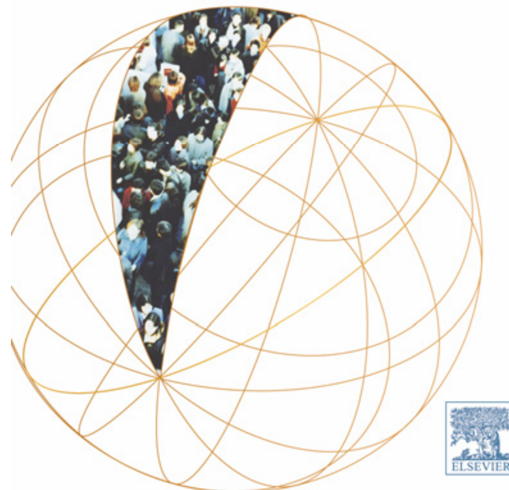
Provided for non-commercial research and educational use.
Not for reproduction, distribution or commercial use.

This article was originally published in the *International Encyclopedia of Public Health*, published by Elsevier, and the attached copy is provided by Elsevier for the author's benefit and for the benefit of the author's institution, for non-commercial research and educational use including without limitation use in instruction at your institution, sending it to specific colleagues who you know, and providing a copy to your institution's administrator.



All other uses, reproduction and distribution, including without limitation commercial reprints, selling or licensing copies or access, or posting on open internet sites, your personal or institution's website or repository, are prohibited. For exceptions, permission may be sought for such use through Elsevier's permissions site at:

http://www.elsevier.com/locate/permissionusematerial

Criel B, Waelkens M -P, Soors W, Devadasan N and Atim C Community Health Insurance in Developing Countries. In: Kris Heggenhougen and Stella Quah, editors International Encyclopedia of Public Health, Vol 1. San Diego: Academic Press; 2008. pp. 782-791.

Author's personal copy

http://www.healthlink.org.uk – Healthlink Worldwide.
http://www.hesperian.org – Hesperian Foundation.
http://www.hreoc.gov.au/HUMAN_RIGHTS/rural_health/nyirrpi_grandmothers.html – Human Rights and Equal Opportunity Commission, Rural Health Examples.
http://www.pih.org/home.html – Partners in Health.
http://bhpr.hrsa.gov/healthworkforce/chw/5.htm – US Department of Health and Human Services, Community Health Workers National Workforce Study, Chapter 5.
http://www.who.int – World Health Organization (WHO).

Community Health Insurance in Developing Countries

B Criel, M-P Waelkens, and W Soors, Public Health Department Prince Leopold Institute of Tropical Medicine, Antwerp, Belgium
N Devadasan, Institute of Public Health, Bangalore, India
C Atim, PATH Malaria Vaccine Initiative, France

© 2008 Elsevier Inc. All rights reserved.

Scope and Origin of an Evolving Approach

Community Health Insurance (CHI) is an exciting yet elusive concept. Indeed, the term CHI covers a wide variety of health insurance schemes, each in its distinctive setting and each designed for different population groups. In theory, there are five characteristics that CHI schemes all share:

- solidarity, where risk sharing is as inclusive as possible and membership premiums are independent of individual health risks;
- community-based social dynamics, where the schemes are organized by and for individuals who share common characteristics (geographical, occupational, ethnic, religious, gender, etc.);
- participatory decision making and management;
- nonprofit character;
- voluntary participation.

In practice however, all CHI schemes apply all of these principles to a greater or lesser extent. Schemes set up by health-care providers, for example, might not permit the full development of participatory decision making and management. A trade union might decide to make subscription to a CHI scheme compulsory for its affiliates, thus not upholding the principle of voluntary participation.

In the English-language literature, the term CHI is the phrase used to describe all such schemes. Less common is the descriptor mutual health organization, although its French equivalent *Mutuelle de Santé* is widely employed in francophone Africa. In West Africa especially, the social and political dimensions of CHI come to the forefront and scheme management relies considerably on community participation. On the other hand in East Africa, where provider-driven schemes are encountered more frequently, the financial dimensions of CHI attract more attention. This latter approach to CHI is reflected in the use of the term health micro insurance, a phrase endorsed over recent years by the International Labour Organization (ILO). The ILO denomination is, however, less specific than CHI, as it does not refer to participatory decision making or to the independence of premium calculation from individual health risks. CHI is concentrated in, but not limited to, the informal labor sector. Resource-pooling initiatives taken by workers' organizations in the formal sector, in search of better access to health care, are also included. CHI is not necessarily an informal business either: The insurance may be purchased from an existing insurance company, as is often the case in India.

The wide variety of CHI models has led to various attempts at classification (Bennett *et al.*, 1998). Until now, CHI has been classified by ownership, management, membership, and risk coverage:

- Classification by ownership refers to the initiator of a CHI scheme rather than to strict legal ownership. Essentially, such a scheme can be initiated and run by a group of people with similar health-care needs (community-based) or by a health-care provider (provider-driven). By extension, a community-based scheme can also be owned by representative organizations within a community, for example, a nongovernmental organization (NGO) or a trade union. Provider-driven schemes can further be categorized according to the character of the provider. Common examples include faith-based providers wishing to improve access to their health-care facilities, other private providers wanting to improve income flow, or governmental institutions attempting to implement CHI at the district level.
- Classification by management differentiates between schemes on the basis of organization and control and is thus somewhat more specific. A CHI scheme can either be managed by elected representatives of the membership, by an NGO with existing connections to

Author's personal copy

the scheme, or by a health-care provider, or the management may be contracted out to a third party such as a professional insurer.

