

ORIGINAL ARTICLE

Scaling-up health insurance through community-based health insurance schemes in rural sub-Saharan African communities

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Abstract

Context: The knotty and monumental problem of health inequality and the high burden of diseases in sub-Saharan Africa bothers on the poor state of health of many of its citizens particularly in rural communities. These issues are further exacerbated by the harrowing conditions of health care delivery and the poor financing of health services in many of these communities. Against these backdrops, health policy makers in the region are not just concerned with improving peoples' health but with protecting them against the financial costs of illness. What is important is the need to support more robust strategies for healthcare financing in these communities in sub-Saharan Africa.

Objective: This review assesses the evidence of the extent to which community-based health insurance (CBHI) is a more viable option for health care financing amongst other health insurance schemes in rural communities in sub-Saharan Africa.

Patterns of health insurance in sub-Saharan Africa: Theoretically, the basis for health insurance is that it allows for risk pooling and therefore ensures that resources follow sick individuals to seek health care when needed. As it were, there are different models such as social, private and CBHI schemes which could come to bear in different settings in the region. However, not all insurance schemes will come to bear in rural settings in the region.

Community based health insurance: CBHI is now recognized as a community-initiative that is community friendly and has a wide reach in the informal sector especially if well designed. Experience from Rwanda, parts of Nigeria and other settings in the region indicate high acceptability but the challenge is that these schemes are still very new in the region.

Recommendations and conclusion: Governments and international development partners in the region should collectively develop CBHI as it will help in strengthening health systems and efforts geared towards achieving the millennium development goals. This is because it is inextricably linked to the health care needs of the poor.

Key words

Sub-Saharan Africa, Health insurance, Pre-payment, Community-based health insurance

1 Introduction

Healthcare delivery and overall health system performance are neatly knitted to health care financing. However, the situation in sub-Saharan Africa shows that in spite of the efforts made to improve healthcare financing, the knotty and

monumental problem of health inequality and the high burden of diseases in sub-Saharan Africa still bothers on the poor state of health of many of its citizens particularly in rural communities ^[1]. These issues are further exacerbated by the harrowing conditions of health care delivery and the poor financing of health services in many of these communities ^[1-3]. As it were, in a region where many of the citizens live in rural communities, it is therefore not surprising that many of the people especially women and children and in particular the poorest of the poor die from avoidable health problems such as preventable infectious diseases, malnutrition, as well as complications of pregnancy and child birth. Consequently, this has translated into a perpetually low life expectancy for many in the region. Statistical evidence show that on the average life expectancy slide by approximately two years to 47.1 between 1990 to 2005 ^[4]. Current life expectancy range level is about 50 years, from a high of 72 years in Mauritius to a low of 37 years in Zimbabwe with trends clearly negative in many countries in the region ^[4]. Increasing adult mortality from HIV/AIDS has led to a decline in overall life expectancy in the region. Equally, estimates of maternal mortality show that rates as high as 500 deaths per 100,000 live births are still recorded in many settings in sub-Saharan Africa ^[5]. Additionally, substantial evidence from the United Nations Children Fund (UNICEF) has it that there are records of infant and child mortality rates as high as 46 and 102 deaths per 1,000 live births respectively as well as a low index of 0.7 annual rate reduction for under five mortality recorded between 1999-2004 in many parts of sub-Saharan Africa ^[6]. The situation is further compounded by poor maternal delivery services as evidence reveals that in many settings approximately sixty percent of the births are not attended to by a skilled health professional ^[7, 8]. More so, a child born in sub-Saharan Africa is about four times more likely not to achieve full immunization when compared to children in developed countries of the World ^[9].

As it were, the poor health care delivery performance is very clearly shown from its unsalutary health systems funding with particular attention to government budgetary allocation as a percentage of total gross domestic product as illustrated in Table below. For instance, following the Abuja declaration by African Heads of State and Government in 2001 to allocate at least 15% of their annual budget to the health sector, only about six countries in the region spend about 15% of their national budget on health: Rwanda, 18.8%, Botswana, 17.8%, Niger, 17.8%, Malawi, 17.1%, Zambia, 16.4% and Burkina Faso, 15.8%, while many others are yet to implement this in their budgetary allocation to health ^[10]. Additionally, out-of-pocket payment for health care delivery now constitutes over fifty percent of healthcare financing in most settings in the region, driving millions of people every year into poverty and their untimely death due to catastrophic health expenditure ^[11-14]. The result is a persistently high disease burden that has a risk of propagating a sickly and unproductive labor force, and this continues to present formidable challenges to governments, academicians and policy experts ^[15, 16].

