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Community health insurance in sub-Saharan Africa: what operational difficulties hamper its successful development?

Manuela De Allegri[1], Rainer Sauerborn[1], Bocar Kouyaté[2] and Steffen Flessa[3]

1 *Faculty of Medicine, Department of Tropical Hygiene and Public Health, University of Heidelberg, Heidelberg, Germany*
2 *Centre National de Recherche et de Formation sur le Paludisme, Ouagadougou, Burkina Faso*
3 *Faculty of Law and Economics, Department of Health Care Management, University of Greifswald, Greifswald, Germany*

Summary In recent years, a number of reviews have generated evidence on the potential of community health insurance (CHI) to increase access to care and offer financial protection against the cost of illness for poor people excluded from formal insurance systems. Field experience, however, shows that in sub-Saharan Africa (SSA), a series of operational difficulties still hampers the successful development of CHI, yielding negative effects on potential progress towards increased access to care and improved financial protection. Through a careful assessment of the existing literature, including peer-reviewed articles, books, consultancy reports, and manuscripts from international organizations, we produce an analytical review of such difficulties. Our aim is to provide policy makers with the necessary knowledge on the problems at stake and with policy propositions to offset such problems, strengthening CHI and enhancing its role within SSA health systems. Our review of the literature reveals that the major difficulties currently faced by CHI in SSA are operational in nature and cluster around five areas: (i) lack of clear legislative and regulatory framework; (ii) low enrolment rates; (iii) insufficient risk management measures; (iv) weak managerial capacity; and (v) high overhead costs. Consequently, our review calls for appropriate policy interventions, specifically: (i) greater commitment towards the development of adequate legislation in support of CHI; (ii) increasing uptake of measures to expand equitable enrolment; (iii) the adoption of adequate risk management measures in all schemes; (iv) substantial investments from host countries as well as from sponsoring agencies to improve managerial capacity; and (v) collective efforts to contain overhead costs.

keywords community health insurance, sub-Saharan Africa, review, health financing

Introduction

Across low income countries, Community Health Insurance (CHI) represents a response to the problem of access to care and financial protection faced by those excluded from formal insurance systems, mainly poor people working in the informal sector. CHI attempts to bridge the gap in access and social protection between people covered by formal schemes and those left to pay for care out of their own pocket (Preker *et al.* 2004; Letourmy 2006b).

Community health insurance is an expression used to indicate community insurance arrangements described in the literature with a variety of terms: community-based health insurance, micro-insurance, medical aid schemes, mutual health organizations, community health funds, and rural health insurance (Atim 1998; Bennett *et al.* 1998; Dror 2002; Criel *et al.* 2004; Preker *et al.* 2004; Waelkens & Criel 2004; Letourmy 2006b). The different terms reflect the multiple contexts in which CHI has emerged, but they all indicate a 'voluntary, non-profit 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' (Atim 1998). The concept of insurance is applied at the micro-level to facilitate access to care and offer financial protection against the cost of illness, by favouring community resource pooling and risk-sharing.

In spite of preliminary evidence suggesting that CHI can facilitate access to care and offer financial protection against the cost of illness (Schneider & Diop 2004; Ekman 2004; Waelkens *et al.* 2004; Schneider & Hanson 2006; Gnawali *et al.* 2009; Chee *et al.* 2002; Jütting 2004; Musango *et al.* 2004; Ranson 2002; Devadasan *et al.* 2007), field experience shows that CHI still suffers from a variety of operational problems hindering its development and impeding it from achieving its full potential.

In recent years, a number of reviews evaluating CHI have been published. These reviews have focused on assessing the impact of CHI, defined in terms of its capacity to facilitate access to services (Palmer *et al.* 2004), to mobilize resources, improve quality of care, and offer financial protection against the cost of illness (Ekman 2004), and to contribute to the performance of health financing systems (Carrin *et al.* 2005).

We aim to complement the existing literature by offering an analytical review of the major operational difficulties hampering CHI development in sub-Saharan Africa (SSA), where estimates indicate the existence of approximately 900 schemes (Waelkens & Criel 2004). Understanding current operational difficulties represents an essential step towards searching for solutions to strengthen CHI and enhance its role within the health system. We purposely focus only on SSA because operational difficulties differ across continents and cannot easily be summarized in one single manuscript.