- Classification by membership can provide useful additional information. Membership of a CHI scheme may be defined on a geographical basis (for example, people living in the same village or district, or using the same health facility), on the grounds of occupation, ethnicity, religion or gender, or on membership in another organization.
- Classification by risk coverage distinguishes between CHI schemes covering infrequent but costly events (such as hospital admissions) and those covering common low-cost events (e.g., first-line consultations). Such a distinction assumes a direct relation between high-cost events and high risk, whereas others have reported that frequent low-cost events can also lead to catastrophic health expenditure (Segall *et al.*, 2000). In addition, classification by risk coverage is becoming obsolete since more and more CHI schemes set out to cover both high-cost and low-cost events, and – in some cases – even indirect costs.

It is essential to consider CHI within the framework of health insurance as a whole and to highlight both the common features and the distinctions that exist across commercial, community, and social health insurance schemes (see Table 1). All three types of schemes, being risk-sharing arrangements, accomplish risk reduction by pooling prepaid premiums in a fund earmarked for the health-care expenses of their affiliates. What differentiates them is a series of characteristics based on their different rationale, resulting in a narrower or broader insurance spectrum:

- Commercial health insurance generally operates in a private-for-profit environment. Premiums are a function of the expected cost of health care and set on the basis of individual risk assessment of the client. Clients with high health risks pay more, while those with low health risks pay less. Solidarity and cross-subsidy play no role. Subscription is usually voluntary.
- CHI – as already described in this section – thrives on community solidarity and has a social purpose in a private nonprofit environment. Premiums are generally fixed according to the risk faced by the average scheme member, i.e., a system of community rating, independent of individual income. Thus there is an element of cross-subsidy from the healthier to the less healthy but not from richer to poorer affiliates, except where the very poor are exempted from premium payments. Subscription is usually voluntary.
- Social health insurance (SHI) pursues nationwide risk sharing from a public rights-based perspective and in a nonprofit environment. Premiums are generally proportional to income, independent of the individual risk, and paid principally by employees and their employers through legislation and financial levies. SHI implies both cross-subsidy from the healthy to those with poor health, and from the rich to the poor, provided that affiliation is mandatory and universal.

In the European countries where it originated, social health insurance (the so-called Bismarck model, referring to the German chancellor Otto von Bismarck who introduced the first national compulsory health insurance scheme in 1884) delivers almost universal coverage, thus maximizing the benefits of solidarity. Non-European high-income countries such as Japan and the Republic of Korea followed a similar path. Other European countries attained the same goal by providing tax-financed health care (the so-called Beveridge model, referring to the British academician William Beveridge whose 1942 Report to the Parliament on Social Insurance and Allied Services was at the basis of the National Health Service's establishment in 1948). The financing models on which both systems are based are far from incompatible and blends of both models are the rule rather than the exception. The fact that Bismarck included state subsidies in the first SHI scheme is often overlooked. Recent history shows that SHI systems in the world increasingly rely on revenue from general taxation, partly in response to the explosion of health-care costs that occurred in the late twentieth century and the need to subsidize or pay for the contributions of vulnerable groups such as the unemployed and low-income pensioners. With health insurance

Table 1 Types of health insurance

Commercial health insurance	*Community health insurance*	*Social health insurance*
Private for-profit rationale	Private nonprofit rationale	Public nonprofit rationale
Premium is a function of individual risk	Premium is a function of average risk	Premium is a function of individual income
Limited cross-subsidy from the healthier to the less healthy	Cross-subsidy from the healthier to the less healthy	Cross-subsidy from the healthier to the less healthy
No cross-subsidy from the wealthier to the less wealthy	Limited cross-subsidy from the wealthier to the less wealthy	Cross-subsidy from the wealthier to the less wealthy
Individual or corporate client	Member of a community	Citizen of a state
Usually voluntary affiliation	Usually voluntary affiliation	Mandatory affiliation

Author's personal copy

defined as effective health-care risk protection, a national pool of tax contributions to pay individual health-care expenses can be seen as the consummate manifestation of the health insurance function. From this perspective, a British citizen is equally as well insured as his German counterpart, albeit without a formal insurance arrangement (Kutzin, 1998). Clearly, the successes of both the Bismarck and the Beveridge models are related to a particular context: Combinations of civic voice, political stability, government stewardship, and administrative competence that most developing countries can only covet (Criel and Van Dormael, 1999). Only a few low- and middle-income countries share these characteristics and were able to approximate universal coverage. Historic examples are Costa Rica (by and large following the SHI path) and Cuba (using state revenues). In most developing countries, neither of the two models succeeded. Most developing countries' social health insurance systems remained at best highly fragmented (of which core exemplars can be found in Latin America) or restricted to civil servants (typical of Africa). The case of Africa is illuminating: In the 1960s and 1970s, neither SHI nor free health care at the point of use brought the desired welfare state any closer. In fact, both SHI and the free care concept were inherited from colonial powers and lacked the underpinning of autonomous socio-political development (Criel, 1998). During the 1970s, the African public health systems deteriorated in parallel with the deepening economic crisis. From the 1980s on, the introduction of user fees further impeded access to care, in Africa as elsewhere. In many cases, it was the emergence of widespread problems with exclusion from effective health care that prompted the development of CHI in the late 1980s and early 1990s.

