ASSESSMENT OF THE FEASIBILITY OF COMMUNITY-BASED HEALTH INSURANCE (CBHI) SCHEME FOR FINANCIAL RISK PROTECTION IN THREE AFRICAN COUNTRIES: A SYSTEMATIC REVIEW

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Abstract
Of all the risks facing poor households, health risks pose the greatest threat to their lives and livelihoods. One of the ways that poor communities manage health risks, in combination with publicly financed health care services, is community-based health insurance scheme (CBHI). Health care financing through CBHI is a growing concept in the sub-Saharan Africa, and this study has the objective of assessing the effectiveness of three of these schemes to see if they improved access to health care and reduced financial burden for their members in the case of illness and if they stabilized members incomes and helped to preserve assets when they fall sick. Three empirical studies were selected from the countries of Senegal, Rwanda and Nigeria to examine how they have fared in fulfilling the above objectives. The results of the

review were mixed. Results seem to confirm the researchers' hypothesis that community-financing through pre-payment and risk-sharing reduces financial barriers to health care. The ''upper income'' strata tend to participate more than the average group, for inability to afford the required insurance premium. Limited coverage offered by the schemes constitute a threat of catastrophic illness, which is enough to drive individuals and families into poverty.

Introduction

Health financing refers to the collection of funds from various sources, pooling of funds and spreading of risks across larger population groups, and allocation or use of funds to purchase services from public and private providers of health care (World Health Organization, WHO, 2006). Community Based Health Insurance (CBHI), which comes in varying forms, is inclusive of Health Financing.

Of all the risks facing poor households, health risks pose the greatest threat to their lives and livelihoods. A health shock adds health expenditures to the burden of the poor precisely at the time when they can afford it the least. One of the ways that poor communities manage health risks, in combination with publicly financed health care services, is community-based health insurance scheme (CBHI). These are small scale, voluntary health insurance programs, organized and managed in a participatory manner. They are designed to be simple and affordable, and to draw on resources of social solidarity and cohesion to overcome problems of small risk pools, moral hazard, fraud, exclusion and cost-escalation (Tabor, 2005).

CBHIs are formed with a variety of goals and objectives, other than to improve access and quality of health care. Sometimes, the schemes are started as a way of mobilizing or

stabilizing revenues for hospitals and other health care providers. In other cases, CBHIs are established to replace free provision of health care services with fee-based service. In other instances, CBHIs have been initiated as a way of reducing the bad debts accumulated by micro-finance institution clients, and to diversify the services that micro-finance institutions provide (Del Conte 2002; Tabor, 2005).

CBHIs provide (some) coverage for a defined set of primary health care expenditures, such as clinic and drug expenses. Most of them also cover part of the costs of hospital treatment. Accordingly, they perform two distinct health access functions. They act to pool high-cost health risks - a pure insurance function - and they facilitate entry of low income households to a public health care system that has its own arrangements for financing, pooling risks and providing services (Baeza *et al*, 2002; Tabor, 2005).

CBHIs also contribute to improving the quality of health services. This is accomplished by striking agreements with health service providers to improve drug and medical supply availability, to improve cleanliness, to be more responsive to clients, to reduce waiting times, and to focus more attention on health education and client awareness. Thanks to collective bargaining power, CBHI monitoring and supervision of health providers also increases demand-side pressure for better management of health delivery services.

By improving demand for health services, CBHIs also contributes to higher rates of health facility capacity utilization, and by augmenting funding, CBHIs improve the capacity of health facilities to provide drugs, equipment and other essential health supplies. By helping to improve beneficiary education, they foster health awareness and stimulate demand for improvements in community health conditions and for primary health care (Tabor, 2005).

Less than 10 per cent of the informal sector population in the developing nations has health coverage from a CBHI, but the number of such schemes is growing rapidly. On average, CBHIs recover between a quarter to a half of health service costs. As a social protection device, they have been shown to be effective in reducing out-of-pocket payments of their members, and in improving access to health services. Many schemes do fail. Problems, such as weak management, poor quality government health services, and the limited resources that local population can mobilize to finance health care, can impede success. In addition, the poorest groups are unlikely to become members of CBHIs because they are generally unable to afford the premiums (Tabor, 2005).

An extensive review was made by WHO in 1998 concerning 82 non-profit health insurance schemes for people outside formal sector employment in developing countries. It was observed that very few of these schemes covered large populations or did not even cover high proportions of the eligible population. From a subset of 44 of the schemes, the median value of the percentage of the eligible population covered was 24.9%, 13 schemes had a coverage rate below 15%, and 12 schemes had a coverage rate above 50%. One conclusion was that adverse selection was more affecting the schemes that insured against high-cost low frequency events than schemes that covered low-cost high-frequency events. One of the main reasons was that many people tended to sign up with the CHIs at the moment of illness. It follows that the members with high risks tended to be over-represented in the CHIs (Carrin, 2003).