Methods

We conducted our literature search in June and July 2007. We referred to PubMed as our initial and main search engine and sought relevant articles using a variety of keywords: community health insurance, community-based health insurance, mutual health insurance, and micro-health insurance. We referred to the websites of major international organizations, such as the International Labour Organization, and to the websites of international consultancy agencies, such as Partnerships for Health Reform Project, Abt Associates Inc, to retrieve additional documents describing CHI experiences. We searched the bibliography of all materials we read to identify further resources on the topic. We collected all publications in English, French, and German, which could be retrieved through our library systems, online, or could be made available to us through personal contact with other researchers in the field. Given the exclusive focus on SSA, we restricted our search to this region. We purposely did not review any article on formal health insurance arrangements, whether government or private. To check for the consistency and completeness of the information in the literature, we also contacted a number of researchers, policy makers, and project managers in the field.

In order not to miss any relevant information, we collected all available material on CHI and only later focused our reading exclusively on the identification of operational difficulties. This strategy allowed us to extract relevant information also from documents which focused primarily on different aspects of CHI development (Table 1).

Unlike previous work condensing information on CHI (Ekman 2004; Palmer *et al.* 2004; Carrin *et al.* 2005), we purposely decided not to let our review be guided by any specific theoretical framework decided upon *a priori*. Using what in qualitative research is defined as an inductive approach to data analysis (Patton 1990), we analysed the existing publications on CHI without adopting any pre-conceived set of categories. As we progressed in our reading, we freely 'coded', meaning that we identified and labelled them, all the information which reflected an operational difficulty, defined as any element, whether internal or external to a scheme management, hindering CHI from operating effectively. Afterwards, we grouped the coded information into five categories which appeared meaningful and could facilitate the presentation of the findings in a publication. We adopted this inductive approach to limit the risk of overlooking relevant information by defining and restricting the scope of our analysis from its very onset.

Given the publication of pertinent reviews (Ekman 2004; Palmer *et al.* 2004; Carrin *et al.* 2005), we purposely did not appraise information on the impact of CHI on access to care, financial protection against the cost of illness, and quality of care.

Results

For this analytical review, we used 10 peer reviewed articles, seven books and book chapters, and 20 additional publications. We grouped the operational difficulties identified into five categories: (i) lack of clear legislative and regulatory framework; (ii) low enrolment rates; (iii) weak managerial capacity; (iv) insufficient risk management measures; and (v) overhead costs. The description of the findings is organized accordingly.

Lack of clear legislative and regulatory framework

Governmental responses to international pressure calling for national policies in support of CHI (Bennett *et al.* 1998; WHO 2000; Carrin *et al.* 2001; Carrin 2003; Tabor 2005) have generally been inadequate across SSA. Specifically, governments have been called upon to develop policies which promote the establishment of schemes, offer a technical framework for operation, and facilitate contracting with health care providers (Letourmy 2006a). Even in the presence of an interest to support CHI, however, most countries still lack the needed legislative, technical, and regulatory framework (Carrin 2003; La Concertation 2004; Waelkens & Criel 2004; Waelkens *et al.* 2004). Schemes are often forced to register under unspecific laws governing associations, cooperatives, or

Table 1 Summary table of all publications from which information on operational difficulties was extracted