Community Health Insurance in Africa

CHI in Africa must be seen in the context of large majorities within the population trapped in poverty and excluded from formal social security systems. The African CHI movement was started out of a concern to either improve access to health care for a greater proportion of the population or to ensure a stable source of income for health-care provision or both. The first initiatives were developed under the direction of expatriate development aid workers who were most familiar with the history and operation of Europe's SHI systems. A well-known example is the provider-driven Bwamanda district hospital scheme in the Democratic Republic of Congo that commenced in 1986 with Belgian support. Also in 1986, the first community-based schemes emerged with the inauguration of the Mutuelle Pharmaceutique de Tounouma in Burkina Faso. Over time, different models and blends developed, first in West and Central Africa, followed later by East Africa.

Community Health Insurance in West Africa

From the early 1990s on, the West African CHI movement enjoyed increasing external support – often from organizations that had a strong attachment to the European SHI model. These organizations, such as the International Department of the Belgian Christian Mutualities, organized training sessions for scheme managers, designed technical manuals, and helped create and develop local support organizations. Gradually, governments and donors became interested in the potential of CHI to increase access to health care in adverse conditions. The movement gained strength and in 1998 several African countries, international partners, and local actors met in Abidjan to create the network La Concertation entre les acteurs du développement des mutuelles de santé en Afrique, currently known and referred to as La Concertation. This network supports and monitors the development of CHI schemes, mainly in francophone West Africa.

The rise in CHIs in this region has led to a sixfold overall increase in the number of schemes between 1997 and 2003, as documented by La Concertation in 2004. **Table 2** provides an overview count of the almost 600 CHI initiatives registered in 2003 in francophone West Africa. Forerunner Senegal ranks first in terms of number of schemes. A closer look at country level discloses not only different speeds of implementation, but also variations in the mode of implementation.

In Mali, the CHI movement benefited from the start of the Technical Union of Community Health Insurance Schemes, the Union Technique de la Mutualité Malienne (UTM). This federation offers urban communities a standard package (called *assurance maladie volontaire*) and rural communities a tailor-made CHI suited to local needs. The Union also acts as an interface between the movement and the government. Initially the UTM targeted organized formal urban workers, but now has extended its reach to include both the informal sector and the rural communities.

In Senegal, CHI schemes extended their remit in the opposite direction, expanding gradually from rural villages to urban and periurban settings and from the informal to the formal sector. New initiatives continue to emerge. Today formal workers are adopting the CHI concept as a welcome complement to bureaucratic social security arrangements with limited coverage. The Senegalese government supports the CHI concept and has provided a legal framework and a strategic plan for CHI development.

Guinea presents yet another particularity: A research project (the PRIMA project: Projet de Recherche sur le Partage du Risque Maladie) set out the stakes back in 1996. More recently the implementation of MURIGA (Mutuelles pour les Risques liés à la Grossesse et à l'Accouchement, i.e., CHI schemes for the management of

Author's personal copy

Table 2 Number of CHI schemes in francophone West Africa

	1997	*2000*	*2003*				
	Functional schemes	*Functional schemes*	*Functional schemes*	*Starting up*	*In difficulty*	*All*	*Beneficiaries*
Benin	11	23	42	11	0	53	41 428
Burkina Faso	6	26	35	50	4	89	14 873
Cameroon	18	20	22	14	2	38	15 947
Chad	3	4	7	0	0	7	1775
Guinea	6	27	55	44	10	109	84 820
Ivory Coast	0	29	36	1	3	40	527 670
Mali	7	22	51	16	4	71	469 815
Mauritania	0	0	3	4	0	7	13 055
Niger	6	12	9	3	1	13	49 868
Senegal	19	29	79	48	9	136	303 563
Togo	0	7	9	8	0	17	20 011
Total	76	199	348	199	33	580	1 547 825

Inventory by the *Concertation entre les acteurs du développement des mutuelles de santé en Afrique* (http://www.concertation.org), adapted from Ndiaye P, Soors W, and Criel B (2007) A view from beneath: Community health insurance in Africa. *Tropical Medicine and International Health* 12(2): 157–161.

pregnancy and birth-related risks, which differs from the classical CHI concept by focusing on a narrower target group), provides a possible entry point for yet additional risk sharing among populations.

Burkina Faso worked toward extending of CHI schemes through the medium of the health-care providers themselves, but today community-run CHI schemes are increasingly common. Approximately 40 CHI schemes, representing 20 000 beneficiaries, receive technical support and training from the Réseau d'appui aux mutuelles de santé. The Burkinian government endorses this third-party organization to enhance the negotiation capacity of the demand side, and eventually to contribute to a better-quality health-care supply.

Benin focused on the involvement of locally elected leaders. Cameroon, Niger, and Mauritania became involved only recently in CHI, but are fortunate in being able to rely on strong social and religious networks.

The bulk of West African CHI schemes have less than 1000 members within each scheme, in fact the majority of schemes only count a few hundred members. Moreover, most of them remain firmly linked to a single social setting, such as a village, a neighborhood, or a professional body. These features lead to high transaction costs and limited risk pooling with insufficient and unsustainable coverage of expensive risks, such as surgical interventions or prolonged medical treatment (HIV/AIDS being the most prominent example, but also hypertension, diabetes, etc.). Currently however, West African CHI managers show an increasing interest in creating unions, federations, and networks, in order to increase efficiency and common voice (Waelkens and Criel, 2007).

More than 60% of the West African CHI schemes handle activities in addition to health insurance, especially in Cameroon, Guinea, and Burkina Faso. The provision of microcredits (small loans for poor families) or health care is most likely to be associated with health insurance. This relation runs in both directions: 33% of micro-credit schemes report health insurance as an associated activity.

