household contributes half the price of the insurance card during the income-earning season, while the other half is subsidized by general tax revenue through the Ministry of Public Health. The Ministry of Public Health decentralized the management and decision making to the provincial level to define their own policies. The premiums, however, remained the same. The health card officers helped increase access to the scheme by providing clear information to the community (Supakankunti 1997).

In some provinces of **China,** the Rural Cooperative Medical System is a joint effort between the government, villages, and the rural population. Counties and townships played a vital role in the design of the scheme, which was adapted to the local situation (Carrin 1999).

At the same time, there are examples where community financing schemes were created in response to a vacuum in government stewardship—and managed to survive. For example, Criel (1999) raises the example of the Bwamanda scheme in the **Democratic Republic of the Congo** which "succeeded in generating stable revenue for the hospital in a context where government intervention was virtually absent and where external subsidies were most uncertain."

A more systematic assessment of the various forms of government support (financial, nonfinancial) for community financing and their performance impact would make a much needed contribution toward our understanding what makes certain schemes work and others fail.

Ownership. There are various forms of ownership and related forms of governance: by members (i.e., cooperative), by providers, by nongovernmental organizations, by microfinance organizations, by churches. (See Bennett et al. 1998 for a comprehensive discussion of ownership forms of community financing.) Each form of ownership can demonstrate successful as well as unsuccessful resource-mobilization schemes. Thus, the same conclusion holds as for government regulation—linking alternative ownership forms with performance measures is a much needed contribution to the field.

Markets. Community financing schemes compete on the factor markets (particularly labor and supplies) with other organizations involved in financing and providing health care. Attracting physicians to remote rural areas where most community financing schemes work is difficult. Community financing schemes' effective demand for factors of health services production is hampered by their low ability to pay due to their predominantly poor contributing population.

In the health services markets, community financing schemes often fill a vacuum, and thus competitive forces do not necessarily apply: community financing scheme are often initiated in response to the complete absence of other income-protection instruments for the poor against the cost of illness. Thus, their members often do not have a meaningful choice of alternative schemes or other health financing modalities.

At the same time, competition is more likely when the scheme is involved in active purchasing of health services from providers and employs selectivity in the resource allocation process and performance rewards. This is again hampered by the geographic monopoly of providers in poor rural areas where many of the schemes operate. Further understanding of how market mechanisms apply to community financing schemes and how they affect performance would be helpful.

In conclusion, the reviewed literature is very rich in terms of describing various technical, managerial, organizational, and institutional features of community financing schemes. At the same time, better understanding is needed to assess how these structural characteristics contribute to scheme performance. This is particularly true where modalities are now well formulated but their impact on performance is less well understood.

VII. CONCLUDING REMARKS

This review of 45 studies on community-based health care financing has found a number of interesting observations. Perhaps the most obvious conclusion is that the literature on community-based health care financing is growing exponentially. This reflects enthusiasm among policymakers and researchers alike about the potential of these schemes to mobilize resources for the health care of the poor.

Although this growing literature is varied in terms of focus, content, scope, and approach, the following observations emerge:

- The reviewed literature is very rich in describing the nature of community financing and its variants. There is plenty of information about the design of various schemes and also about the implementation process.

- Evidence regarding the performance of community financing is building up. In particular, there is rather convincing evidence that community involvement in resource mobilization increases access to health care for those covered by these programs while reducing the financial burden of seeking health care.

- At the same time, the need persists for further evidence about the performance of community-based health financing arrangements along various measures. Most striking is the lack of knowledge about the number of people covered globally, the extent of their coverage, and the volume of resources mobilized. In the absence of these indicators, assessment of the potential of community financing at a global scale is difficult.

- There are a number of definitions and typologies presented in the literature and this paper is guilty in adding an additional one. It would be an important step, however, to arrive at a common definition so that individual studies and presented schemes could more easily be compared.

- Accepting that community financing comes in many shapes and forms, a key unanswered question is what form of community financing is more effective in terms of mobilizing resources for the health of the poor and providing financial protection against the cost of illness.