Another part of the conclusions in the WHO Study was that overall benefit packages were only weakly defined. Although some schemes defined exclusions, there was a tendency to include all available services at facilities participating in the CHIs. With this broad approach, enrollment rates among patients with pre-existing conditions, especially chronic illnesses, tended to be high. In other words, this led to the problem of adverse selection. After financial

review, some schemes had to redefine the benefit package, even excluding certain population groups, such as the elderly and/or excluding patients with pre-existing conditions. Another way to contain costs as a result of introducing a broad benefit package was to introduce strict gate-keeping and referral practices. The latter was the case of the Bwamanda Health Insurance Scheme and the Chogoria Hospital Scheme, whereby patients could only get access to (insured) hospital care after being referred by a primary health care centre (Carrin, 2003).

According to World Health Report 2005, forty-four countries of the WHO African Region spent less than 15% of their national annual budget on health; 29 national governments spent less than US$10 per person per year; fifty percent of the total expenditure on health in 24 countries came from government sources; prepaid health financing mechanisms cover only a small proportion of population in the Region; private spending constitute over 40% of the total expenditure on health in 31 countries; direct out-of-pocket expenditure constitutes over 50% of the private health expenditure in 38 countries (WHO Regional Office for Africa, 2006). The statement above provides the current situation of health financing in the WHO African Region and highlights the fact that prepaid health financing (of which CBHI belongs) covers only a small proportion of the population in the region.

CBHI is a new and emerging social protection technology in many parts of the developing world. Track records are short, and empirical evidences upon which conclusions about impact and sustainability can be reached are limited. There is clear evidence, however, that those in developing countries who have insurance have better health outcomes than those who do not. The main strengths of CBHI schemes are the extent 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 (Preker and Tabor, 2004; Tabor, 2005).

Where CBHI's have been successfully introduced, they have reduced the amount that poor people pay in out-of-pocket payments when they seek care and they have contributed to more frequent utilization of health services. There is ample evidence that prepayment and risk sharing through community involvement in health care financing - no matter how small - increases access by poor populations to basic health services and protects them to a limited extent against the impoverishing effects of illness. Members of CBHIs are less likely to need to borrow or sell assets to cover health costs. They are also less vulnerable to social pressure to contribute to health financing requirements of others (Preker and Tabor, 2004; Tabor, 2004).

Overwhelming documentation and evidence point to the fact that majority of sub-Saharan Africans engaged in the informal sector and of rural population have had little or no access to privately run health insurance and no access at all to wage-based social health insurance. As a response to the lack of social security, to the negative side-effects of user fees introduced in the eighties and to persistent problems with health care financing, non-profit, voluntary community-based health insurance (CBHI) schemes for urban and rural self-employed and informal sector workers have recently emerged. CBHI seems to be a promising attempt to improve access to health care, health outcomes and social protection in the case of illness. Given the unique ethnic, lingual and cultural diversity within African nations, the CBHI approach may be particularly valuable because it allows adaptation to local conditions (Wiesmann *et al*, 2000).

There are several possible ways to classify these schemes, according to: kind of benefits provided, degree of risk pooling, circumstances of their creation, fund ownership and management and the distinction whether the schemes focus on coverage for

high-cost, low frequency events or on low-cost, and high-frequency events. Similar characteristics of these schemes are:

- voluntary membership,
- nonprofit character,
- pre-payment of contribution into a fund and entitlement to specified benefits,
- important role of the community in the design and running of the scheme,
- institutional relationship to one or several health care providers.

The actual implementation of CBHI schemes in sub-Saharan African has had mixed results so far, with viability and acceptance largely depending on design and management of the scheme, community participation, regulations at the level of the health care provider, quality of services and on the socio-economic and cultural context (Wiesmann *et al*, 2000). The interest in community financing has also been driven by the recognition that user fees, introduced to raise revenue and create great accountability in low income countries with poor level of service in public sector, often have negative effects on poor households' access to care (Gilson and Brijhai, 1997; Abel-Smith and Rawal, 1992; Creese, 1991; De Bethune *et al*, 1989; Waddington and Enyimayew, 1989).

In Rwanda for instance, as a consequence of the removal of financial barriers to accessing health care by CBHI schemes, members of CBHI schemes are four times more likely to seek modern health care when sick than non-members (Diop, 2005). This is to indicate that thorough formulation and implementation bordering on access in regards to CBHI's affordability and removal of certain access fees, like co-payment, could actually improve on enrolment, improving access and also acceptability.

Most of the oldest and largest CBHI schemes are to be found in Central and West Africa. The widespread development of such schemes in East and Southern Africa is a relatively new development. The schemes are becoming increasingly popular, with a rapid growth in the number of schemes operating in African countries (Atim, 1998), many of which have been actively promoted by various international organizations (e.g. the World Bank provided financial and technical support for the establishment of the Tanzanian Community Health Fund) (Mclntyre *et al*, 2005).