In English-speaking West Africa, the case of Ghana is of particular interest. By 2002, 46 CHI schemes were active, but covered only a fraction of the population. In 2003, the government passed a Health Insurance Act, which significantly changed health financing across the entire country. The aim was to replace out-of-pocket payments (called cash and carry in Ghana) with health insurance, which would meet up to 20% of total health expenditure, while the remaining 80% would be underwritten by the government. This, it was intended, would facilitate less restrictive and more sustainable national health-care financing. In fact, the Health Insurance Act paved the way for scaling up CHI, as a basis for social health insurance in the long run. The act envisaged that every district would set up a district-based CHI scheme, the establishment of a National Health Insurance Council (NHIC, known as the Council) and the creation of a National Health Insurance Fund (NHIF, known as the Fund). The Council accredits and regulates both district-based and other CHI schemes, as well as commercial health insurance schemes. It also manages the Fund, whose main function is to subsidize district-based CHI schemes. The Fund is financed by a combination of earmarked levy proportional to income, a transfer from formal sector social security contributions, general taxation, and donations. By the end of 2005, 83 out of 138 districts boasted a CHI scheme. Most of these schemes provided coverage for between 20% and 40% of their target community. Enrollment at national level has reached 14.4% and is still rising.

Author's personal copy

While implementation continues, some strengths and weaknesses can already be identified. Among the strengths, both cross-subsidies and tax allocations are seen as potentially effective innovations. Among the weaknesses, highly deficient health provision in deprived areas is recognized as an impediment to progress. In between, the combination of relatively low and differential individual contributions with a wide benefit package (first-line and referral care, but no antiretrovirals) is seen as attractive by some but as barely sustainable by others.

Community Health Insurance in East and Central Africa

In East Africa, CHI has recently been enjoying increased attention. In this part of Africa, both health-care providers and governments tend to play a prominent role in the launch and management of CHI schemes.

In Uganda for example, roughly a dozen CHI schemes are in existence. These were created in the late 1990s with the help of British bilateral aid. Nonprofit church-affiliated hospitals manage the majority of these schemes. Only recently, the community-based model – of the type that is common in West Africa – was introduced with support from the Centre International de Développement et de Recherche (CIDR), a French NGO with long-standing experience in West Africa. The importance of CHI is on the wane in Uganda, at least in the public sector where user fees were abolished in 2001. However, it is still a significant force in the private-nonprofit sector, which makes up half of all district hospitals in rural Uganda.

In Kenya, CHI was introduced in 1999–2000 as a result of the first Community Based Health Financing (CBHF) conference held in Uganda in 1998. These pioneering efforts were largely arranged by religious organizations. By 2005, Kenya boasted 32 schemes in various stages of development.

In Tanzania, user fees have progressively replaced financing from general taxation since 1993. As a result, a diversity of insurance configurations has emerged. The compulsory National Health Insurance Scheme (NHIS), which is restricted to civil servants and their families, covers only 3% of the population. A similarly compulsory National Social Security Fund (NSSF) was established for the remaining parts of the formal employment sector. Voluntary health insurance initiatives address the vast informal sector. Since 2002, these initiatives have received technical support from the Tanzania Network of Community Health Funds (TNCHF). There are approximately a dozen provider-driven CHI schemes, most of them based on church-related facilities, together with a few community-based schemes. Alongside these CHI schemes run district-based community health funds (CHF). While the 2001 CHF act made the creation of a community health fund obligatory for every district within a 2-year span, only 67 out of 129 districts had achieved a CHF by the end of 2005. Where a CHF scheme is in place, enrollment rises to approximately 10%. As in other CHI schemes, because of obvious problems in ability to pay, the poorest sectors of the community almost never join. In order to address this problem, the German Technical Cooperation is assisting in the development of a hybrid CHI and social assistance program. In this project, called CHFplus, district councils guarantee to meet the cost of insurance premiums for the very poor, following their identification by the local communities. This innovative concept could be of interest to policy makers and scheme organizers in Tanzania and elsewhere.

In Central Africa, the pioneering Bwamanda scheme in the Democratic Republic of Congo survived political instability, economic decline, and war. Subscription declined during wartime, but began to increase again beginning in 2003. Most impressively, the scheme reported a total of 114 465 members in 2004. A recent survey of 28 Congolese schemes highlighted evidence of a countrywide renewal in CHI activities since 2000, and to a great variety of CHI models (Atim and Criel, 2004).

In Rwanda, the government launched a health center-based CHI program in 1999 as part of the national reconstruction effort, following the 1994 genocide. With the assistance of USAID, 54 *Mutuelles* were implemented in three pilot districts, during 2000 and 2001. By 2005, 19 out of a total of 39 districts had a CHI scheme and a detailed legal framework was established. This determined state-driven approach yielded exceptional enrollment levels (up to 2.5 million people), but also contains inherent weaknesses: Cost-recovery rates are low, the benefit package at the referral level is limited, and peripheral management capacity and performance is frail. Moreover, the pushed-through CHI boom hardly takes account of preceding nongovernmental initiatives, such as prepayment arrangements organized by a number of nonprofit providers. Still, the current Rwandan approach includes promising novel features, such as the prepayment of premiums using microcredits at the community level.

Community Health Insurance in Asia

CHI in Asia began as part of a political process in the middle of the twentieth century. In China, the first medical cooperatives saw the light of day in a few communist-controlled rural areas as far back as the 1940s. This modest initiative eventually led to the nationwide implementation of the Rural Cooperative Medical System (RCMS) in the 1960s, which by the 1970s covered 90% of China's rural population. However, the RCMS collapsed following the market-oriented reforms of the

Author's personal copy

early 1980s and by 2006 had not really recovered. In the Indian subcontinent, the Students Health Home was the first CHI scheme to be recorded, set up by the communist movement in West Bengal back in 1952. It was not until the late 1990s, however, that a crossover between the microfinance movement (which originated mainly as microcredit, but now encompasses a variety of products including microcredit, microsavings, and microinsurance) and CHI initiatives led to a spurt of CHI schemes in both Bangladesh and India. Except for China and the Indian subcontinent, CHI in Asia – as in Africa – is a relatively recent introduction.

