Review Article

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Community-based health insurance schemes in India: A review:

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ABSTRACT

There is an increasing inclination among multinational agencies—including the World Bank, World Health Organization and International Labour Organization—to advocate community-based health insurance (CBHI) schemes as part of a comprehensive solution to improving access for healthcare services in India. This paper reviews the experience of Indian CBHI schemes, their impact on health system goals, such as access to hospitalization and protection from indebtedness, and the factors—particularly scheme design and management—that may contribute to success.

The CBHI schemes in India are extremely diverse in terms of their designs, sizes and target populations. While some of the schemes are run by non-governmental organization (NGO) providers, there is an increasing trend towards collaboration with the Government Insurance Company (GIC). In its partnership with NGOs, the GIC seems to have provided favourable group plans compared to the individual Mediclaim and Jan Arogya policies. We have little information on the impact of existing CBHI schemes—most importantly, in terms of access and protection from indebtedness—and even less on factors that make for a successful scheme.

This review suggests that there is a demand for health insurance services among the poor. To date, there is little evidence to suggest that these schemes can include the poorest of the poor or improve access to inpatient care. Furthermore, the schemes have done little to address the issue of low/variable quality of healthcare services. Empirically derived data on the existing schemes in India are extremely limited, making this fertile ground for future research.

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INTRODUCTION

In India, there are two predominant pathways of healthcare financing. The bulk of the resources (roughly 85%) flow from individuals and households directly to healthcare providers—predominantly private—in the form of out-of-pocket payments.1 Public resources, the second most important source of healthcare financing (central, state and local governments contribute 13%), are typically used for the provision of healthcare through the multi-tiered system of public providers.

Healthcare costs, and those for inpatient care in particular, pose a barrier to seeking healthcare, and can be a major cause of indebtedness and impoverishment, particularly among the poor. An individual with a low income may be unable to afford preventive care, or curative care in the event of illness, which may result in the worsening of his or her state of health. In India (only in part due to the costs of healthcare), rates of healthcare utilization, both ambulatory and inpatient, are far higher among the wealthy than the poor, and the poor use care of lesser quality. On an average, the poorest quintile of Indians is 2.6 times more likely than the richest to forego medical treatment when ill.2 Aside from cases where people believed that their illness was not serious (which comprised more than half of all cases), the main reason for not seeking care was cost, particularly for the poor. The richest quintile of the population is 6 times more likely than the poorest quintile to have been hospitalized in either the public or private sector. Among those who do opt to seek healthcare, the costs can be catastrophic. According to an analysis by Peters et al.,2 at least 24% of all people hospitalized in India in a single year slipped below the poverty line because they were hospitalized. In theory, government provision of healthcare should cover the poor, but in practice it often does not. Thus, there is a need to find ways of protecting the poor from the costs of medical care.

Private-for-profit health insurance, only recently allowed in India under the Insurance Regulatory Development Authority (IRDA) Act of 1999, is largely unavailable. The Government of India's social insurance schemes (Central Government Health Scheme and Employees' State Insurance Scheme) and voluntary insurance schemes (Mediclaim provided through four Government Insurance Company subsidiaries) are geared towards workers in the organized sector, who comprise not more than 10% of all workers.3 Together, these schemes cover approximately 42 million people. The only government initiative to cover the informal sector is in Goa (1991 population of only 1.17 million), where the state government

has purchased insurance through the Government Insurance Company (GIC) to cover the hospitalization needs of all permanent residents with an annual income of less than Rs 50 000.4 No more than 3.3% of the total healthcare expenditure flows through the various governmental health insurance schemes.5 Expansion of government schemes outside the formal sector is unlikely, both due to logistical difficulties in organizing premium collection and targeting subsidies,6 and because insurers view the poor as bad risks and an unreliable source of premium payments.

Community-based health insurance (CBHI) is a mechanism that allows for pooling of resources to cover the costs of future, unpredictable, health-related events. It offers individuals and households protection against the uncertain risk of catastrophic medical expenses in exchange for regular payment of premiums. What distinguishes these 'community-based' schemes from public or private-for-profit insurance is that the targeted community is involved in defining the contribution level and collecting mechanisms, the content of the benefit package, and/or allocating the scheme's financial resources.7

Prepayment (even in the absence of pooling) can facilitate access to expensive medical care because it spreads the expenditures over time and prevents people from having to pay out-of-pocket at the time of seeking treatment. Pooling of resources allows for risk sharing and cross-subsidization, which can have positive impacts on equity, access and financial protection. Risk sharing occurs when the insurance premium is unrelated (or not completely related) to the likelihood that the insured will fall ill, and benefits are provided on the basis of need; hence, payments go to the sickest people. Because people with lower income and less education tend to have poorer health, they stand to gain more from insurance claims.8 Cross-subsidization occurs when premiums are indexed to income and access to healthcare is as good (or better) among the poor as the wealthy. In such a scenario, the wealthy subsidize the healthcare costs of the poor.