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IX. APPENDIX A. PERFORMANCE VARIABLES REPORTED IN THE REVIEWED STUDIES

In this section, we list the reviewed 45 studies, grouped according to the modality of the scheme(s) it reviews. Sections 1 through 4 are the four modalities, Section 5 summarizes studies that address multiple modalities and were large comparative papers, and Section 6 lists the conceptual papers. The performance variables included include resource generation, social inclusion and financial protection.

MODALITY 1: COMMUNITY COST SHARING	Countries reviewed	Resource generation	Social Inclusion	Financial protection	Others
1. McPake B et al. 1993. “Community Financing of Health Care in Africa: An Evaluation of the Bamako Initiative.”	Burundi Kenya Uganda Guinea	✓	✓	✓	
2. Ogunbekun I et al. 1996. “Costs and Financing of improvements in the quality of maternal health services through the Bamako Initiative in Nigeria.”	Nigeria	✗	✗	✗	
3. Soucat A et al. 1997. ‘‘Health seeking behavior and household expenditures in Benin and Guinea : The Equity implications of the Bamako Initiative.”	Benin Guinea	✓	✗	✓	
4. Soucat A et al. 1997. ‘‘Local cost sharing in Bamako Initiative Systems in Benin and Guinea :Assuring the Financial Viability of Primary Health Care.”	Benin Guinea	✓	✗	✗	
5. Gilson L. 1997. “The lessons of user fee experience in Africa.”	Africa	✓	✗	✗	Efficiency Equity Sustainability
6. Supakankunti S. 1998. “Comparative Analysis of Various Community Cost Sharing Implemented in Myanmar.”	Myanmar	✗	✗	✗	
7. Fiedler JL et al. 1999. “An Assessment of the Community Drug Funds of Honduras.”	Honduras	✗	✗	✗	
8. Fiedler JL et al. 2000. “Financing Health Care at the Local Level: The Community Drug Funds of Honduras.”	Honduras	✗	✗	✗	Quality
9. Gilson L et al. 2000. “The Equity Impacts of Community Financing Activities in three African Countries.”	Benin Kenya Zambia	✓	✓	✓	
10. Okumara J et al. 2001. “Impact of Bamako type revolving drug fund on drug use in Vietnam.”	Vietnam	✗	✗	✗	

MODALITY 2: COMMUNITY PREPAYMENT OR MUTUAL HEALTH ORGANIZATIONS	Countries reviewed	Resource generation	Social Inclusion	Financial protection	Others
11. Arhin DC. 1995. "Rural Health Insurance: A Viable Alternative to User Fees."	Ghana Guinea Bissau Burundi	✓	✗	✓	
12. Toonen, J. 1995. "Community Financing For Health Care. A Case Study from Bolivia."	Bolivia	✓	✗	✗	
13. Hsiao WC. 1995. "The Chinese Health Care System: Lessons for other Nations."	China	✗	✗	✗	
14. Ron A et al. 1996. ''A Community health insurance scheme in the Philippines: extension of a community-based integrated project."	Philippines	✗	✗	✗	
15. Liu Y et al. 1996. "Is community financing necessary and feasible for rural China?"	China	✓	✓	✓	
16. Desmet A et al. 1999. "The potential for social mobilization in Bangladesh: the organization and functioning of two health insurance schemes."	Bangladesh	✓	✓	✓	
17. Ron A. 1999. "NGOs in community health insurance schemes: examples from Guatemala and Philippines."	Guatamala Philippines	✗	✗	✗	
18. Carrin G et al. 1999. ''The reform of the Rural Cooperative Medical System in the People's Republic of China: interim experience in 14 pilot counties."	China	✓	✓	✓	
19. Chen N et al. 2000. ''Study and Experience of a Risk-based Cooperative Medical System in China : Experience in Weifang of Shandong province."	China	✗	✗	✓	
20. Xing-yuan G et al. 2000. "Study on Health Financing in Rural China."	China	✗	✗	✓	Drug use behavior
21. Gumber A et al. 2000. "Health insurance for informal sector: Case study of Gujarat."	India	✗	✗	✓	
22. Jütting J. 2000. "Do mutual health insurance schemes improve the access to health care? Preliminary results from a household survey in rural Senegal."	Senegal	✗	✓	✓	
23. Schneider P et al. 2000. "Development and Implementation of Prepayment Schemes in Rwanda."	Rwanda	✓	✗	✓	Quality
24. Preker, A. 2001. "Philippines Mission Report."	Philippines	✗	✗	✗	