Community Health Insurance in China

The early Medical Cooperatives in the Shanxi, Gansu, and Ningxia provinces were established as a mechanism to help defray the cost of medical treatment and drugs. Initially set up as mutual prepayment funds, they subsisted on the peasants' voluntary contributions in the form of both cash and in-kind payments, as well as initial drug stocks provided by the ruling communist local governments. These initiatives proliferated and gained financial strength during the 1950s, when the communist state organized the agricultural workers into farmer cooperatives and consequently were able to introduce welfare funds at the community level. As an integral part of the collective system for agricultural production and social services, the Rural Cooperative Medical System became a nationwide structure of prepayment schemes for health-care financing during the 1960s. Most villages funded their Cooperative Medical Scheme from three separate sources: Household health insurance premiums, the collective welfare fund, and state subsidies. Depending on the plan's benefit structure and the village's economic status, the household premium was usually fixed at between 0.5% and 2% of a peasant family's annual income. The welfare fund was a state-defined portion of the village's collective income from agricultural production. Subsidies from upper-level tiers of governments were typically earmarked to compensate health workers and purchase medical equipment. In 1965, the state explicitly encouraged the entire rural sector to adopt the Cooperative Medical Scheme as the mode of financing and organizing health-care services. The resulting community financing and organization model is believed by many to have contributed significantly to the achievements of the Chinese primary care of that era. Between 1949 and 1973, the infant mortality rate was reduced from about 200 per 1000 to 47 per 1000 live births and life expectancy increased from 35 to roughly 65 years. From the late 1960s until 1979, when the process of collectivization began to be reversed, the RCMS covered 90% of China's rural residents.

Due to market-oriented reforms, both the communal administrative structure that employed the health workers and the collective welfare funds (that once counted for 30–90% of the schemes' funding) disappeared. By 1984, population coverage had dropped to less than 5%. Between 1981 and 1993, the contribution made by the RCMS to national health expenditure fell from 20% to 2%. Despite several government-driven attempts to re-establish the RCMS in the second half of the 1990s, by the end of the century 90% of China's rural residents were uninsured (Carrin *et al.*, 1999). Still, the Rural Cooperative Medical System never disappeared entirely from the political agenda. In 2002, the Asian Development Bank made an appeal for its reinstatement, at least in central China's middle-income regions, a plea contingent on renewed and committed government support (Liu *et al.*, 2002). In 2003, China created a new RCMS, based on voluntary participation, co-funded by the local and central government, and managed on county level. Still expanding, the new RCMS covered 641 out of some 2000 counties by mid-2005 and is projected to cover the whole of rural China by 2008.

Community Health Insurance in the Indian Subcontinent

CHI in the Indian subcontinent emerged (though rarely as a stand-alone phenomenon) as an effort to improve access to health care and to protect households from catastrophic medical expenditure. Of the 49 Indian, Nepalese, and Bangladeshi health-related schemes listed in the International Labour Organization inventories (ILO 2003a, 2003b, 2005), all but three piggybacked onto existing organizations drawn from a spectrum that ranged from health-care providers to microfinance institutions, but consisted mainly of broad-spectrum development organizations. Typically, the resulting schemes took the form of NGOs and were able to build on a foundation of trust and financial capability. Most schemes are of relatively recent origin. Out of the 49 schemes mentioned, 30 were started after 1995 and so coincided with the shift of interest by the microfinance sector from microcredits to microinsurance.

The fact that most CHI schemes are NGO-owned still leaves room for organizational diversity. Where the NGO is also the health-care provider – as is more frequently the case in Nepal and Bangladesh than in India – the provider usually runs the scheme. Where the NGO has no health-care functions, it may act as an insurer for the community and purchase care from independent providers. In a third option, which became increasingly popular in India, the NGO purchases insurance – not care – from a formal insurance company. In this so-called partner-agent or linked model, augmented pooling can lead to wider risk sharing (Devadasan *et al.*, 2005). This gain may be

Author's personal copy

overshadowed by several drawbacks: Where the premium and the benefit package is based on actuarial calculations, the premium may be prohibitive or the benefit package too limited. The resulting insurance product cannot be tailored to meet local conditions, while the patient still has to pay up front and reimbursement is often cumbersome. However, this model is still evolving: NGOs are improving their negotiating capacity and insurance companies are continuously adapting their products.

Across the whole Indian subcontinent, CHI focuses on the poorer sections of society: Small farmers, landless laborers, women's groups, self-employed vendors, in fact all communities within the informal sector. Enrollment ranges from a few thousand to several hundred thousand. Most of the Nepalese and Bangladeshi schemes focus on first-line health care, whereas in India the main benefit on offer is reimbursement of hospital costs. In all three countries – and particularly in Nepal and Bangladesh – there are considerable co-payments required. In most schemes, the providers operate either in the private not-for-profit or the private-for-profit sector, seldom in the public sector. Fee-for-service payment is ubiquitous and so is overprescribing. In this scenario, the need for provider regulation is obvious if cost escalation is to be kept under control. Though most of the operating NGOs lack technical expertise and a health-systems perspective, many of them have evolved mechanisms to manage risks (see **Table 3**). The lack of technical expertise led to the inception of microinsurance training centers in India – six by 2006 – encouraged by donors and the insurance industry.