Author	Publication date	Region	Main focus of the publication	Operational difficulties addressed
Arhim-Tenkorang	2004	SSA	Assessment of performance of six CHI schemes	Legislative framework Enrolment Risk management measures
Atim C	1998	West and Central Africa	Comprehensive assessment of CHI development	Legislative framework Enrolment Risk management measures Managerial capacity Overhead costs
Atim C	1999	Ghana Cameroon	Assessment of the impact of social movements on performance of two schemes	Enrolment Risk management measures Overhead costs
Atim C and Sock M	2000	Ghana	Comprehensive assessment of one scheme	Enrolment Risk management measures
Baltussen R *et al.*	2006	Ghana	Comprehensive inventory of the structure, financial management, and financial position of forty-five schemes	Risk management measures Managerial capacity Overhead costs
Basaza R *et al.*	2007	Uganda	Comprehensive analysis of enrolment	Legislative framework Enrolment
Bennett S *et al.*	1998	Low income countries	Comprehensive assessment of CHI development	Legislative framework Enrolment Risk management measures Managerial capacity
Carrin G	2001	Africa and Asia	Role of governments and NGOs in CHI development	Legislative framework
Carrin G	2003	Low income countries	Comprehensive assessment of CHI achievements and limitations	Legislative framework Enrolment
Carrin G *et al.*	2005	Low income countries	Assessment of CHI contribution to health system financing	Enrolment Risk management measures Overhead costs
Chee G *et al.*	2002	Tanzania	Comprehensive assessment of Community Health Fund schemes	Legislative framework Enrolment Risk management measures
Criel B	1998	Democratic Republic of Congo Rwanda	Comprehensive assessment of three schemes	Enrolment Risk management measures Overhead costs
Criel B *et al.*	2002	Guinea Conakry	Comprehensive assessment of one scheme	Enrolment Risk management measures Overhead costs
Criel B and Waelkens MP	2003	Guinea Conakry	Qualitative analysis of enrolment	Enrolment
Criel B *et al.*	2004	SSA	Editorial exploring the link between contextual elements and CHI performance	Enrolment
De Allegri M	2007	Burkina Faso	Comprehensive analysis of enrolment	Enrolment Risk management measures Managerial capacity
De Allegri M *et al.*	2006	Burkina Faso	Quantitative analysis of enrolment	Enrolment
Derriennic Y *et al.*	2005	Uganda	Assessment of community-based health financing activities	Enrolment Risk management measures Overhead costs

Table 1 (*Continued*)

Author	Publication date	Region	Main focus of the publication	Operational difficulties addressed
Flessa S	2006	Kenya	Rapid assessment of operating CHI schemes	Legislative framework Enrolment Managerial capacity Overheads
Fonteneau R	2000	Burkina Faso	Comprehensive assessment of CHI development in the country	Legislative framework Enrolment Risk management measures Managerial capacity Overhead costs
Huber G *et al.*	2002	West Africa	Comprehensive assessment of CHI development in the region	Legislative framework Enrolment Risk management measures Managerial capacity
Jütting J	2003	Senegal	Quantitative analysis of enrolment	Enrolment
Jütting J	2004	Senegal	Quantitative analysis of access to care given CHI	Risk management measures
Kayonga, C	2007	Rwanda	National health insurance program	Enrolment Managerial capacity
La Concertation	2004	West Africa	Comprehensive inventory of CHI experiences in eleven countries	Legislative framework Enrolment Risk management measures Managerial capacity Overhead costs
Ministry of Health of Ghana	2003	Ghana	National health insurance program	Legislative framework
Musango L *et al.*	2004	Rwanda	Quantitative analysis of enrolment and access to care given CHI	Legislative framework Enrolment Risk management measures
Musau SN	1999	East and Southern Africa	Comprehensive assessment of six schemes	Enrolment Risk management measures Managerial capacity Overheads
Ndiaye P *et al.*	2007	SSA	Historical prospective on CHI development in SSA	Legislative framework Enrolment Managerial capacity Overhead costs
Osei-Akoto I	2004	Ghana	Quantitative analysis of enrolment	Enrolment Risk management measures
Schneider P and Diop F	2004	Rwanda	Quantitative analysis of enrolment and access to care given CHI	Legislative framework Enrolment Risk management measures
Shepard D *et al.*	1996	Zaire	Comprehensive assessment of four schemes	Enrolment Risk management measures Overhead costs
Tabor SR	2005	Low income countries	Assessment of CHI impact on poverty reduction	Legislative framework Enrolment Risk management measures Managerial capacity Overhead costs
Vinard P and Basaza R	2006	Kenya Uganda Tanzania	Assessment of social health protection development	Legislative framework Enrolment Overhead costs

Table 1 (*Continued*)

Author	Publication date	Region	Main focus of the publication	Operational difficulties addressed
Waelkens MP and Criel B	2004	SSA	Comprehensive assessment of the problem of low enrolment	Legislative framework Enrolment Risk management measures Managerial capacity Overheads
Waelkens MP *et al.*	2004	SSA	Conceptual paper on the link between social health protection and poverty reduction	Legislative framework
WHO	2000	Low income countries	World Health Report 2000	Legislative framework

CHI, community health insurance; SSA, sub-Saharan Africa.

social welfare organizations (Atim 1998; La Concertation 2004).