MODALITY 3: PROVIDER BASED COMMUNITY HEALTH INSURANCE	Countries reviewed	Resource generation	Social Inclusion	Financial protection	Others
25. Roenen C et al. 1997. "The Kanage Community-Financed Scheme: What can be learned from failure."	Sub-Saharan Africa Rwanda China	✓	✗	✓	Effective-ness efficiency
26. Criel B et al. 1999. "The Bwamanda hospital insurance scheme: effective for whom? A study of its impact on hospitalization utilization patterns."	Democratic Republic of Congo	✓	✓	✓	Efficiency
27. Atim C et al. 2000. "An External Evaluation of the Nkoranza Community Financing Health Insurance Scheme, Ghana."	Ghana	✗	✓	✓	
MODALITY 4: COMMUNITY DRIVEN PREPAYMENT SCHEME ATTACHED TO SOCIAL INSURANCE OR GOVERNMENT RUN SYSTEM	**Countries reviewed**	**Resource generation**	**Social Inclusion**	**Financial protection**	**Others**
28. Arhin, D. 1994. "The Health Card Insurance Scheme in Burundi: A social asset or a non-viable venture?"	Burundi	✓	✓	✓	Benefit to women
29. DeRoeck D et al. 1996. "Rural Health Services at Seguridad Social Campesino Facilities: Analyses of Facility and Household Surveys."	Ecuador	✓	✓	✓	Cost and demand analysis
30. Supakankunti, S. 1997. "Future Prospects of Voluntary Health Insurance in Thailand."	Thailand	✓	✓	✗	Quality of care

STUDIES THAT ADDRESS MULTIPLE MODALITIES	Countries reviewed	Resource generation	Social Inclusion	Financial protection	Others
31. Dave P. 1991. "Community and self-financing in voluntary health programmes in India."	India	✓	✗	✗	
32. Diop FP et al. 1994. "Evaluation of the Impact of Pilot Tests for Cost Recovery on Primary Health Care in Niger."	Niger	✓	✓	✓	quality
33. Diop F et al. 1995. "The impact of alternative cost recovery schemes on access and equity in Niger."	Niger	✓	✓	✓	quality
34. Atim C. 1998. "Contribution of Mutual Health Organizations to Financing, Delivery, and Access to Health Care. Synthesis of Research in Nine West and Central-African Countries."	Benin, Côte d'Ivoire, Ghana, Mali, Nigeria, Senegal, Burkina Faso, Cameroon, Togo	✓	✗	✗	Efficiency Quality Sustaina-bility
35. Bennett S et al. 1998. "Health Insurance Schemes for People outside Formal Sector Employment."	Guatemala, DR of Congo, Tanzania, India Kenya, Vietnam Philippines, Indonesia, Ecuador, México, Burundi, Cameroon, Bangladesh, Madagascar, China, Mali, Nigeria, Thailand, Papua New Guinea, Nepal, Guinea Bissau	✓	✗	✗	Efficiency
36. Musau SN. 1999. "Community-based health insurance: Experiences and Lessons learned from East and Southern Africa."	Kenya Uganda Tanzania	✓	✗	✓	Quality Efficiency Sustaina-bility

37. Atim C. 1999. “Social movements and health insurance : a critical evaluation of voluntary, nonprofit insurance schemes with case studies from Ghana and Cameroon.”	Ghana Cameroon	✓	✗	✗	Efficiency
38. CLAISS. 1999. “Synthesis of Micro-insurance and other forms of extending social protection in health in Latin America and the Caribbean.”	Colombia Bolivia Honduras Dominican Republic Uruguay Nicaragua Ecuador Argentina Guatemala Peru	✓	✗	✗	Equity Financial Sustainabi-lity Quality
39. Hsiao WC. 2001. “Unmet needs of 2 billion: Is Community Financing a Solution?”	China Indonesia	✓	✗		
40. Narula, IS et al. XXXX. “Community Health Financing Mechanisms And Sustainability: A Comparative Analysis of 10 Asian Countries.”	Vietnam China Mongolia Philippines Indonesia Lao PDR Cambodia Myanmar Papua New Guinea Thailand	✓	✗	✗	Quality Financial Sustainabi-lity