There is an increasing inclination among multinational donor agencies to advocate CBHI schemes as part of a comprehensive solution to improving access for healthcare services in low-income countries. The report of the WHO Commission on Macroeconomics and Health is a good example of this:

' The Commission recommends that out-of-pocket expenditures by poor communities should increasingly be channelled into "community financing" schemes to help cover the costs of community-based health delivery…. Community-financing schemes are no panacea, and have often failed, but for many places they seem a promising and flexible mechanism that can often be harnessed to local needs.'9

As alluded to in this passage, many questions remain pertaining to the ability of CBHI to have an impact on the goals of the health systems. Will provision of health insurance to the poor—and thus removal of some component of the financial barrier to seeking healthcare—result in increased healthcare utilization among the poor? Or will other barriers such as distance, lack of information/education, and lack of time to seek care, prove to be more important? Can these schemes expand to cover sufficiently large and diverse populations so as to effectively pool risks? Are the technical and financial resources necessary to run such a scheme available to communities? Can schemes that target the poor be financially viable over the long term?

In the late 1980s, Dave and Berman studied some of the CBHI schemes in India10–12 as part of a broader effort by the Ford Foundation to document 'innovative efforts at self-financing'. Their review did not include all the schemes in existence at the time, and recent years have seen the development of several new CBHI schemes (and the demise of some old ones), with others being planned for implementation. A review is once again necessary to ensure that the lessons learned from these efforts reach 'policy-makers, program managers, academics, social activists and the interested public'.10 In particular, there is a heavy demand for practical advice as to whether/how a non-governmental organization (NGO) should go about implementing a CBHI scheme.

This paper updates the work by Dave and Berman, and addresses the many remaining questions about CBHI based on the experience of schemes in India. The first section of the paper describes the design and management of the schemes. The second section discusses the extent to which these schemes achieved success, based on goals such as access and financial protection. The third section identifies and discusses factors that may have contributed to the success or failure of these CBHI schemes. The fourth section summarizes the lessons learned from the review, and discusses the potential of CBHI schemes to impact on access to healthcare, and financial protection from healthcare costs in India.

Data were collected by review of both the published and unpublished literature, and visits were made to several of the schemes. (The author spent more than a year at the Self-Employed Women's Association

[SEWA] and Tribhuvandas Foundation [TF], as part of his PhD research.) Some schemes, elsewhere described as CBHI, are excluded from discussion in this paper. Most notably, schemes are excluded if resources are pooled to cover the costs of outpatient care or drugs only. The events covered by such schemes are very likely to occur at least once within the policy period and are likely to involve small expenditures, in absolute terms. (Expenditures on drugs and outpatient care may actually be quite high, relative to the household income of poor Indian households and, as such, constitute a barrier to seeking healthcare and/or a source of indebtedness.) Health economists argue that the pooling of resources to cover such costs is inefficient, as personal savings (where feasible) can provide the same degree of protection, without the administrative costs incurred in insurance. Otherwise, all CBHI schemes encountered in the published or grey literature are included in this review; whether they are currently functioning or have been discontinued.

SCHEME DESIGN AND MANAGEMENT

India is known for its diversity of culture, language, socioeconomic class, climate and terrain. It may not be surprising then that India's experience with insurance schemes for the informal sector has been tremendously rich and varied. This paper documents 13 CBHI schemes encountered in the review of the literature (Tables I and II).

The Indian CBHI schemes varied tremendously in terms of their age, the oldest starting in 1955 (Students' Health Home [SHH]) and the youngest within the past few years (Kadamalai Kalanjia Vattara Sangam [KKVS] and Working Women's Forum [WWF]).