Community Health Insurance in Indonesia, the Philippines, and Cambodia

CHI in Indonesia is mainly of historical interest. From the 1970s onward, the Indonesian government promoted the Dana Sehat (Health Fund) community schemes as an alternative form of health-care financing (Thabrany *et al.*, 2003). The main motive for this top-down approach was to compensate on a nationwide scale for decreased access to care in low-income groups due to increased user fees. Despite renewed efforts to promote CHI, by 1998 only 1.9% of the Indonesian households were members of health funds. The lack of success associated with the Dana Sehat approach can be seen as a quintessential example of inappropriate scaling up, targeting, and implementation. Indeed, the concept was based on the embryonic experience of small NGO schemes during the late 1960s. The targeting of poor households in order to raise health-care finance proved misguided against a background where 80% of the household income is spent on food. Limited fund collection led to limited benefit packages, which in turn discouraged individuals from participation. Dropout rates from the first to the second year ranged from 60% to 90%. The Dana Sehat approach has now been almost completely replaced by a social assistance scheme (SSN), which enables the authenticated poor to access some basic and reproductive health services through a health benefits card.

CHI in the Philippines began life as an effort to improve access to health care among the poor. Many schemes are offshoots of community-based health programs initiated in the 1980s; most of them are cooperative-driven and are plagued by low enrollment (Yap, 2003). In addition, several local government-prompted schemes were set up in the 1990s. At the same time, CHI schemes (alongside health maintenance organizations) were activated by NGOs with external assistance. The Social Health Insurance Networking and Empowerment project (SHINE) anticipated an ongoing attempt to link and to frame these disparate efforts within the central Philippine health insurance corporation (PhilHealth), installed by law in 1995 and whose mission is to ensure universal coverage by 2010.

In contrast, CHI in Cambodia is still at the embryonic stage: The SKY scheme (Khmer acronym for health for our families) was only started in 1998. SKY was introduced by the French NGO GRET (Groupe de Recherche et d'Échanges Technologiques), based on an impact study among clients of a large microfinance program run by the same organization since 1991 (McCord, 2001). Initially offering only a limited-benefit package, the scheme had to

Table 3 Risk management in Indian CHI schemes

Risk	*Methods used to mitigate risk*	*Methods not used to mitigate risk*
Adverse selection	Definite collection period Definite waiting period Exclusion of pre-existing diseases	Household as enrolment unit Mandatory nature
Patient-induced moral hazard[a]	Co-payments Upper limits	Referral system
Provider-induced moral hazard	Fixed salary for providers	Case-based instead of fee-for-service billing
Fraud	Community checks ID cards for the insured	

Author's personal copy

overcome high dropout rates and was redesigned several times. In its current form, it offers both insurance for first-line care and hospital care after referral, and uses a vast array of risk-management strategies (see **Table 4**).

Membership has increased significantly since 2004, approaching 8% of its target population. Being the sole example within Cambodia and with still modest coverage, SKY is widely considered by CHI planners to be a case of special interest. Indeed, the scheme exhibits some features that, nowadays, are viewed as promising options in the field of CHI: It has achieved external financing for its administrative costs and has begun to link its activities with existing targeted social assistance programs (the so-called health equity funds). While administrative cost subsidies are believed to deserve the consideration of international policy makers, it is the latter linkage of health care and social assistance programs that ensures that care reaches those too poor to insure and to that the efficiency of the targeted funds is increased.

Community Health Insurance in Latin America

CHI in Latin America is a marginal phenomenon, especially when compared to the venerable record of social health insurance and the recent expansion of commercial health insurance on the continent, despite the presence of mutual aid societies, which have existed since the nineteenth century. In the context of a highly inegalitarian society, segmented social protection systems and elitist private premiums, exclusion is common practice, also in health. It is the preoccupation with the excluded that gave rise to new CHI initiatives, without, however, really taking off.

Within a small number of case studies analyzed by the International Labour Organization, all such initiatives led to improved access to health care among their target populations, but only a minority were judged to be financially sustainable in the absence of external funding. Even so, most still exist and new schemes are being established. In the light of a growing regional commitment to universal social protection (ECLAC, 2006), it is pertinent to question if and how the scattered Latin American CHI efforts can contribute to this broader development goal.

Roundup of Current and Future Challenges

The growing interest in CHI should not divert the attention from the shortcomings and obstacles that have been reported by many observers. These include a lack of trust among potential members, limited operational capacity – certainly when managed on a voluntary basis – and the weak purchasing power of most schemes (Carrin *et al.*, 2005). Above all, the perceived poor quality of the health care on offer deters people from investing scarce household resources in health insurance (Waelkens and Criel, 2004). Paradoxically, this key obstacle to enrollment is precisely one of the providers' deficiencies that CHI could in some degree counteract.