Table. Estimates of expenditure on health care delivery per region

WHO Region	Total expenditure on health as a % of Gross Domestic Product	General government expenditure on health as a % of total expenditure on health	Private expenditure on health as a % of total health expenditure	External resources for health as a % of total expenditure on health
Africa	5.5	47.1	52.9	10.7
Americas	12.8	47.7	52.3	0.1
South Asia	3.4	33.6	66.4	1.9
Europe	8.4	75.6	24.4	0.1
Eastern Mediterranean	4.5	50.9	49.1	2.0
Western Pacific	6.1	61.0	39.0	0.2

Source: Nigel Crisp (2010). Health and Poverty- The Second Headline

Against these backdrops, health policy makers are therefore not just concerned with improving peoples' health but with protecting them against the financial costs of illness ^[17]. What is now cardinal in the region is the need to rapidly scale-up health financing through sustainable alternatives. Of critical consideration are the different models of health insurance (private and social insurance or general taxation), as health financing through general taxation and other pre-payment schemes are viable alternatives to easing the existing burden of payments for health services ^[18]. Substantial evidence now

show that these insurance systems tend to respond to equity in financing, in that beneficiaries are asked to pay according to their means while guaranteeing them the right to health services according to need ^[19, 20]. However, some of these financing schemes have inherent drawbacks that will impede their full realization in a region that is characteristically rural and where most of its citizens are not employed in the formal sector ^[21-23]. Accordingly, there is now the need to scale-up sustainable pre-payment schemes through community-based health insurance (CBHI) in the region.

2 Patterns of health insurance in sub-Saharan Africa

Critically thinking about the concept of scaling-up health insurance through CBHI in the region highlights the need for understanding the existing patterns of health insurance in sub-Saharan Africa. As it were, the critical issue in making optimal choice(s) for health care financing in the region is how to reduce the over dependence on government budgetary allocation and the regressive burden of out-of-pocket expenditure on healthcare by expanding pre-payment schemes which spread financial risk and reduce the spectre of catastrophic health care expenditures. Accordingly, as health insurance is now seen as a viable option that is available to broaden sources of health care financing and hence reduce the dependence and pressure on government budget and the spectre of catastrophic health care expenditures of out-of-pocket expenditures in sub-Saharan African communities, Social, Private and CBHI are patterns existing patterns of health insurance schemes in the region ^[18, 20, 24, 25].

Theoretically, the basis for health insurance is that it allows for risk pooling and therefore ensures that resources follow sick individuals to seek health care when needed ^[20]. This creates a platform for the socio-economically deprived to consume quality health care services ^[24, 25]. More so, while health insurance is now critical to bridging the gap in health care financing in the region, evidence shows that there are different models (which includes social, private health insurance and community-based health insurance schemes) which could come to bear in different settings ^[26, 27]. Likewise, there are key features that are common to all insurance schemes: (i) They are legislated by government and require regular contribution by members, (ii) Premiums are paid, (iii) Contributions are earmarked for spending on health services only, and (iv) Benefit packages are standardized. However, not all schemes will be beneficial in rural settings in the region as there are problems with the implementation of social (or general taxation) and private health insurance schemes in rural settings. These problems make it difficult for health policy makers in selecting suitable choice(s) for sustainable health system financing and implementation thereof in these settings.

2.1 Social health insurance (SHI)

Social health insurance systems are operated by public agencies and they are characterized by compulsory membership, payroll deductions, redistribution policies, complex administration and relatively high costs in mobilizing additional resources for the health sector. Conventionally, in these systems, premiums take the form of compulsory contributions which are deducted from the payroll as part of earning contributions to a health fund ^[28]. While these systems have some advantages (such as wide health coverage and improved quality of health services) implementing SHI schemes in a region that is characteristically rural and where most of its citizens are not employed in the formal sector pose will be difficult. Equally, there are problems of inefficiency in premium collections, bureaucratic obstacles, tedious claiming processes, high administrative costs that is sometimes fuelled by mismanagement and problems of cost containment ^[29]. For instance, the Nigerian health insurance experience reveals that policy regulators chose a “staggered” approach to the national health insurance scheme implementation, were it was limited to only a small proportion of the citizenry who were in the formal sector and many of whom had difficulties in accessing and utilizing the services these insurance packages were meant for ^[29]. Furthermore, is the issue of cost escalation, which tends to be salient where insurers fail to control providers, as evidence from the experiences in the 1990s in Brazil, China and South Korea demonstrates thereof ^[18]. Also, these schemes can exacerbate equity problems as only the insured tend to have better access to health care and if government extends insurance, there will be the need to ensure the same services for the uninsured who are usually in the informal sector ^[28]. Besides is the problem of political instability which causes economic insecurity and interferes with a steady

development of the health sector, as the implementation of higher payroll deductions or taxation for social development or for a social health insurance policy will be severely restricted if there is no strong and steady political support ^[20].