While there is clear evidence that these schemes may provide financial protection against unexpected health care costs for their members and improve access to services when needed, there are a number of concerns about this form of financing (Mclntyre *et al*, 2005). These concerns also affect enrolment into the scheme. Summarized, they are as follows:

1. The affordability, frequency and timing of scheme contributions are essential aspects of a successful scheme (Artin, 1995; Eklund and Stavem, 1996; Shepherd *et al*; 1996; Jakab and Krishnan, 2004). Most successful rural schemes collect contributions once or twice a year, timed to coincide with harvest and sometimes allow payment in kind. Affordability is the ability to pay and must be managed through the combination of frequency and timing of payments. Contributions must accommodate a community's ability to pay, so is the frequency and timing arrangements. The contributions made by individual households must be graduated to accommodate more members who otherwise would not be enrolled, if enrollment were made on a per capita basis.
2. Another issue of importance is whether the contribution is made on a per person or per household basis, with those with a larger family size finding it difficult to cover all household

members if per person contributions are charged. Many schemes are addressing this problem by using a graduated fee, where the fee per person declines as family size increases.

3. The proximity of the health facility which will provide services covered by the scheme also influences willingness to pay scheme contributions (Artin, 1995; Shepherd *et al*; 1996).
4. In addition, the perceived quality of services covered by the scheme is of critical importance (Artin, 1994; Chebot *et al*, 1991; Criel and Waelkens, 2003).
5. Another issue is the need to consult the target population when designing the schemes' benefit package to determine their preference and needs (Bennett, 2004).

Altruistic willingness to pay for CBHI describes the willingness of others to contribute extra Naira beyond the requirements of the scheme so that the poor and indigent people would benefit. When considering the equity of health care financing, one cannot simply consider who bears the burden of paying the health services; it is equally important to consider who derives the benefit from each source of finance (Mclntyre *et al*, 2005). Altruistic WTP is a form of equity, since it extends benefits of health services based on need and not on the ability to pay.

On reviewing the formation and activities of community-based health insurance schemes in sub-Sahara Africa, McIntyre *et al* (2005) state that "A related issue is that the poorest community members will only be incorporated in these schemes if their membership contribution is partly or fully subsidized". While there are some examples of contributions being subsidized either by the scheme itself (i.e. out of other members' contributions) or by government or donors, considerable challenges are faced in identifying the most vulnerable households to benefit from these subsidies (Mclntyre *et al*, 2005).

In some countries, such as in Tanzania, for the Community Health Fund, government and donor funds are used to provide matching grants' according to the amount of revenue generated by each scheme. While this is intended as an incentive for the scheme to register as many members and generate as much contribution revenue as possible, it does mean that areas with highest poverty levels, which are likely to be able to generate the largest contribution revenue, are generally able to secure the largest share of subsidies from government and donor funds, raising serious equity concerns (Mclntyre *et al*, 2005). Altruism remains a valid factor in community-based health insurance in sub-Saharan Africa and requires much more research on equity concerns between the contributors and those that benefit from the contribution. This is to prevent skewing too much benefit to those that benefit from the contributions against those paying for it.

Affordability of even relatively low contributions has been shown to be a constraint to expanding coverage in some schemes (Criel and Waelkens, 2003). There is evidence that CBHI reaches "a large number of low-income population who would otherwise have no financial protection against the cost of illness" (Jakab and Krishnan, 2004). Nevertheless, schemes that focus on rural communities or informal sector workers in urban areas place a burden on those with the least ability to pay, and may end up being a mechanism whereby "the poor simply cross-subsidize the health care costs of other poor members of the population" (Bennett *et al*, 1998). This raises equity concerns that may hinder the affordability of CBHI by the poor.

There are very few data on the income level of members of community financing schemes. What evidence there is, gives a mixed picture. It would appear that two schemes in Bangladesh have managed to enroll significant members of the poor. However, this is not the case for other schemes (e.g. Theis Scheme Senegal), where the income level of members is higher than for

non-members, suggesting that the non-poor in the formal sector make up the bulk of the membership (Goudge *et al*, 2003). The evidence does suggest that poor people are unable to enroll in such schemes because of non-affordability. One of the failures of social health insurance is that it does not reach self-employed or those in the informal sector easily, thus the search for alternatives - of which community based health insurance (CBHI) has evolved.

With very few exceptions, population coverage by CBHI schemes is yet relatively low. Even well established schemes, such as the CAM scheme in Burundi, the Babouantou scheme in Cameroon and the Nkonanza scheme in Ghana, cover a quarter or less of the community or target population (Ekman, 2004). Yet, there is evidence that CBHI reaches "a large number of low-income populations who would otherwise have no financial protection against the cost of illness" (Jakab and Krishnan, 2004).

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Methodology

To enable this systematic review, studies of primary data with proven concerns for methodology and design were selected. Some factors used in this selection were whether the identified studies dealt with issues pertaining to enrollment in the community-based health insurance scheme and how much they performed in providing financial risk protection to members in times of need in Africa. Also considered were whether they mentioned or proffered likely solutions to make better the effectiveness of community-based health insurance schemes in Africa in providing financial

risk protection and how they failed in that direction in some cases. Deliberate attempt was also undertaken in making sure that studies selected were from the major sub-Saharan African sub-regions.

Data identification

The following databases were searched: Google Scholar, Pub-Med, and Embase/Medline. The list of words used in the search or a combination thereof were: community-based health insurance in Africa, the effectiveness of CBHI in Africa, financial risk protection and community-based health insurance in Africa, factors enabling enrollment into CBHI in Africa, inhibiting and facilitating factors of CBHI in Africa, etc. The reference lists of the identified studies were also used to uncover potentially relevant studies, grey literature and information not yet published in the journals.