The advantages and disadvantages of CHI have been the subject of comments by observers representing a range of perspectives: The possible contributions of CHI to equitable health-care access, to health sector financing, to provider responsiveness, and to quality of care. Additionally, CHI can be regarded as a conduit for other developmental objectives aside from health. The increased social control and transparency observed in the presence of a well-implemented CHI scheme may boost sustainable development and democratization at community level. Eventually, CHI may contribute to poverty reduction (Waelkens *et al.*, 2005). These are challenging issues indeed; the bottom line, however, is that our current knowledge remains insufficient to draw definite conclusions. While there is little doubt by now that a CHI scheme can improve access to health care for its members, the evidence on the broader impact of CHI in developing countries is still scanty. For the time being, research into CHI tends to concentrate on the technical and

Table 4 Risk management in the Cambodian SKY scheme

Risk	*Methods used to mitigate risk*	*Methods not used to mitigate risk*
Adverse selection	Definite collection period	Mandatory nature
	Definite waiting period	
	Exclusion of membership outside definite groups	
	Exclusion of preexisting diseases	
Patient-induced moral hazard	Co-payments	
	Upper limits	
	Referral system	
Provider-induced moral hazard	Preselection of first-line providers	
	External assessment of first-line providers	
	Capitation payment for hospital care	
	Internal assessment of hospital care	
Fraud	ID passbooks, including the insured's medical history	

Author's personal copy

managerial aspects. A more comprehensive evaluation of CHI schemes spanning the full breadth of their sociopolitical, cultural, and economical contexts is needed to assess the performance and potential of CHI.

Equally, guidelines for the implementation of CHI focus on the technical and managerial aspects are needed. Yet, introducing CHI generates complex dynamics: It changes the relationship between patients and health-care providers, influences the roles of the actors within the health system and the interactions between them, and may introduce new actors hitherto excluded from the decision-making process. Clearly, CHI staff need more than just technical and managerial training and support.

The time has come for research on CHI and implementation of CHI schemes to go hand in hand. Performance of CHI can only benefit from better information, which, in turn, will only be generated by action-oriented research taking into account the broader picture. Essential investigation into the contextual factors that determine the successful development of CHI still has its place. Beyond this, a series of questions remains unanswered:

- How can a better-organized demand side, in effect an insurance scheme, contribute to better quality of care?
- Which mix of interventions, on both the demand and supply sides of the health-care equation, can bring about improvements to the quality of health services?
- What are the broader social and political consequences of CHI?
- How can CHI be scaled up and integrated in a nation-wide social protection system for health?
- How can CHI be linked to social assistance for the very poor?
- How can subsidies – whatever their source, be they domestically or externally funded – enhance the development and performance of CHI without damaging the internal dynamics?

CHI is too complex a subject for cavalier treatment. Hence the need to approach the issue from a medium-term perspective, resisting the temptation for quick gains. At best, CHI is one step on the road to sustainable universal coverage, and this needs time to develop properly.

See also: Comparative Health Systems; Ethics of Health Promotion; Health Inequalities; Resource Allocation: International Perspectives on Resource Allocation; South Asia, Health Systems of; Universal Coverage in Developing Countries, Transition to.

Citations

Atim C and Criel B (2004) Faisabilité de la mise en œuvre de mutuelles de santé en République Démocratique du Congo. *Mission report*. Kinshasa Democratic Republic of the Congo: Ministry of Public Health/Belgian Technical Cooperation; Antwerp, Belgium: Institute of Tropical Medicine.

Bennet S, Creese A, and Monasch R (1998) *WHO/ARA/CC/98.1 ARA Paper Number 15: Health Insurance Schemes for People Outside Formal Sector Employment.* Geneva, Switzerland: World Health Organization Division of Analysis Research and Assessment.

Carrin G, Ron A, Hui Y, *et al.* (1999) The reform of the rural cooperative medical system in the People's Republic of China: Interim experience in 14 pilot counties. *Social Science and Medicine* 48(7): 961–972.

Carrin G, Waelkens M-P, and Criel B (2005) Community-based health insurance in developing countries: A study of its contribution to the performance of health financing systems. *Tropical Medicine and International Health* 10(8): 799–811.

Criel B (1998) *Studies in Health Services Organisation and Policy, 9: District-Based Health Insurance in Sub-Saharan Africa; Part 1: From Theory to Practice.* Antwerp, Belgium: ITG Press.

Criel B and Van Dormael M (1999) Mutual health organizations in Africa and social health insurance systems: Will European history repeat itself? *Tropical Medicine and International Health* 4(3): 155–159.

Devadasan N, Ranson K, Van Damme W, Acharya A, and Criel B (2005) The landscape of community health insurance in India: An overview based on 10 case studies. *Health Policy* 78: 224–234.

Economic Commission for Latin America and the Caribbean (2006) Shaping the future of social protection: Access, financing and solidarity. *Proceedings of the 31st session of ECLAC, March 20–24, 2006*, Montevideo, Uruguay: ECLAC.

International Labour Organization (2003a) *An Inventory of Micro-insurance Schemes in Nepal.* Kathmandu, Nepal: International Labour Office in Nepal.

International Labour Organization (2003b) *Micro-Insurers: Inventory of Micro-insurance Schemes in Bangladesh.* Geneva, Switzerland: International Labour Office Strategies and Tools Against Social Exclusion and Poverty Programme (STEP).

International Labour Organization (2005) *India: An Inventory of Micro-insurance Schemes.* Geneva, Switzerland: International Labour Office Strategies and Tools against social Exclusion and Poverty Programme (STEP).

Kutzin J (1998) Enhancing the insurance function of health systems: A proposed conceptual framework. In: Nitayarumphong S and Mills A (eds.) *Achieving Universal Coverage of Health Care*, pp. 27–101. Nontaburi, Thailand: Ministry of Public Health Office of Health Care Reform.

Liu Y, Rao K, and Hu S (2002) *People's Republic of China: Toward Establishing a Rural Health Protection System.* Manila, Philippines: Asian Development Bank.

McCord MJ (2001) *Microinsurance: A Case Study of an Example of the Provider Model of Microinsurance Provision / GRET Cambodia.* Nairobi, Kenya: MicroSave-Africa.