2.2 Private health insurance (PHI)

As considerations are being made to provide a panacea that will tackle the enormous disease burden as well as the monumental problems of health care delivery in the face of dwindling funding and rising costs for health care services in sub-Saharan Africa, private health insurance schemes could be considered. They are driven by third party arrangements (*i.e.* the insurance companies) which in most instances are for-profit based organizations ^[28]. Although, these are not common in the region but where they do exist, and where regulation is light, they are moderately successful, garnering a small but not negligible market share (usually among the upper and middle class) and making modest profits ^[30]. However, of concern are with the characteristics of private health insurance systems. It follows that, in most low income communities, for-profitting could be a huge setback to resource mobilization, risk pooling and guaranteeing of access to health services in a region where there is a huge gap between the “haves” and the “have-nots”. Therefore, the problems of adverse selection further compounded by limited coverage are seen to quietly exclude the poor and high risk individuals from benefiting from these schemes. As it were, irrespective of the premium set, low income earners may not be able to afford it because they are rather expensive and would-be enrollees from the community will not benefit from these insurance packages as a result of lack of ability to pay. These suggest that private insurance schemes cannot be an effective health financing option in rural communities in sub-Saharan Africa ^[28].

Consequently, these issues do come to bear and need to be taken into cognizance as impediments to universal health coverage in a region still grappling with the monumental burden of diseases amidst escalating costs for health care delivery. To this end, there is now the need to rapidly scale-up sustainable schemes that adequately addresses universal coverage with adequate financial protection at the same time ensures that enrollees gain participation in the management of the financing scheme and the organization of the health services. It is these that necessitates scaling up CBHI, as it is the most viable and sustainable pre-payment scheme for rural communities in sub-Saharan Africa ^[31-34].

2.3 Community-based health insurance (CBHI)

As the confluence of policy-mix for a sustainable option for health financing through health insurance comes to bear, CBHI is now seen as the most viable and sustainable pre-payment scheme for rural communities in the sub-Saharan African region ^[32-34]. Although, locally developed CBHI schemes focusing on the very poor and self-employed populations remain relatively rare in the region ^[35], within the last 15 years-20 years there have being experiments in CBHI catering for these populations in the region ^[36, 37]. In fact, it has received increasing attention from policy makers in the recent past and it is now recognized as a community-initiative that is both community friendly and has a wider reach than other health insurance schemes in the informal sector especially if well designed ^[20].

Similarly, it is often described as a common denominator for voluntary and usually not for-profit health insurance that is organized at the level of the community which may be referred to as mutual health organizations, medical aid societies, medical aid schemes or micro-insurance schemes ^[24-27]. Likewise, CBHI is essentially a household co-financing system which is a more viable option in rural settings when compared with other health insurance schemes which have problems of inefficiency in premium collections, bureaucratic obstacles, tedious claiming processes and poor coverage. Equally, the challenge of “brand identity” and efforts to carve a “niche” by insurance providers of PHIs in the competitive health insurance market as is the situation in developed societies such as in Europe and North America is not much of a challenge with CBHI in the region. It follows that traditional solidarity organizations already exist in rudimentary forms in many settings in Africa and these provide the basis for the movement towards CBHI schemes that emerged in response to failure by the state to provide such services ^[40]. More so, unlike PHI schemes where insurance provider organizations are much concerned about profit making, CBHI schemes are voluntary and usually not for profit schemes organized at the level of the community and are community-initiative programmes that have a wide reach in the informal sector. Interestingly, there are rising reports that in twenty-three countries in the region, the development of SHI schemes and PHI schemes have

neither promoted greater equity in access to health services among the poor nor have they permitted greater financial risk protection for these populations as it was earlier envisaged^[38, 39]. Accordingly, while countries in the region such as Ghana, Nigeria and Zimbabwe had introduced some form of national health insurance schemes (SHI and PHI), they are now scaling-up CBHI schemes considering the monumental benefits they have in improving the health of their teeming rural populace^[41].