Limitations

There were some limitations in the study: 1) only materials published in English language were accessed; and 2) only materials published between 1985 and January, 2009 were included in the study.

Selection criteria

The reviewer was able to identify some studies for possible inclusion in the review. There were criteria earmarked to guide both the inclusion and exclusion of studies for the review. The inclusion criteria included:

1) clear reasons for the establishment of the CBHI;
2) the effectiveness of the programme as a financial risk protector in times of need;
3) other contributing factors that may have enabled success or failures of the schemes during implementation; and

4) the CBHI must be an original work in a community in Africa with primary data collection.

Studies were excluded if their originality and design were questionable. The inclusion criteria were so selected to provide coherence to the study. Studies were excluded based on whether they had a clear statement on our study aims and the appropriateness of the methodology used. This was made to strengthen the coherence of the identified studies so as to enable appropriate analysis. Primary studies were used because it was determined by the reviewers that they will make stronger cases for the analysis of community based health insurance scheme in Africa as to their effectiveness as financial risk protectors in times of need. The identified studies provided grounds for comparative analysis thereby strengthening our study as to the effectiveness of CBHI as financial risk protection in times of need.

Extraction of Data for Analysis

Using a data extraction form adapted from Greenhalgh *et al* (2005), the selected studies were summarized based on their study design, the research questions, and the research context on coverage, findings and validity of conclusions. The Greenhalgh mode of analysis was used due to the differentials in the methodologies used in the papers, and as such a narrative synthesis is needed to summarize the findings. The studies were then reviewed and themes selected for analysis.

Results and Discussion

Electronic search was undertaken which yielded 521 references. Papers merited their full scrutiny after the consideration of their title and abstract. Of the articles identified as potentially relevant to the research question, 41 were reviewed. After excluding studies which did not meet the stated inclusion criteria or did not use

primary data, 10 remained, and 7 were discarded as they did not meet criteria for quality. Consequently, 3 papers met all the inclusion criteria.

Study assessment of the effectiveness of community-based health insurance schemes in three African countries.

Any attempt at assessing the effectiveness of community-based health insurance schemes in the sub-Saharan African region, must take into consideration the very reasons the schemes evolved in the first place. The effectiveness of the schemes must be judged based on whether they were able to provide for the very reason(s) they came into being, prominent amongst which is the financial risk protection for the poor in times of illness.

Many community finance 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 such difficult contexts, community involvement in financing health care provides a critical first step towards improved access to health care by the poor and social protection against the cost of illness (Tabor, 2005).

In trying to make a determination as to the effectiveness of community-based health insurance schemes in sub-Saharan Africa in providing financial risk protection to the members especially the poor in times of need, individual assessment of schemes based on research results would be used, where not available, works produced by international organizations, like WHO, the World Bank, etc., will do. This study will use both published and unpublished research. The unpublished work, we agreed, must be

from global organizations like World Bank, WHO, etc. because of their authenticity and proven prudence in research.

Important themes in regards to effectiveness as gathered in the review of the literature

During the course of the review of the literature, there were five common themes noted to be relevant among the included works in assessing the effectiveness of CBHI schemes in the countries of Senegal, Nigeria and Rwanda. These themes included:

1. Usage of health services/hospitalisation compared to non-members;
2. Payment in relation to the amount of health services used/out-of-pocket payments;
3. Social status of the population receiving health services the most;
4. Effects of health services usage on members; and
5. Organisation of schemes and the consumption of health care.

A tabular summary of the findings in the included works is presented below:

Table 13.1: ***Summary of findings***

S/N	Studies/Countries	Year	Usage of health services/hospitalisation compared to non-members	Payment in relation to the amount of health services used/out-of pocket payments.	Social status of the population receiving health services the most.	Effects of health services usage on members.	Organisation of schemes and consumption of health care.
1.	Johannes P. Putting/Senegal	2003	Use services more than non-members. More likely to seek hospitalisation services more than non-members.	Pay less compared to the amount of health services used. Lower out-of pocket payments.	The poorest of the poor likely to be excluded in joining the mutual health services compared to the more affluent due to non-affordability of premium	Members less likely to engage in coping mechanisms like selling live stock and borrowing from relatives in times of hospitalization.	The study suggests that because of the prudent organization and management of the scheme, people living in Fandine have a higher effective hospialisation demand than the people in the other three communities. to participate in the scheme.
2.	Diop, F.P; Butera, J.D./ Rwanda.	2005	As a consequence of the removal of financial barriers to access to health care by CBHI schemes, members of CBHI schemes are four times more likely to seek modern health care when sick than non-members.			As a result of their insurance function, CBHI schemes protect the income of their members against financial risks associated with illness through seeking health care earlier and secondly, sick	Improved health coverage by CBHI has been enhanced by political leaders through technical initiatives for design and organisation of the schemes.

						members pay small out-of–pocket payments at the health centres.	
3	Uzochukwu et al/Nigeria	2009 Case study A/Community A. Case B/CommunityB	Availability of good quality treatment was the next common reason for remaining with the scheme after financial risk protection as indicated by 82.4% of the registered respondents. Just as in case A, the availability of good quality treatment was the next most common reason for registration in the scheme after perceived financial risk protection by the scheme.		There were no significant SES differences in registration and willingness to renew registration for the respondents as well as for other household members. There were, again, no significant SES differences in registration and willingness to renew registration for respondents and households.	Most respondents who registered did so because they perceived that the scheme offered financial risk protection. Again, most respondents who registered did so because they perceived that the scheme offered financial risk protection.	Majority of the respondents trust the CBHI managers and the community members to manage CBHI funds, a fact that may have contributed to the higher enrollment 14.9% of the respondents registered for CBHI in community B, significantly less than A-43.7%. This made it less successful than A.