The exception to this generalized lack of adequate policies comes from the experience of countries such as Mali, which passed the Law on Mutuality already in 1996 (Atim 1998; Waelkens *et al.* 2004), and Senegal, which in the late 1990s developed relevant legislation following early CHI experiences in the Thiès region (Atim 1998; Waelkens *et al.* 2004). To the present day, only four countries, Burundi, Ghana, Rwanda and Tanzania, have policies to support the large-scale establishment of subsidized CHI schemes as a means towards achieving universal coverage (Arhin-Tenkorang 2004; Ministry of Health Ghana 2003; Vinard & Basaza 2006; Schneider & Diop 2004; Ndiaye *et al.* 2007; Chee *et al.* 2002; Musango *et al.* 2004; Waelkens *et al.* 2004).

The absence of an adequate legislative and regulatory framework has been observed to yield counterproductive effects on the operations of schemes as those are forced to operate in conditions of uncertainty within the framework of a fragmented national policy. In turn, this has yielded negative effects on people's decision to enrol in a scheme, on access to care, and on financial protection against the cost of illness (Flessa 2006; Vinard & Basaza 2006; Waelkens & Criel 2004; La Concertation 2004; Huber *et al.* 2002; Basaza *et al.* 2007). The relative success experienced by schemes in countries such as Mali and Rwanda highlights the importance of working within the boundaries of an adequate legislative and regulatory framework (Letourmy 2006a; Kayonga 2007; Twahirwa 2008; Logie *et al.* 2008).

Low enrolment rates

Across SSA, CHI suffers from the problem of low enrolment. Apart from few successful experiences, the most notable of which are the Bwamanda Insurance Plan in the Democratic Republic of Congo (Criel 1998), the Nkoranza scheme in Ghana (Atim & Sock 2000; Arhin-Tenkorang 2004), schemes in the Thiès region (Jütting 2002), and above all, government-supported schemes in Rwanda (Logie *et al.* 2008), the literature consistently reports enrolment rates between 1% and 10% (Arhin-Tenkorang 2004; Criel *et al.* 2002, 2004; Shepard *et al.* 1996; Atim 1998; Bennett *et al.* 1998; Musau 1999; Carrin 2003; Waelkens & Criel 2004; Musango *et al.* 2004; La Concertation 2004; Tabor 2005; Vinard & Basaza 2006; De Allegri *et al.* 2006; Basaza *et al.* 2007; Chee *et al.* 2002; Schneider & Diop 2004). The problem of low enrolment is further exacerbated by the fact that most schemes operate in isolation from one another, further limiting the potential size of pools (La Concertation 2004; Waelkens & Criel 2004; Carrin *et al.* 2005; Ndiaye *et al.* 2007; Dror 2002; Tabor 2005; Letourmy 2006a).

Enrolment is generally higher among schemes not managed directly by the community (Waelkens & Criel 2004), particularly in schemes born out of successful pre-existing institutions, such as the Bwamanda Insurance Plan (Criel 1998; Criel *et al.* 2004), or schemes which entail a certain level of compulsion, such as those linked to micro-finance institutions and/or targeting pre-existing groups (Derriennic *et al.* 2005; Waelkens & Criel 2004; Musau 1999), or schemes heavily supported and subsidized by the government, such as in Rwanda (Ministry of Health Rwanda 2004; Logie *et al.* 2008; Kayonga 2007). For instance, by requiring that all people holding a loan enrol in CHI, the micro-finance institution Jamii Bora in Kenya has achieved 50% enrolment among its members (Flessa 2006). Similarly, the Mburahati scheme in Tanzania has achieved 85% enrolment rate by targeting the enrolment of entire cooperatives (Musau 1999).