CONCEPTUAL PAPERS THAT DID NOT ADDRESS ANY SPECIFIC SCHEMES CLASSIFIED UNDER THE MODALITIES	Countries reviewed	Resource generation	Social Inclusion	Financial protection	Others
41. Dror D et al. 1999. “Micro-insurance: extending health insurance to the excluded”		✖	✖	✖	
42. Brown W et al. 2000. “Insurance Provision in Low-Income Communities-Part II. Initial lessons from Micro-insurance Experiments for the Poor.”		✖	✖	✖	
43. Ziemek S et al. 2000. “Mutual Insurance Schemes and Social Protection.”		✖	✖	✖	
44. Criel B. 2000. “Local Health Insurance systems in developing countries: a policy research paper.”		✖	✖	✖	
45. Ekman B. 2001. “Community-based Health Insurance Schemes in Developing Countries: Theory and Empirical Experiences.”		✖	✖	✖	

X. APPENDIX B CORE CHARACTERISTICS OF COMMUNITY FINANCING SCHEMES FROM THE REVIEW OF LITERATURE

In this section, we list 21 schemes reviewed in the literature grouped by their modality. The design characteristics of the schemes are detailed: technical design characteristics, management characteristics, organizational characteristics and institutional characteristics.

MODALITY 1: Community Cost Sharing

AUTHORS (YEAR)	**Soucat et al (1997)**
NAME OF THE SCHEME	**Bamako Initiative in Benin and Guinea**
Technical Design Characteristics	
Revenue collection mechanisms	• User fee • Voluntary
Pooling and risk sharing arrangements	
Purchasing and resource allocation	• Curative care covered in revitalized health centers • Reduced prices/free care for the poor provided based on a case-by-case basis interview and visual inspection • Highly utilized by children, and low SES exclusion only due to financial reasons • Low price for preventive care due to cross-subsidization of long term curative care
Management Characteristics	
Staff	• Large proportion of operating costs covered through user fee funds • Funds retained at health center level and managed locally
Culture	
Access to information	
Organizational Characteristics	
Organizational forms	
Incentive regime	
Linkages	
Institutional Characteristics	
Stewardship	• Community involved in monitoring and budgeting, increases accountability and autonomy
Governance	• Community sense of ownership
Insurance markets	
Factor & product markets	

MODALITY 2: Community prepayment scheme or Mutual Health Organization

AUTHORS (YEAR)	Gumber and Kulkarni (2000)	Desmet et al (1999)	Desmet et al (1999)
NAME OF THE SCHEME	**Self Employed Women's Association (SEWA), India**	**Grameen Health program, Bangladesh**	**Gonosasthya Kendra, Bangladesh**
Technical Design Characteristics			
Revenue collection mechanisms	• Voluntary membership for families • Women beneficiaries • Fixed premium which is low as assets of the NGO assist the running of the scheme	• Prepayment with a form of scaling in fee structure • Members are beneficiaries of the Grameen Bank cooperative	• Sliding scale fee structure of premiums and copayments • Voluntary per household based on signing of contract
Pooling and risk sharing arrangements			
Purchasing and resource allocation			
Management Characteristics			
Staff	• Preference for management at the panchayat level • Easy and quick settlement of claims by administrative staff		
Culture		• Top down-approach of management	• Power struggle in management scaling down of the interaction with the community to family and individual
Access to information			
Organizational Characteristics			
Organizational forms			
Incentive regime			
Linkages			
Institutional Characteristics			
Stewardship			
Governance		• No active subscriber involvement	• No active subscriber involvement
Insurance markets			
Factor and Product markets			