Determinants of the effectiveness of CBHI scheme as used in the study

The ultimate benefit to be expected from CBHI for the population is its potential positive impact on health and social security. The most important questions for the evaluation of schemes in this regard and in our study are, therefore, the following:

1. Has the scheme improved the access to health care and reduced the financial burden for its members in the case of illness?
2. Has the scheme stabilised incomes and helped to preserve assets? (Jutting, 2003a)
3. Are the schemes financially and institutionally sustainable?

This study, therefore, examines the effectiveness of three community-based health insurance schemes identified in this review, by looking at their ability to improve access to health care and the reduction of financial burden for its members in the case of illness. Financial and institutional sustainability - a product of how the schemes are organised - also forms a basis for this evaluation. How much members resort to coping strategies in cases of illness and hospitalization by selling belongings or borrowing from relatives, for example, will also be examined. The schemes will now be examined based on these criteria.

1. Has the schemes improved the access to health care and reduced the financial burden for its members in the case of illness?

According to the study conducted by Jutting (2003a) in Senegal, the descriptive statistics suggest that members use hospitalization services more often than non-members do. Factors influencing the use of hospitalization services seem to be illness frequency, education, age, income, religion, all belonging to an ethnic group and the village community. Overall, 151 people out of 2,856 have been in hospital within the last two years, as reported by the study.

For analysis, the result is not as obvious as it might appear in the first instance. First, it cannot be taken for granted that an insurance scheme works in the usual poor institutional environment of rural areas in low-income countries often characterized by weak health care systems and under-the-table payments.

Second, the ‘‘insurance effect’’ of the mutual is reduced by the fact that members have to pay substantial co-payments, by the fact that the mutuals generally only cover hospitalization costs up to 10–15 days, and by the fact that very poor non-member also might get health care at a reduced rate. There have been single reported cases, where some of the doctors have given simple treatment and medicaments for free after work to very poor people. Given the described circumstances it is very unlikely that this practice has a major impact on the insurance value, however, it is an additional explanation for the smaller differences in out-of-pocket payments between members and nonmembers than one might expect.

While the reduction in out-of-pocket payment for members is impressive, as the study reports, the cost side of joining the health insurance scheme is also important. Households have to take into account both the payment of the premiums and the probability of a family member being hospitalized. For an average household, the annual premium of covering the family totals roughly to 2% of the household’s annual average income, while the household can expect that a member has to be hospitalized every two years (Jutting, 2003b).

To summarize, as pointed out by Johannes Jutting-Senegal, the analysis of the impact of the mutuals on access to health care has shown that members frequent the hospital more often than non-members and pay less for a visit. The results seem to confirm the researchers’ hypothesis that community-financing through pre-payment and risk-sharing reduces financial barriers to health care,

as is demonstrated by higher utilization but lower out-of-pocket expenditure. In addition, it shows that risk pooling and prepayment, no matter how small-scaled, can improve financial protection for the poor.

According to the World Bank special Report on CBHI scheme in Rwanda, because of the removal of financial barriers to access to health care by the schemes, members of CBHI schemes are four times more likely to seek modern health care when sick than non-members (Diop *et al*, 2000). These household survey results of the pilot phase have been replicated based on routine data from health centres. CBHI schemes coverage has also increased the use of reproductive health services, including prenatal care and delivery care. They had no effect, however, on the use of family planning services.

Report from Nigeria on CBHI, as presented by Uzochukwu *et al* (2009) indicates that 48.4% of the respondents registered for CBHI in the community A, thus making it more "successful" than community B, by just 14.9%. Most respondents who registered did so because they perceived that the scheme offered financial risk protection. Availability of good quality treatment was the next most common reason for registering, and the most common reason for not registering was unavailability of funds. About 82.4% of registered respondents indicated willingness to renew registration for themselves and other members of their households. Also 77.9% of the registered respondents were willing to pay for others. The study found that there were no significant SES difference in registration, and willingness to renew registration, for the respondents as well as for other household members. In addition, the number of registered respondents indicating increase in facility utilization did not differ significantly across SES groups.

Also from the survey data, 14.9% of the respondents registered for CBHI in Community B, significantly less than community A, where 43.7% registered. This made it less

successful than community A, as initially identified. Again, most respondents who registered did so because they perceived that the scheme offered financial risk protection. Availability of good quality treatment was the next most common reason for registering, and the most common reason for not registering was unavailability of funds. More people from this community did not register because of a lack of trust in those managing the CBHI funds. About 54.5% of registered respondents indicated willingness to renew registration for self and other members of their households, as opposed to 82.4% in community A. Also, only 40.3% of the registered respondents were willing to pay for others, as opposed to 77.9% in community A.