Even schemes with relatively high enrolment rates often suffer from substantial fluctuations in membership (Bennett *et al.* 1998; La Concertation 2004; Tabor 2005). This problem has been repeatedly reported, although seldom quantified, and affects schemes in countries as diverse as Cameroon (Atim 1999), Ghana (Atim & Sock 2000), Tanzania (Chee *et al.* 2002), and Burkina Faso (H. Dong, personal communication). Notable exceptions are the Bwamanda Insurance Plan and government-supported CHI schemes in Rwanda with retention rates up to 90% (Criel 1998; Musango *et al.* 2004).

Across SSA, CHI is still far from achieving its objective of increasing equity in access and financial protection against the cost of illness. With the exception of the Rwandan experience (Schneider & Diop 2004), the literature consistently indicates that the wealthiest, or rather the least poor, are most likely to enrol (Jütting 2002; Osei-Akoto 2004; Waelkens & Criel 2004; De Allegri *et al.* 2006; Chee *et al.* 2002; Musango *et al.* 2004) and to enjoy the benefits derived from membership (Gnawali *et al.* 2009).

Low enrolment rates represent a problem because they translate into limited resource mobilization. In turn, this threatens the long term viability of schemes and the stabilization of the financial resources made available to providers (Dror 2002). Inequitable enrolment is an additional limitation because it is likely to foster rather than to counteract existing inequalities in access to care and financial protection against the cost of illness (Bennett 2004; Letourmy 2006b).

Weak managerial capacity

The literature consistently identifies in weak managerial capacity a major operational limitation to the successful development of CHI in SSA (Atim 1998; Bennett *et al.* 1998; Musau 1999; Fonteneau 2000; Huber *et al.* 2002; Waelkens & Criel 2004; La Concertation 2004; Baltussen *et al.* 2006; Flessa 2006; Ndiaye *et al.* 2007; Tabor 2005; Chee *et al.* 2002). Weak managerial capacity is reflected in all fields of operation, from setting actuarially fair premiums to designing risk management tools, from conducting social marketing campaigns to administering everyday bookkeeping, from performing financial management to handling cash flow control. Weak managerial capacity is more pronounced among community-based schemes than among schemes managed by providers, by non-governmental organisation, or by micro-finance institutions (Flessa 2006; La Concertation 2004; Waelkens & Criel 2004; Chee *et al.* 2002), but it is not an exclusivity of schemes managed by volunteers. Weak managerial capacity in fact, has been reported also among schemes that employ apparently professional people (Baltussen *et al.* 2006; Waelkens & Criel 2004; La Concertation 2004; De Allegri 2007). In spite of international efforts to foster training in insurance management, policy makers, researchers, and scheme leaders alike still accuse a severe lack of CHI-specific skills (La Concertation 2004; Huber *et al.* 2002; Flessa 2006).

Weak managerial capacity undermines CHI development, because schemes that are mismanaged are inevitably less likely to grow into successful institutions which can increase access to care and offer financial protection against the cost of illness (Waelkens & Criel 2004; Huber *et al.* 2002; Bennett *et al.* 1998; Atim 1998; La Concertation 2004).

Insufficient risk management measures

In spite of recent progress to control consumer fraud, adverse selection, over-utilization, and cost escalation, many CHI schemes still rely on insufficient risk management measures. Learning from early failures to control consumer fraud through the exclusive application of social control (Atim 1998, 1999; Bennett *et al.* 1998), most schemes now issue member ID cards (Musau 1999; Atim & Sock 2000; Chee *et al.* 2002; Waelkens & Criel 2004; Baltussen *et al.* 2006; De Allegri 2007; Tabor 2005; Arhin-Tenkorang 2004). Given the high cost of producing individual photo ID cards, however, many schemes still opt for the cheaper option of issuing non-photo ID cards and/or collective household ID cards, thus limiting consumer fraud only partially (Atim & Sock 2000; Fonteneau 2000). The literature is mostly silent regarding potential fraud by providers at the expense of schemes.