AUTHORS (YEAR)	Jütting (2000)	Atim (1999)	Arhin (1994)
NAME OF THE SCHEME	**Mutual Health Organization (MHO), Senegal**	**Mutuelle Famille Babouantou de Yaoundé, Cameroon**	**Abota Village Health Insurance Scheme, Guinea Bissau**
Technical Design Characteristics			
Revenue collection mechanisms	• Fee per member insured • Generally household is a member • 50 percent of costs to be paid in case of surgery to check over utilization, any excess stay in the hospital of more than 10-15 days initially paid by the mutual and eventually reimbursed by the member	• Individual or family membership—high premiums • Members of same ethnic group	• Revenue collection varies from village to village, from individual to household basis, in-kind contribution in the form of agricultural produce accepted • Prepayment contributions collection time varied from once to twice a year
Pooling and risk sharing arrangements		• 3 months probationary period to check for adverse selection • Family registration incentives to check for adverse selection	• Social cohesion responsible for reducing adverse selection and moral hazard
Purchasing and resource allocation	• Covers only hospitalization	• Association pays a lump sum to member in the event of hospitalization for a specified time, surgery for at least 15 days • Cannot claim benefits more than once a year • As check on moral hazard, scheme pays fixed amount per person per year	• If Abota scheme member, referred patients to the public health facilities exempt form consultation fees
Management Characteristics			
Staff		• Mutual aid organization draws on voluntary labor of its members for management and other tasks • No full-time paid staff • No external grants in the income • Potentially good management staff—skilled in their own workplaces, and stiff sanctions exist for dereliction of duty	• Decreasing capacity of government health workers to train and supervise village health workers • Abota funds misappropriated by village health workers or staff of the Ministry of Health • Drug shortages • Village health workers attend refresher training courses

Culture	• Household participates in the decision making	• Community participation in meetings and elections of management • Social control to check fraud, moral hazard, etc	
Access to information			
Organizational Characteristics			
Organizational forms			
Incentive regime			
Linkages	• Contract with nonprofit St. Jean de Dieu hospital provides a reduction of up to 50 percent for treatment		• Supplier of drugs is the Central Medical Store in the Capital to government health centers and sectoral hospitals • Government obligated to training and supervising village health workers, supplying essential drugs • Support also provided by NGOs such as GVC and WHO/UNICEF evaluation teams
Institutional Characteristics			
Stewardship		• No enforcement of essential drug list policy or generic drugs for refunds	• Government involvement apart from management by both traditional and political leaders through he village committees • Individual communities develop financing system based on local appropriateness • However, no control of community in purchasing of inputs
Governance		• Social solidarity is prominent • Democratic accountability, participation and a sense of ownership is strong	• Has the characteristics of a social institution • Community involvement beyond mobilization of local material and labor resources
Insurance markets			
Factor & product markets			

AUTHORS (YEAR)	Musau (1999)	Musau (1999)	Schneider (2000)
NAME OF THE SCHEME	**Mburahati Health Trust Fund, Tanzania**	**Atiman Insurance Scheme, Tanzania**	**Community-based Health Insurance—Prepayment Schemes, Rwanda**
Technical Design Characteristics			
Revenue collection mechanisms	• Two types of payments: registration fees to cover operational costs related to start up of scheme and regular contributions (daily) in cash or kind since daily income earners • Membership based on a nuclear family, flat fee per day per person	• Monthly premiums paid directly to the Parish Office • Family or individual membership • Voluntary membership	• Annual premium per family • Copayment is paid per episode of care • In the pilot project, 2 districts had voluntary subscription and one subscription was through health solidarity fund
Pooling and risk sharing arrangements	• To prevent moral hazard, there is social control as the group is small • There is a 3-month probation period and the whole family must enroll in scheme to prevent adverse selection	• Schemes practice a short-probation or waiting period for a month, in practice varies and adverse selection exists • Moral hazard risk is minimized by social control	• One –month waiting period • On a health center level, risk is shared within the community, on a hospital level, the risk is shared on a district level
Purchasing and resource allocation	• Includes outpatient care in designated dispensary, and covers 10 percent of costs of hospitalization in public hospital • No MCH services included • Family photograph in dispensary is required to prevent fraud and the patient signs for treatment received	• Includes outpatient care at local church dispensary, no limit to cost • Primary care available at St. Camillus Dispensary • Members have an ID card with photograph to minimize fraud	• Covers basic health center package of services, drugs and ambulance referral to district hospital • Subsidization of premiums by employers and religious authorities • Prepayment schemes reimburse health centers by capitation payment • District hospital reimbursed by district federation on a per episode basis from the schemes monthly disbursement
Management			