2. Has the scheme stabilised incomes and helped to preserve assets?

As reported by Johannes Jutting for Senegal, a single stay of one member in the hospital can lead to an expenditure that represents more than 25% of the household's annual budget. Furthermore, this is without calculating the indirect cost of illness, i.e., loss of working hours, reduction in labour supply, and potential reduction in labour productivity. This underlines the feet that hospitalization is a low-frequency, but high-cost risk that can push people deep into poverty, reports the study. In this regard, a threat of catastrophic illness is enough to drive individuals and families into poverty, and as such, the scheme failed in providing the necessary protection to prevent families from slipping into poverty in the event of a major illness. Though unreported, situations like this could make individuals and families to resort to coping strategies, like borrowing and selling personal assets, to meet up with the expenditure associated with such conditions. As a result of their insurance function, CBHI schemes in Rwanda, as reported by World Bank, protect the income of their members against financial risks associated with illness through two mechanisms. First, when sick, members of CBHI schemes seek care earlier, resulting in

efficiency gains in the consumption of health care services. Second, sick members pay small out-of-pocket co-payments at the health centres. Consequently, out-of-pocket payments are reduced significantly among CBHI scheme members, as demonstrated by the comparison of members and non-members of CBHI schemes' out-of-pocket payments, as presented by the study.

3. Are the schemes financially and institutionally sustainable?

In terms of village effects, as reported in Johannes Jutting-Senegal, it seems that people living in Fandene have a higher effective hospitalisation demand than the people in the other three communities as presented in the study. A possible explanation is the fact that Fandene is the oldest mutual, and is, according to the interview partners in the project, well organized and well functioning. The study also reports that a further explanation might be the fact that it is the closest mutual to the St. Jean de Dieu hospital. Proximity to health facilities participating in CBHI scheme is an added advantage for members to access health care when needed. Two advantages that could be gotten from this is that members are able to seek health care early enough to avoid catastrophe and complications, and there is reduced economic burden due to less transportation costs. Same study also reports that there are indications that the ''upper income'' strata tend to participate more than the average group with a 16% points higher probability. A major reason given in personal interviews from poor non-members was that they are interested in joining the scheme, but have no financial means to pay the required insurance premium. These results, however, do not mean that the poor are not reached. Among members are also households that belong to the poorest quintile, although, the poorest of the poor are hardly reached by the mutuals. Hence, one has to think carefully about appropriate solutions to target also this part of the population. The essence and the basic concept behind CBHI schemes is to cover

the poorest of the poor, and in this regard the Senegal's experience could be seen as not living up to expectations.

Greater access of the poor to CBHI scheme benefits are being promoted organisationally through two main strategies in Rwanda, according to the World Bank report. First, building on partnerships between CBHI schemes, grassroots associations and micro-finance schemes (*banques populaires*), existing and newly formed grassroots associations are motivated to enroll as a group in the CBHI schemes under a financing scheme where the microfinance schemes provide small loans to the associations' members to pay for their yearly contributions to the CBHI schemes. Such a financing scheme has boosted enrollment of the poor in the CBHI schemes.

In addition, it has opened opportunities for poor CBHI members for greater access to larger microfinance loans to finance income-generating activities. Such financial arrangements were developed as a consequence of the institutional arrangements between CBHI schemes, micro-financing schemes and health centres, and innovations introduced by local actors. Second, non-government organizations and administrative districts are building on the institutional bridges between the community, the CBHI schemes and health care providers to finance the enrollment of the poorest, indigents and vulnerable groups (orphans, widows, people living with HIV/AIDS, etc.). Under these demand-based subsidy schemes, community leaders play administrative functions in the identification of the poorest and indigents and vulnerable groups. The CBHI schemes manage the consumption of health care for these groups, while the subsidies are financed by non-government organisations and administrative districts who serve as intermediaries for primary sources of finance (state, external aid). The partnership between these various groups organizationally made it possible to reach the very poor and goes to say that all

hands must be on deck to boost the viability and success of CBHI schemes.

The institutional and financial sustainability of CBHI in Rwanda was built on three main approaches. First, the development of CBHI in Rwanda built on an incremental approach which drew lessons from internal experiences and external experiences of prepayment schemes in Southern Africa and mutual health organizations in West Africa. The Ministry of Health (MOH) provided the leadership to initiate the pilot phase, and secured technical assistance from USAID\Rwanda and Abt Associates Inc., which improved on the technical design and organization of CBHI schemes in the country. The MOH kept a respectable distance from the design and management of the schemes to ensure the autonomy and the appropriation of the schemes by communities and local health providers. It generated information on the performance of the schemes and convened multiple fora for stakeholders to exchange experiences and to debate on the consequences and implications of the CBHI schemes on the Rwanda health system. Such an incremental approach provided a platform for learning and drawing policy directions for the development of CBHI in the country.