Early reports documented the existence of extensive adverse selection, as schemes allowed individual membership and did not impose a waiting period (Arhin-Tenkorang 2004; Atim 1998; Bennett *et al.* 1998; Fonteneau 2000; Shepard *et al.* 1996). Nowadays, a growing number of schemes, yet not all, impose mandatory group enrolment and/or a waiting period (Arhin-Tenkorang 2004; Atim 1998; Bennett *et al.* 1998; Criel 1998; Fonteneau 2000; Schneider & Diop 2004; Waelkens & Criel 2004; La Concertation 2004; Baltussen *et al.* 2006; De Allegri 2007; Derriennic *et al.* 2005; Musau 1999). Group enrolment, however, has been found to be effective only in contexts where schemes dispose of adequate means, such as census data or a demographic surveillance system, to enforce such a requirement (Criel 1998; Criel *et al.* 2002; De Allegri 2007). In the absence of such means, group enrolment can easily be bypassed, as in the case of the Nkoranza scheme in Ghana (Atim & Sock 2000; Osei-Akoto 2004). Given that they are simpler to apply, waiting periods have progressively become the most common measure to control

adverse selection (Fonteneau 2000; Schneider & Diop 2004; Waelkens & Criel 2004; La Concertation 2004; Baltussen *et al.* 2006; De Allegri 2007; Tabor 2005). The latest review from Ghana indicated that while only 20% of schemes enforced group enrolment, more than 85% imposed a waiting period (Baltussen *et al.* 2006). An inventory of CHI in West Africa reported similar figures (La Concertation 2004).

Compared to the progress made to control consumer fraud and adverse selection, schemes have been slow in incorporating measures to control service over-utilization. Less than half of all existing schemes impose co-payments, deductibles, or ceilings (Atim 1998; Bennett *et al.* 1998; Baltussen *et al.* 2006; La Concertation 2004; Shepard *et al.* 1996; Derriennic *et al.* 2005; Musau 1999; Musango *et al.* 2004; Huber *et al.* 2002). These measures are mostly needed when schemes are exclusively hospital-based and cannot rely on referral and gate-keeping as means of limiting utilization (De Allegri 2007; Schneider & Diop 2004). Still, even several hospital-based schemes, such as the Nkoranza scheme (Atim & Sock 2000) or the Hanang District Commmunity Health Fund in Tanzania (Chee *et al.* 2002), are reluctant to impose such measures. Social control in fact, is often expected to be sufficient to control over-utilization (Waelkens & Criel 2004; Fonteneau 2000). In practice, however, social control has proved to be effective only among the smallest schemes (Atim 1998) and never among schemes which pool risks across different communities (Atim & Sock 2000; Tabor 2005).

Community health insurance schemes in SSA have also been relatively slow in incorporating measures to control cost escalation. Few schemes have negotiated with providers contracts adequate to contain costs. The literature reports that more than 80% of schemes still rely on fee-for-service payment mechanisms (Atim 1998, 1999; Bennett *et al.* 1998; Fonteneau 2000; Baltussen *et al.* 2006; Huber *et al.* 2002; La Concertation 2004; Carrin *et al.* 2005), although some schemes have at least been able to negotiate special tariffs (Baltussen *et al.* 2006; Huber *et al.* 2002; Atim 1998; Jütting 2002; Carrin *et al.* 2005; Tabor 2005). The fact that very few schemes employ capitation payments (La Concertation 2004; Schneider & Diop 2004; De Allegri 2007) is indicative of providers' resistance to accept forms of payment which force them to assume part of the risk (Carrin *et al.* 2005; De Allegri 2007). While unable to negotiate better contracts, schemes have at least progressively succeeded in enforcing abidance to essential and generic drug lists. Two recent CHI inventories indicated that approximately two-thirds of all schemes currently adopt such lists (La Concertation 2004; Baltussen *et al.* 2006). This is an important achievement as this measure, relatively easy to implement even in the absence of extensive managerial capacity, can effectively limit cost escalation.

Lack of adequate risk management structures threatens the long term viability of schemes by exposing them to a high risk of insolvency and bankruptcy (Atim 1998; Bennett *et al.* 1998; Dror 2002; Letourmy 2006b).

Overhead costs

Early reports were silent regarding overheads (Bennett *et al.* 1998; Fonteneau 2000; Derriennic *et al.* 2005), probably assuming that CHI would at most recover health service costs, but would always need external support to cover administrative costs. More recently, as the issue of self-sustainability has gained prominence, reports have started to address problems related to overhead costs.