Characteristics			
Staff	• Manual record keeping by different officials of the scheme • All members received training from the SSMECA regarding need for social protection and characteristics of mutual health insurance schemes • On the job training related to administration and management was received • Health care provider also received training regarding administration requirements and adherence to established procedures prior to medical treatment	• Manual records kept in church office, is incomplete after theft • Weak management of the dispensary resulted in irregularities in leadership and accountability of the dispensary, over prescription of drugs, and poor quality care • No fraud check systems in place • Scheme's leaders, staff and health care provider have no training on management of health insurance	• Provided regular training before and after launch of the prepayment scheme on scheme modalities, accounting tools, administration, organizational and financial issues, etc. • In order to strengthen financial and organizational management capacities on the provider side, members prepay for care and schemes pay a capitation rate instead of fee-for-service payment
Culture	• Operates through an elected Health Committee composed of a chairperson, secretary and treasurer, and monthly meetings and Annual general meeting		• Staff receives regular feedback on service utilization, financial standing and membership status • Contractual relationship with the partners of scheme lends democratization in Rwanda
Access to information			• Population informed about introduction of prepayment schemes via radio spots, newspaper articles, and community and church meetings
Organizational Characteristics			
Organizational forms			
Incentive regime			
Linkages Linkages	• With public hospital • Technical assistance from the SSMECA- Strengthening Small and Micro Enterprise and their Cooperatives/Association • Contract with the Harlem Agape	• With local church dispensary that reports to the Diocese medical director and the medical board • Linkages with the Christian Mutual Association in Belgium	

	Dispensary to provide health care • The Medical Department of the Catholic Secretariat of the Tanzania Episcopal Church assists the group in checking the treatment forms on a regular basis	to develop control measures such as treatment guidelines and official agreement between scheme and dispensary	
Institutional Characteristics			
Stewardship	• The Scheme Management Committee is elected by members • There are formal links with the local government, Kinondoni district cooperative officer provides training on aspects related to cooperative management	• The Parish Office and Scheme Executive Committee manage the scheme • Consultations with MOH, and ILO's SSMECA STEP project Some sort of subsidy reliance exists	• 2 Districts chose for the schemes to be managed by providers and population, while one chose to be managed directly by the population
Governance	• Members run the scheme, active involvement in the design and implementation of scheme	• Community participation, members attend general meeting and elect their representatives in the Executive Committee	
Insurance markets			
Factor & product markets			

MODALITY 3: Provider-based community health insurance

AUTHORS (YEAR)	**Atim and Sock (2000)**	**Roenen and Criel (1997)**	**Criel et al (1999)**
NAME OF THE SCHEME	**Nkoranza Community Health Financing Scheme, Ghana**	**Kanage Cooperative Scheme, Rwanda**	**Bwamanda Hospital Insurance Scheme, Democratic Republic of Congo**

Technical Design Characteristics			
Revenue collection mechanisms	• Premiums collected "community-rated" in • Dec-Jan • Voluntary membership • Entire families covered	• Premiums "community-rated" • Collected between June-September	• Voluntary scheme • Community-rated premiums • Collected during the crop-selling season
Pooling and risk sharing arrangements	• Scheme insisted at the time of admission of patient, whole family be registered • Medical Officer determined access to benefits to prevent moral hazard	• Inverse relationship- poor ended up financing the services offered to the more affluent members of the cooperative	• Family is the subscription unit
Purchasing and resource allocation		• No good surveillance system leading to fraudulent use of services	• 20 percent copayment in case of hospital admission which helps reduce adverse selection
Management Characteristics			
Staff	• Lack of training in community participation skills, negotiation skills, accounting and book-keeping, computing skills, monitoring and evaluation of scheme	• One staff initially managed enrollment, but hospital took over due to high costs	
Culture	• Top-down approach of management	• No community involvement	
Access to information			
Organizational Characteristics			
Organizational forms	• Contract with St. Theresa's hospital admission costs to which are covered		
Incentive regime	• Scheme pays the hospital on a fee-for-service basis	• Subsidized by Murunda Hospital	
Linkages	• With private district hospital—St. Theresa's Hospital	• Linked to the Murunda Hospital	• Linked to hospital as health care provider
Institutional Characteristics			
Stewardship	• Hospital based	• Hospital based	
Governance	• No community involvement	• Hospital played a dominant role, no community participation	• Managed by the District Health Team
Insurance markets			