Ndiaye P, Soors W, and Criel B (2007) A view from beneath: Community health insurance in Africa. *Tropical Medicine and International Health* 12(2): 157–161.

Segall M, Tipping G, Lucas H, *et al.* (2000) *IDS Research Report 43: Health Care Seeking by the Poor in Transitional Economies: The Case of Vietnam.* Sussex, UK: Institute of Development Studies.

Thabrany H, Gani A, Pujianto Mayanda L, Mahlil, and Budi BS (2003) *Social Health Insurance in Indonesia: Current Status and the Plan for National Health Insurance.* Presented at the Regional Expert Group Meeting on Social Health Insurance WHO/SEARO, New Delhi India March 13–15, 2003. New Delhi, India: WHO/SEARO.

Waelkens M-P and Criel B (2004) *Health Nutrition and Population (HNP) Discussion Paper: Les mutuelles de santé en Afrique sub-Saharienne: état des lieux et réflexions sur un agenda de recherché.* Washington DC: The World Bank.

Waelkens M-P and Criel B (eds.) (2007) *La mise en réseau de mutuelles de santé en Afrique de l'Ouest. L'union fait-elle la force? Enseignements d'un colloque international organisé à Nouakchott Mauritanie, 19 et 20 décembre 2004.* Antwerp, Belgium: ITG Press.

Waelkens M-P, Soors W, and Criel B (2005) *Extension of Social Security (ESS) Paper n°22: The Role of Social Health Protection in Reducing Poverty: The Case of Africa.* Geneva, Switzerland: International Labour Office Strategies and Tools against social Exclusion and Poverty (STEP).

Author's personal copy

Yap MEC (2003) *An Overview of Community Health Insurance Initiatives in the Philippines. Presented at the Third Health Sector Development Technical Advisory Group Meeting WHO/WPRO, Manila, the Philippines February 17–19, 2003.* Manila, the Philippines: WHO/WPRO.

Moens F (1990) Design, implementations, and evaluation of a community financing scheme for hospital care in developing countries: A pre-paid health plan in the Bwamanda health zone, Zaire. *Social Science and Medicine* 30(12): 1319–1327.

Further Reading

Carrin G (2003) *Department Health System Financing Expenditure and Resource Allocation (FER), Cluster Evidence and Information for Policy (EIP), Discussion Paper n°1: Community-Based Health Insurance Schemes in Developing Countries: Facts, Problems and Perspectives.* Geneva, Switzerland: World Health Organization.

Dror DM and Preker AS (2002) *Social Reinsurance: A New Approach to Sustainable Community Health Financing.* Geneva, Switzerland: International Labour Office.

International Labour Organization, Pan American Health Organization (1999) Synthesis of case studies of micro-insurance and other forms of extending social protection in health in Latin America and the Caribbean. *Regional Tripartite Meeting with the Collaboration of PAHO on the Extension of Social Protection in Health to Excluded Groups in Latin America and the Caribbean Mexico DF, Mexico November 29 – December 1, 1999, working document n°5.* Geneva, Switzerland: International Labour Office.

Relevant Websites

http://www.ilo.org/public/english/protection/socsec/step/ – International Labour Organization, Strategies and Tools Against Social Exclusion and Poverty (STEP) Programme.

http://www.concertation.org/ – La concertation entre les acteurs du développement des mutuelles de santé en Afrique.

http://www.microinsurancecenter.org/ – microinsurance Center, independent institution promoting the partner-agent model.

http://www.phrplus.org/ – Partners for Health Reform plus, US Agency for International Development's project for health policy and systems strengthening and its successor http://www.healthsystems2020.org/.

http://www.masmut.be/masmut/website/ – Plateforme belge Micro Assurance Santé / Mutuelles de Santé (Belgian platform Community Health Insurance / Mutual Health Organisations).

http://www.who.int/health_financing/en/ – World Health Organization, Health financing policy.

Community-Based Nutrition Programs

K Tontisirin, Institute of Nutrition, Mahidol University, Salaya, Nakhon Pathom, Thailand
L Bhattacharjee, National Food Policy Capacity Strengthening Programme, Food and Agriculture Organization of the United Nations, Bangladesh

© 2008 Elsevier Inc. All rights reserved.

What Is Community-Based Nutrition Programming?

Community-based nutrition programming is the process of building capacities and empowering people at the grassroots toward creating a demand for their own nutrition improvement. This involves establishing in them a strong sense of ownership for the developmental programs, which in essence become community investments for promoting their own nutrition, health, and development.

Role and Scope

Problems of food security and nutrition that prevail in developing countries can usually be traced to three major factors, namely, (1) poverty, meaning low income levels and poor purchasing power among large sections of the community, as a result of which they have poor access to food and other basic necessities of life, (2) lack of basic knowledge and illiteracy, especially female illiteracy, which prevents households and communities from appropriately utilizing available food and related resources and improving their nutritional status, and (3) poor quality and poor outreach of basic health, nutrition, and related services, if available in a country.

As its ultimate goal in addressing problems of food security and undernutrition, CBNPs ensure that the community is led to a process of capacity building and empowerment, so that it becomes as self-reliant as possible. Community members are expected to work out strategies to resolve their food and nutrition problems by developing solutions that to the largest extent possible lie within their own community contexts, and that are equitable and sustainable.

Such an approach emphasizes maximization of community participation and makes for efficient use of services available. Where nutrition programs are provided through the government infrastructure, the community-based approach can be linked to basic service delivery structures.

Process and System of Community-Based Programs

First and foremost, community-based nutrition programs need to be jointly developed and implemented by a team