Second, as consensus built up on the benefits of the CBHI schemes, a multi-level leadership developed in the country to provide support to the adaptation and extension of the schemes. Political leaders at the central level, starting from the Presidency, called for the mobilization of all actors to support the implementation of CBHI schemes throughout the country. Local communities were motivated by the MOH support in designing and establishing CBHI schemes. Such support was boosted by the Ministry of Local Affairs' involvement in promotion activities. At the province and district levels, prefects and mayors continue to play a key role in co-ordinating promotional activities. At the grassroots levels, cell and sector representatives are playing a key

role in sensitization activities, along with health personnel and local opinion leaders. Such a multi-level leadership has strengthened the legitimacy of CBHI in the country and enabled the mobilization of intersectoral support for the development of the schemes.

Third, the involvement of decentralized entities and non-government organizsations in CBHI promotion activities under a policy environment where community development was a central theme, mobilized intersectoral action, resulting in local initiatives which improved access of the poor to CBHI benefits. Partnerships between local microfinance schemes, CBHI schemes, and grassroots associations have widened opportunities for the poor to access CBHI and microfinance credit. Access of the poorest and indigents to CBHI benefits is being strengthened, due to the use of CBHI schemes as intermediate local solidarity funds in the targeting of demand-based subsidies to the poorest and indigents in the health sector by non-government organizations and administrative districts (Diop *et al*, 2000). The power of intersectoral cooperation ought not to be underestimated in the success of CBHI schemes.

Organisationally and also in an effort to maintain institutional and financial sustainability, the households enrolled in the Anambra State-Nigeria CBHI scheme pay premiums into the CBHI fund, the scheme pays the government for the use of the facilities, and the healthcare providers offer health care services to the scheme members. In addition, the government makes matching contributions to the premiums paid by the households to the scheme, as well as providing subsidy to health care providers in form of salaries. Non members of the scheme also have access to the health facilities, but pay some user fees directly to the health care providers to access care (Uzochukwu *et al*, 2009).

For the scheme to succeed and be sustained, a high level of community effort and ownership was secured in community A. In

his remark during this occasion, the *Igwe* (king) of the community, a medical doctor by training, pledged his community's preparedness to ensure the success of the scheme, provided the government maintained the required seriousness. To this end, various philanthropists in the community made many contributions to the scheme. For example, three individuals donated three giant electric power generating plants, one made a donation of drugs worth 100,000 naira (7,500 US Dollars), another donated an ambulance, and yet another one donated hospital beds. The town union and another member assisted in the renovation of the infrastructure, while some individuals paid the premium for other members of the community - a fact supported by the survey data where about 77.9% (155/199) of those registered showed the willingness to register for other members. The CHC members were also involved in sensitizing the community members on the need to register, and there seemed to have been a well coordinated CHC under the leadership of the *Igwe* (Uzochukwu *et al*, 2009).

Community views and issue of trust

Although the scheme appears to have been doing well in community A, the community members do not trust the health workers, and this may have also been one of the reasons for the *Igwe* keeping custody of the drugs and other equipments. In contrast, the majority of the participants trust the CBHI managers and the community members to manage CBHI funds - a fact that may have contributed to the higher enrollment as shown in the survey data where 43.7% of the respondents registered for CBHI and 82.4% of these were willing to renew their registration.

In the community's view, the nurses who were there before CBHI was introduced were not comfortable with the program and would not want it to succeed. Additionally, community members reported that the nurses complained that they were not informed about the program by their boss (the local government), and that

their term of reference is the health centre and not the CBHI scheme. According to the community members, these factors led to the nurses moving away from the laid down guidelines in relation to the implementation of the scheme. For example, two sets of drugs are held within each health centre, one for the CBHI and the others - some of which are brought by the nurses - for non CBHI members. Some members of the community reported that there are occasions when the health workers will want to convince the patients to opt for the non CBHI drugs which they have to pay for, especially when the CBHI drugs get out of stock. This was seen by the community committee members as undermining the success of CBHI and some of these concerns were captured by the community members in the various quotes.

Health worker response

In both sites, the health workers themselves also expressed reservation about the scheme, although they dwelt more on loss of incentives. They complained that, whilst learning about the scheme from the state task force team during the initial period of sensitization and community mobilization, they did not receive any form of training on the scheme before, or during, the implementation. There was also little or no supervision from the doctor in charge of the facilities. This made implementation difficult for the health workers. However, this was more keenly expressed in community B than in community A. Some of these views are captured in the quote made by the respondents.

Community Participation (Health committee and role of Igwe and relationship with the facility workers)

Community participation was very poor in community B. This was as a result of lack of proper mobilization of the community by the managers and health workers. For example, according to some

respondents, some people who could have registered with the scheme did not do so because of lack of information. Moreover, according to the CHC members, influential and wealthy people in the community lacked interest in the scheme.

Another issue that was constantly raised in this community is the role of the scheme co-ordinator or manager. The co-ordinator here, who was also a member of the community, was said to have been acting as a sole administrator, instead of working in harmony with the other members of CHC. It was reported that he had not been following the directives of the town union president; that he was trying to make money out of the scheme, and at one point, was registering people on his own and printed his own cards. Although, this co-ordinator eventually died and was replaced, all the people that registered through him could not be accounted for, and it is not clear why the *Igwe* in this community was not active with respect to the CBHI. This attitude of the co-ordinator disenchanted many members of the CHC and the community at large. As was captured in the respondents' quotes, this may have contributed to the poor performance of the scheme in this community.