Given limited resource mobilization capacity (Atim 1998; Bennett *et al.* 1998; Ekman 2004), schemes are expected to minimize overhead costs. In practice, however, this is frequently not the case as overheads are usually very high, between 10% and 30% of the revenues generated through premium collection, among small and large schemes alike (Atim 1998, 1999; Criel 1998; Criel *et al.* 2002; La Concertation 2004; Baltussen *et al.* 2006). Only in rare instances, overheads are lower, such as in the Bwamanda Insurance Plan and in the Mutuelle Famille Babouantou de Yaoundè in Cameroon where they absorb 6% and 3%, respectively, of the premium (Shepard *et al.* 1996; Atim 1999). Provider-based schemes are generally cheaper to run as the insurance functions are integrated in the overall facility management. This integration, however, can be problematic as it makes providers unable to estimate the real cost of running the scheme, usually leading to a substantial underestimation of the actual overheads (Fonteneau 2000; Atim & Sock 2000; Derriennic *et al.* 2005; Vinard & Basaza 2006; Shepard *et al.* 1996; Musau 1999).

In addition to everyday administrative costs, CHI schemes also face considerable start up costs (Tabor 2005; Letourmy 2006a). Since it would be impossible to expect communities to raise sufficient funds, start up costs are usually absorbed by sponsor agencies and probably for this reason, they are not carefully documented in the literature.

The high start up and overhead costs make it impossible for the vast majority of CHI schemes to be self-sustainable, i.e. to survive exclusively with the revenues generated through premium collection without relying on any external aid, at least in the short and medium term (Waelkens & Criel 2004; Ndiaye *et al.* 2007; Ekman 2004; Carrin *et al.* 2005; Derriennic *et al.* 2005; Musau 1999; Letourmy 2006a).

Discussion

In the light of the elements described above, it appears clear that although CHI in SSA can serve to increase access to care and offer financial protection against the cost of illness (Schneider & Diop 2004; Ekman 2004; Waelkens *et al.* 2004; Schneider & Hanson 2006; Gnawali *et al.* 2009; Chee *et al.* 2002; Jütting 2004; Musango *et al.* 2004), a variety of operational difficulties still hamper its successful development. We believe that it is a responsibility of the research community to help policy makers identify these difficulties and search for possible solutions. Although schemes are highly unlikely to become self-sustainable in the short and medium term, investments in CHI should not be discontinued. The experience of countries such as Rwanda, which have channelled foreign aid towards CHI development (Logie *et al.* 2008; Twahirwa 2008), shows how investments in CHI offer a unique opportunity to strengthen an entire health system, by consolidating its financing and promoting community mobilization, in view of the future prospect of achieving universal coverage (Ndiaye *et al.* 2007; Carrin 2003; Carrin *et al.* 2001; Waelkens & Criel 2004; Tabor 2005; Huber *et al.* 2002; Waelkens *et al.* 2004; International Labour Organisation 1998).

Since the ability of the single schemes to operate successfully is largely dependent upon the existence of a legislative and regulatory framework (Flessa 2006; Vinard & Basaza 2006; Waelkens & Criel 2004; La Concertation 2004; Huber *et al.* 2002; Letourmy 2006a; Basaza *et al.* 2007; Ndiaye *et al.* 2007; Logie *et al.* 2008), policy makers should in the very first place invest in the development of such a framework. The existence of a legislative framework in fact, often stands to signify an explicit political commitment towards a given policy. Field experience from Rwanda and Guinea has shown that such explicit political commitment can foster cooperation across schemes and promote foreign investments to enhance technical support for CHI development (Letourmy 2006a). Legislation enabling single schemes to work effectively (Carrin *et al.* 2001; Carrin 2003; Tabor 2005) should possibly be issued within the framework of policies ultimately aimed at achieving universal coverage, as in the case of Rwanda and Ghana (Kayonga 2007; Ministry of Health Rwanda 2004; Ministry of Health Ghana 2003). In light of their commitment to CHI (WHO 2000; International Labour Organisation 2002; Preker *et al.* 2004), international organizations and cooperation agencies retain the responsibility to foster this process of legislative development in SSA (Carrin *et al.* 2001; Carrin 2003; International Labour Organisation 1998).