2.3.1 Resource mobilization and risk pooling

There are a number of reasons for setting up CBHI, but of primary consideration is resource mobilization for health services^[42]. Chiefly is the fact that CBHI concerns voluntary contributions made by individuals, families or community groups to support the cost of health services with particular attention to primary health care^[43, 44]. It is now important to consider that CBHI in most rural communities in the region will only come to bear when its citizens are willing to pay for pre-payment schemes. Hence, economists gauge the willingness to pay (WTP) for health insurance in low income countries by means of contingent valuation (CV) methods which elicit directly what individuals would be willing to pay for a hypothetical health insurance package^[42, 45, 46]. Evidence from Nigeria, Namibia, Ghana, Ethiopia and the Bwamanda district in Democratic Republic of Congo (D.R Congo) have shown that by CV theory valid and reliable health-related information on the WTP for CBHI by a target population will facilitate scheme design and implementation for policy^[35, 42].

Although CBHI schemes are still very new in the region, it is critical to conduct CVs prior to implementation of CBHI. More so, through adequate community advocacy, organized community participation and government support, households can be mobilized to contribute to a general pooled fund as evidence from the region attests to this^[42, 45, 47]. Additionally is the fact that local communities play significant roles in determining the premiums and benefit packages based on needs, priorities and community members' ability to pay and the payment of premium to schemes can be adjusted to suit members^[48]. As an example, payment may be carried out at the time following harvest and sale of farm produce as may occur predominantly in a farming community. There is now substantial evidence revealing this practice in settings in the region such as in Nigeria, Kenya, Ghana, D.R Congo and Rwanda^[18, 47, 48]. Typical of this was a pilot scheme conducted in ten communities in Eastern Nigeria where thousands of enrollees made contributions with payments as low as 70cents and 35cents per adult and per child per month respectively^[41]. Equally, reports from India provide a satisfactory example where members of several communities participate in a voluntary health contributory fund scheme (the Yeshasvini cooperative healthcare scheme)^[49]. Its modus operandi is such that within the first two years, individuals from communities are mobilized to pay as low as \$1.08 per enrollee per annum with subsidies from government during these years. By the third year, the premium increases to only \$2.20 and subsequently increases in the fifth year to include a marketing incentive of approximately 20cents for third parties (co-operative societies) who help in handling claims by enrollees^[49]. Furthermore, as a potential major source for resource mobilization for health, findings from around the region reveals that CBHI schemes such as the Bwamanda hospital pre-payment scheme in D.R Congo had positive effects on cost-recovery rates for health system funding of about 35% and positive effects on the quality of care^[18]. Similarly, in Kenya the Chogoria and Kisiizi hospital pre-payment schemes both showed marginal positive effect on cost-recovery rates of 2.1% and 6.6% respectively^[18]. These findings suggest that CBHI schemes will be beneficial to improving health system performance in many rural settings in the region and thus necessitates its rapid scaling up in sub-Saharan Africa.

2.3.2 Financial protection and purchasing

While there is the need to scale up CBHI in sub-Saharan Africa, notwithstanding, strong critiques of CBHI schemes will argue that these have the potential to further alienate the extreme poor from utilizing health services for a number of reasons: Firstly, fixing a flat premium rate could be considered as too high for the very poor so that if given an option they would rather defer health care expenditure until it is vitally needed. Likewise, should the very poor become members of CBHI schemes, they may not fully utilize its provisions since all is not free such as transportation and the opportunity cost of time for consumers of services. However, there is strong evidence of financial risk protection by CBHI schemes in settings in the region^[50-52]. A number of schemes such as the Community Health Fund (Tanzania), Baboantou

(Cameroon), Bakoro (D.R Congo) and the Masisi hospital pre-payment scheme (D.R. Congo) have all shown positive effect of financial risk protections (both direct effect such as decreased levels of out-of-pocket spending and indirect effect such increased access to care), as members showed several times higher utilization rates of health services as compared with non-members^[18]. Besides, a study conducted in Rwanda showed that CBHI schemes can serve as potent instrument for the mobilization of resources for health and at the same time protect households from consumption risks^[47]. By using a traditional regression approach, researchers who conducted the study revealed that the effect of membership in CBHI schemes led to a high degree of utilization of health services and helped protect members from large and unforeseen catastrophic health related expenses^[47].