AUTHORS (YEAR)	**Musau (1999)**	**Musau (1999)**
NAME OF THE SCHEME	**Kisiizi Hospital Health Society, Uganda**	**Chogoria Hospital Insurance Scheme, Kenya**
Technical Design		

Characteristics		
Revenue collection mechanisms	• Premium rates depend on family size and time period for which premiums are paid • The scheme is for those who can afford it, access for the poor is not considered	• Fixed premiums based on individual or family enrollment and benefits included • All members should also be a member of the Kenya National Hospital Insurance Fund (NHIF) • Voluntary membership to scheme
Pooling and risk sharing arrangements	• To prevent moral hazard, copayments are charged for out and in-patient services • At least 60 percent of the group has to be enrolled for the scheme to work and prevent adverse selection • There is also a waiting period before cover commences to stop people from joining scheme when they have just fallen sick	• To prevent moral hazard, out-patient visits have a copayment • There is a 2 week waiting period, exclusion of preexisting conditions and discount for those who join as a group to prevent adverse selection
Purchasing and resource allocation	• Includes out-patient care, inpatient care in general ward bed and has no annual limit • Member ID cards are used to prevent fraud	• Includes outpatient and inpatient care subject to annual limits • To prevent fraud and abuse, there is a member ID card with photograph
Management Characteristics		
Staff	• Manual data management with no regular reports kept in scheme office • Good internal control over use of hospital services and external audit to prevent fraud • Some hospital staff have a negative attitude toward scheme members • Not enough staff members • Delay in processing claims so that they can collect drugs from pharmacy • Hospital has a computerized financial accounting system	• Computerized data management with monthly reports kept in the scheme office • Good internal controls over use of service and external audit along with monthly reports on utilization help prevent fraud and abuse of scheme
Culture		
Access to information	• Scheme conducts education meetings to help prospective members understand the scheme	

Organizational Characteristics		
Organizational forms	•	
Incentive regime	•	
Linkages	• No separation between the scheme and the hospital and the scheme is part of the hospital and hence, no contractual agreement exists	• With the Chogoria Hospital under the Presbyterian Church of East Africa • Current members are all employees of the hospital
Institutional Characteristics		
Stewardship	• The Kisiizi Hospital Committee Consultative group manages along with the community members • Scheme recognized and supported by the MOH and the Ugandan Community-based Health Financing Association • The scheme falls under the Community-based Health Care program of the hospital	• The Hospital Committee manages the scheme • Technical assistance from the MOH and USAID funded Kenya Health Care Financing Project
Governance	• Community participation in design and implementation of scheme, and management of scheme	• No community participation
Insurance markets		
Factor & product markets		

MODALITY 4: Community driven prepayment scheme attached to social insurance or government run system

AUTHORS (YEAR)	Xing-yuan and Xue-shan (2000)	Supakankunti (1997)	Carrin et al (1999)
NAME OF THE SCHEME	Cooperative Health Care Scheme (CHCS),	Thai Health Card Scheme, Thailand	Rural Cooperative Medical System (RCMS),