Community views and issue of trust

Whilst the initial distrust with the main coordinator of the scheme effected the low number of registrations, the replacement of co-ordinator may have accounted for the willingness of more than half (54.5%) of the respondents to re-register. Thus, the actions of the co-ordinator evidently affected the acceptance of the scheme in Neni (community B) and may have inadvertently affected implementation.

Community members also raised the issue of nurses not being comfortable with the programne and, therefore, intent on making sure that it failed. They also felt that the workers were resentful because they had extra work to do without a corresponding incentive, as captured in their quotes.

Although the community members acknowledged that services are now readily available, they regretted the limited benefit package. Not only was surgery excluded, but there is absence of Doctors in the health centres and, when Doctors are available, they are usually Doctors on their National Youth service assignment, who are from other tribes and, therefore, cannot speak the local language, making communication with the clients difficult. Community B complained more about the absence of Doctors compared with Community A and this may have also contributed to the poor performance in this community (Uzochukwu *et al*, 2009).

Health worker response

Whilst the health workers acknowledged that the community has gained a lot in the scheme, they also expressed reservation about the scheme, the main reason being the lack of incentives from the state government driving the policy. Again, as in community A, the health workers found out about the scheme from the state task force team. They claimed that no detailed information was provided to them in relation to the establishment of the scheme. This could be explained by a number of reasons: it is possible that some of the health workers were not those initially posted to the health facility when the scheme took off, as some of them claimed, or they were not interested in the scheme, or they were not actually carried along. The effect was that the health workers concentrated more on the schedule of duties, as given to them by the local government that pays their salaries, that in new activities linked to the scheme. There was also little or no supervision from the doctor in-charge of the facility.

Although the health workers were not properly informed, the CHC members of the communities and policy makers accepted that proper communication and information about the scheme was provided. Seminars, church announcements, consultations with the

opinion leaders by the policy makers and monitoring were part of the activities of the stakeholders in the scheme.

Conclusion and Recommendations

Improving on the acceptability of community-based health insurance (CBHI) and expanding enrollment, which is supposed to be the ultimate goal, must be a considerate factor to enable implementation and sustainability. The case study in rural Senegal shows that the successful introduction and development of CBHI schemes depends on a set of factors. One crucial aspect to be looked at is, if there is a viable health care provider who can and is willing to support the schemes. Without the logistical, administrative and financial support of the hospital, St. Jean de Dieu, one can hardly imagine that the same results could have been achieved. This hints at the necessity to analyze in depth the quality of the institutions providing health care services before promoting the introduction of health insurance schemes for the poor.

Another important question is the ability of the CBHI insurance schemes to attract members and also to reach the chronic poor within the region of coverage. Debated options to increase membership are the introduction of well-targeted subsidies, flexibility in the payment/procedure of the premium, and the strengthening of the management capacity of the organisations running the health insurance schemes (Jutting, 2003). In order to reach the poorest members of the community, the cost of participation would have to be reduced by the institutions themselves or the public sector would have to subsidize their premiums. This could be achieved by linking community financing schemes to social funds, for instance.

The community and all, in order to overcome the existing limitations of the schemes, broader risk pools are required. In particular, the role of external financial support - such as government subsidies, donor funding, and reinsurance - in

encouraging social inclusion needs to be further explored. The appropriate functionaries of the CBHI must be involved during the formulation of the scheme to enable their appropriate contributions bearing in mind the culture context of the community. In our study we have agreed (at least from the information thus far) that successful implementation of CBHI must consider the following factors, which are also to aid policy in the area of formation and implementation:

1. The affordability, frequency and timing of scheme contributions are essential aspects of a successful scheme. Most successful rural schemes collect contributions once or twice a year, timed to coincide with harvest and sometimes allow payment in kind. This must be encouraged;
2. A sliding contribution scale, rather than a single flat rate contribution, can promote affordability to households with a wider range of income levels;
3. Another issue of importance is whether the contribution is made on a per person or per household basis, with those with a larger family size finding it difficult to cover all household members if per person contributions are charged. Contributions should be based on per household basis;
4. A related issue is the need for government support to ensure sustainability and equity in the scheme which may include creating the legal framework for schemes, providing technical support and funding to subsidize members exempted from contributions;
5. Successful schemes have also instituted mechanisms to reduce the potential for adverse selection (i.e. the highest risk individuals with the greatest need for health services joining the scheme). All effort must be put in place to discourage adverse selection which has the capacity to run down the scheme and destroy sustainability;

6. The proximity of the health facility which will provide service covered by the scheme also influence willingness to pay scheme contributions and must be encouraged;
7. In addition, the perceived quality of services covered by the scheme is of critical importance and must be considered a critical factor in services provision;
8. Active purchasing of health services for the scheme is needed so as to negotiate reasonable prices, ensure services in the benefit package are available, and monitor quality of care;
9. Finally, adequate capacity to manage funds in a transparent manner must be encouraged.

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