Of concern too are the issues of risk ratings, adverse selection and moral hazards that may arise in CBHI schemes while it protects enrollees from unexpected financial risks and guarantees them universal health coverage. It follows that, community ratings in health insurance refer to a policy in which the premiums are related to the risk of the group in its totality *i.e.*, all subscribers will pay similar premiums (except for adjustments for family size)^[35]. In the same way its premiums will thus not vary according to age, sex, health risk, occupation, *etc.*, as is the case with actuarially based premiums^[35]. The issue is that critics may posit that community ratings may discourage members with low risk from purchasing insurance while making it more attractive to high-risk individuals. However, this can be controlled in the design of the scheme. What can be done for instance, is to modify the community ratings by taking only a variable such as age into consideration as is the case in some settings in parts of Nigeria (where higher premiums are made for adults as against children) while some form of co-payments (where the insured individual will have to make some payments at the time of health service utilization) in the presence of an effective referral system between the different levels of health care delivery^[35, 41]. These may be useful in limiting moral hazards (frivolous demands), addressing the issues of adverse selection and improving the efficiency in health care provision. In particular, the well documented cases in Masisi district in eastern D.R Congo and Nkoranza scheme in Ghana provide sufficient evidence where lessons can be drawn from^[53, 54]. Furthermore, improving CBHI in the region will require empowering enrollees and scheme managers to purchase and make payments for health services (at public and private centres) at the best price^[55, 56]. The rationale for this lies in the fact that it will help to (i) determine the list of healthcare providers such as doctors, nurses, pharmacists, *etc.*, from which CBHI members can then freely choose (ii) establish the set of insured health services or benefit package (iii) set quality standards of care and (iv) propose the provider payment mechanisms^[20].

On the contrary, critics may argue that to start a CBHI the biggest problem is coming up with a service provider network. They could posit that there is the need to find doctors, hospitals *etc.* and negotiate contracts. Whereas, health insurance schemes necessitate building a network of doctors and hospitals in order to negotiate contracts with good deals, this comes to bear particularly in PHIs where health maintenance organizations (HMOs) are important. Networking and negotiating deals with health service providers such as doctors and health centres as well as building robust brands to scale up CBHI are not yet critical challenges in the region for the following reasons: Firstly, traditional solidarity organizations already exist in rudimentary forms in most rural settings in Africa and these provide the basis for the movement towards CBHI schemes^[47]. Secondly, the primary health care facilities are often all that rural communities have in form of a formal health system in the region^[57, 58]. Thirdly, CBHI schemes are community friendly and community-initiative programs that have a focus on primary health care. More so, as CBHI schemes are relatively new in the region, there is the need to promote it with the view to tackling issues of handling of claims, developing community ratings and actuarial expertise, establishing reserves and solvency requirements which are some of the challenges faced in settings in North America and Europe where this form of health financing models are already established. In the same way, through strategic purchasing and payment for health services in identified public and private health facilities, CBHI schemes will be strengthened in a region in dire need of sustainable options for health care financing to address the monumental health burden.

3 Recommendations

Besides the critical issues of resource mobilization and financial protection in CBHI schemes, there is the need for more political commitment and public advocacy to garner support if substantial results will be achieved in strengthening health

systems through CBHI schemes in the region. This now calls for a rapt attention from member states in the World Health Organization (WHO) African region to make concerted efforts in strengthening local and national policies that will rapidly scale-up CBHI in the region. Furthermore, international developmental assistance will also come to bear in closing the existing research gap in CBHIs in the region. This will require more robust methods in data collection and analysis in sub-Saharan African countries with a view to generating information on the cost and benefits of CBHI as well as linking the substantive evidence generated to inform policy^[20]. Evidence reveals that well strategized programmes and policies cannot be achieved if health care resources are not used wisely through decisions and actions from evidenced-informed policies^[58]. A critical example which will come to bear in the region will be the continued implementation of the guidelines on conducting case studies on micro-health insurance of the International Labour Organization (ILO) step programme^[59]. More so, regular systematic assessment and evaluation of these schemes will be of critical interest if sustainability is anything to go by in sub-Saharan Africa.

4 Conclusion

Ultimately, as the region continues to struggle with the knotty and monumental problem of health inequality and high disease burden as well as the poor financing for health services in many of its rural communities, CBHI now comes to bear as a very viable option to rural health care financing in the region as it will help in strengthening health systems and efforts geared towards achieving the millennium development goals. This is because it is inextricably linked to the health care needs of the poor.

Method for review

Literature reviews are summaries of research evidence that addresses research questions or issues by using explicit methods to identify, select, and critically appraise relevant research studies or documents, and to collect and analyze data from the studies that are included for the review. Accordingly, this review involved a broad search of literatures on health insurance and community health financing in sub-Saharan Africa. By using broad criteria the author made the review as inclusive as possible and online search engines and databases including EMBASE, Google Scholar, Medline, SCIRUS and PUBMED were searched as well as grey literature and hand searches of bibliographic records. However, due to paucity of research evidence on community health insurance in the region the evidence was thus limited and this calls for further research, particularly empirical studies in this regards.

Competing interests

This paper clearly expresses the views of the author as there are no competing interests. For enquires on the views of this document please contact the author.

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