Since low enrolment severely constrains the expansion and success of schemes (Dror 2002; Waelkens & Criel 2004), considerable investments ought to be made to understand what discourages communities from joining CHI, adding to the limited existing literature (Criel & Waelkens 2003; De Allegri 2007; De Allegri *et al.* 2006; Osei-Akoto 2004; Jütting 2002; Schneider & Diop 2004; Waelkens & Criel 2004). At the same time, investments should be made to expand and sustain relevant social marketing campaigns (Musau 1999) and other targeted initiatives to increase knowledge on CHI. Since notions of risk-aversion are culturally bound (Letourmy 2006b) and the concept of insurance often foreign to the African tradition (Platteau 1997), culturally sensitive interventions are urgently needed to explain how insurance works in practice and what are the benefits derived from membership (Sommerfeld *et al.* 2002). Since equity in enrolment also challenges the development of most schemes (Jütting 2002; Osei-Akoto 2004; Waelkens & Criel 2004; De Allegri *et al.* 2006; Chee *et al.* 2002; Musango *et al.* 2004), policy makers ought to work to identify the poorest and subsidize their membership, channelling, as in the case of Rwanda (Twahirwa 2008), international monetary support towards this aim (Waelkens & Criel 2004; Carrin *et al.* 2001; Tabor 2005; Huber *et al.* 2002; Waelkens *et al.* 2004; International Labour Organisation 1998).

Considerable efforts should also be channelled towards strengthening managerial capacity. This entails first focusing on increasing the knowledge base on CHI at all levels, i.e. among communities and decision makers alike, and then fostering *ad hoc* training in all areas of operation, namely: (i) premium calculation; (ii) risk management tools; (iii) financial management and bookkeeping; (iv) member registration; and (v) contracting with providers. Sustained investment is needed to ensure that existing managerial tools made available by committed international organizations are adequately exploited and that, when needed, alternative materials and solutions are developed to suit specific contextual needs (Waelkens & Criel 2004; Tabor 2005). In particular, to safeguard the viability of schemes, investments should be made towards ensuring that appropriate risk management tools are set in place. Field experience has amply shown that even in the absence of complex underwriting and administrative structures, risk can be controlled through the application of a simple series of measures. What is still lacking is the systematic application of such measures (Atim 1998; Bennett *et al.* 1998; Baltussen *et al.* 2006; Musau 1999; Waelkens & Criel 2004; De Allegri 2007).

The challenge is to increase managerial capacity without increasing administrative costs. While reliance on external funds is inevitable in the short and medium term,

especially to cover start up costs such as training (Ndiaye *et al.* 2007; Waelkens & Criel 2004; Tabor 2005; Letourmy 2006a), complete dependence on external funds to cover administrative costs would not be acceptable and would induce international policy makers to discontinue investments in CHI. To sustain investments in CHI, efforts should be channelled towards decreasing administrative costs. In order to do so, the first step is to develop accurate cost analyses to understand what are the real costs of running CHI as compared to administering user fees (Griffin & Shaw 1996). Such information is not available. Policy makers should also encourage the development of schemes nested within pre-existing institutions, such as local NGOs, the Bwamanda Insurance Plan (Criel 1998), or micro-finance ones, as Jamii Bora (Flessa 2006). In fact such schemes experience better managerial capacity, which often translates into greater trust among the affected community and in turn, in higher enrolment rates (Flessa 2006; Waelkens & Criel 2004; Fonteneau 2000).

Conclusions

Our review highlights that CHI in SSA still suffers from a variety of operational difficulties which hamper its capacity to substantially increase access to care and offer financial protection against the cost of illness. Our review calls for specific policy interventions to counteract such difficulties, specifically: (i) the development of adequate legislation in support of CHI; (ii) measures to increase equitable enrolment; (iii) the incorporation of adequate risk management measures; (iv) substantial investments to improve managerial capacity; and (v) efforts to contain overhead costs.

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Corresponding Author **Manuela De Allegri**, Faculty of Medicine, Department of Tropical Hygiene and Public Health, University of Heidelberg, INF 324, 69120 Heidelberg, Germany. Tel.: +49 6222 4599; Fax: +49 6222 4599;
E-mail: manuela.de.allegri@urz.uni-heidelberg.de