	China		China
Technical Design Characteristics			
Revenue collection mechanisms	• Funded by peasants and government	• Voluntary prepaid scheme • Half the price of the insurance card is paid by the household during the cycle depending on seasonal fluctuations and the other half is subsidized by general tax revenue through the MOPH	• Voluntary • One time registration, contributions collected once a year • Subsidy by government
Pooling and risk sharing arrangements		• Problem of adverse selection and over-utilization of services	• All funds pooled into one account except in 8 townships where risk sharing was limited due to separate accounts for farmers and workers
Purchasing and resource allocation	• Provides curative and preventive care	• 80 percent of the funds from the health card is allocated to compensate providers and 20 percent for administrative costs	• Provides hospital care at the township and county level
Management Characteristics			
Staff	• Effective as most of the funds was spent on health care and only 6-7 percent on management		• Technical support provided by a Central technical Team comprising of representatives from the MOH, medical universities and WHO
Culture		• Decentralized by the MOPH to the provincial level to define their own policies	
Access to information		• Health card officers effective in providing clear information to the community	
Organizational Characteristics			
Organizational forms			
Incentive regime			
Linkages		• Beneficiaries used health provider units under the MOPH via health center or community hospital and referral line	
Institutional Characteristics			
Stewardship			• Joint financial effort by the government, villages and the rural population
Governance			• Counties and townships played a vital role in the design of the scheme adapted locally
Insurance markets			
Factor & product markets			

AUTHORS (YEAR)	**DeRoeck et al (1996)**	**Arhin (1994)**	**Musau (1999)**
NAME OF THE SCHEME	**Seguridad Social Campesino (SSC), Ecuador**	**La Carte d'Assurance Maladie (CAM), Burundi**	**Community Health Fund (CHF), Tanzania**
Technical Design			

Characteristics			
Revenue collection mechanisms	• Urban payroll tax and subsidies from government's general budget and investment income pays for the rural population enrolled in the scheme • SSC members contribute a small monthly due makes up for less than five percent of the program's budget • Voluntary membership for whole family • Scheme study found user-fees being charged largely for drugs even to members	• CAM card purchased by household entitles 2 adults and all children < than 18 to free health care at al public health facilities • Fixed price (community-rated premium) • Valid for one year and purchased at any time	• Voluntary participation except for civil servants employed by the Ministry of Local Government • Pricing of benefits package based on out-patient department health services
Pooling and risk sharing arrangements	• From urban workers to the rural poor	• Adverse selection of households was a major problem sue to larger households being more likely to purchase card • Moral hazard also a huge problem	• There is adverse selection in the scheme • Fixed premiums does not recognize the ability of the community to pay • There is a mechanism for the very poor to be exempt from paying for participation in the scheme • However, mandatory user fee program together with CHF has eliminated inappropriate use of services
Purchasing and resource allocation	• Provides medical and dental outpatient services, maternity, pre and post natal care, outreach activities, health education and follow-up home visits	• If no card, pay user charges determined by health worker • Names of members written on card thus, preventing fraudulent use	• Includes outpatient care and has no limit • Member ID cards are used to prevent fraud
Management Characteristics			
Staff Staff	• Shortages of drugs and full time medical staff led to the 50 percent decrease in utilization of clinics • Medical staff stress the need for frequent in-service training, often specialized in-patient care appropriate to urban area	• Shortage of drugs is a problem • Health worker discriminated against CAM holders in favor of cash payers • Few female medical technicians (poor antenatal care)	• Manual record keeping at facilities and district headquarters, and computer spreadsheets at headquarters • Friendly staff • Good drug availability

	problems type of training is provided		
Culture	• Top-down management from central office to regional t community clinics	• Revenue retained by local committees that have financial responsibilities, although in practice only a small fraction used for health	• Top down approach from MOH to DMO to CHF Ward Committee and community
Access to information			
Organizational Characteristics			
Organizational forms			
Incentive regime			
Linkages	• Provides primary health care outpatient services through a network of 549 small health clinics in remote rural areas and coastal and mountain regions	• Health worker salaries and drugs funded by government	• No contract between the CHF and service providers • Public health facilities and health centers and dispensaries participate in the CHF
Institutional Characteristics			
Stewardship	• Administered through the government's division of Instituto Ecuadoriano Seguro Social (IESS), including procurement of medicines, hire employees, manage budget	• National health insurance scheme implemented by government	• The management is by the District CHF Board, Ward Health Committee and Facility Staff • Initiated by the MOH, government initiative and receives full recognition
Governance			• Community participation in the management of the fund and running of the public health facilities
Insurance markets			
Factor & product markets			

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