Table I. Inventory of non-governmental, non-profit health insurers (schemes covering inpatient care only) in India

Name, location, year of initiation, nature of scheme and ownership/management	Target population, type of membership, size of enrolled population	Premium	Benefits	Exclusions	References
ACCORD Nilgiris, Tamil Nadu Established 1991NGO-intermediated (with GIC as insurer)	Adivasis 6 months–70 years of age Voluntary Individual 4446 out of 13000	Rs 20 per person per year (scheme subsidizes an additional Rs 2.50)	All hospitalizations to a maximum of Rs 1500 Covers care at one trust hospital (or others if referral required)	Only two admissions for delivery covered per woman	13, p. 3(4); 14 Personal communication, May 2002
KKVS Madurai, Tamil Nadu Established 2000 NGO-owned	Women members of self-help groups (SHG) and their families, age 12 months–55 years. Excludes those with a history of chronic disease Voluntary Family or individual 5710 out of a general population of	Rs 150 if the coverage isfor a family including the SHG member and at least one other beneficiary and Rs 100 if coverage is only for the member	Reimbursement of 75% of hospital expenses up to Rs 10 000 per family per year Except in an emergency, benefit only fortreatment at Kadamalaikkundu Hospital	Must be an inpatient for at least 48 hours No coverage of pre- existing disease nor normal delivery	15

	69 278				
Navsarjan Trust Patan, Gujarat Established 1999, discontinued 2000 NGO-intermediated (with GIC as insurer)	Dalits (scheduled caste), 5–80 years of age Voluntary Individual 574 individuals	Rs 159 per individual (payment of which was partly subsidized by an external donor)	Hospitalizations to a maximum of Rs 15 000	Normal delivery, pre-xisting disease, >1 hositalization for newly developed chronic disease, HIV/AIDS and its complications, diseases resulting from drug/alcohol use	
Seba Calcutta, West Bengal Established 1982NGO-intermediated (with GIC as insurer)	Information on characteristics of target population: na Voluntary Family <3000 families (?1993 data)	Rs 105 per member per annum	Hospitalization expenses up to Rs 8000	na	16; 17, p. 266
SEWA Ahmedabad, Gujarat Established 1992 NGO-intermediated (with GIC as insurer)	Self-employed women and their spouses (ages 19–58 years) Voluntary Individual 92 000 of 285 000 in target population (2001–02)	Individual coverage Rs 20 per annum. Also membership can be paid by fixed deposit	Inpatient costs (private or public hospital) to Rs 2000Fixed deposit members receive one-time flat payment for maternity care, dentures and hearing aid	Normal delivery, preexisting disease, >1 hospitalization for newly developed chronic disease, HIV/AIDS and its complications, diseases resulting from drug/alcohol use	18; 19; 11, pp. 307–16; 20; 13, pp. 3(4)–3(5); 21–24
TF-old Anand, Gujarat Established 1993–94, discontinued 1999 NGO-owned	Residents of one rural district Voluntary Household 16%–20% of the target population of 800 000	Rs 10 per household per year	Discounts on inpatient care (inversely proportionate to their wealth) at a single trust hospital in thedistrict	People deemed sufficiently wealthy (asadjudged by doctor or social worker)were not provided with benefit	18; 11, pp. 307–16
TF-new (Sardar Patel Insurance Scheme) Anand, Gujarat Established	Members of dairy co-operative, depositing at	Nominal fee of Rs 1 per household per annum in	Covers 100% of direct costs of hospitalization at any of 8 trust	Costs of 'special'(v. standard) hospital rooms	Personal communication, July 2001

2001 NGO-owned	least 300 L/year Mandatory Household 113 883 households (size of target population: na)	addition to 3 paise per L of milk deposited (i.e.minimum Rs 9)	hospitals but DOES NOT cover medicines	Heart surgery, cancer, HIV/AIDS, major orthopaedic surgeries, kidney transplants	
WWF Chennai, Tamil Nadu Established 2001–02 NGO-intermediated (with Royal Sundaram as insurer)	Women members of WWF and their families Voluntary Individual Data not available on enrolled population	Children Rs 65 per year Adults <45 years, Rs 125 per year >45 years, Rs 175 per year	Inpatient expenses upto Rs 7000 per year (maximum Rs 5000 per claim) Limits maternity care Rs 3000 cataract Rs 2000 bed charges Rs 100 per day		25

na not available ACCORD Action for Community Organization, Rehabilitation and Development KKVS Kadamalai Kalanjia Vattara Sangam GIC Government Insurance Company SEWA Self-Employed Women's Association TF Tribhuvandas Foundation WWF Working Women's Forum

Table II. Inventory of non-governmental, non-profit health insurers (schemes covering outpatient and inpatient care) in India

Name, location, year of initiation, nature of scheme and ownership/management	Target population, typeof membership, size of enrolled population	Premium	Benefits	Exclusions	References
Mallur Milk Co-operative Karnataka Established 1973 Provider-owned scheme	7000 in 3 villages	Previously, mandatory enrolment of all members of Mallur Milk Co-operative (?1997 data). Now, premiums paid from endowment fund, for all community members	Preventive and curative care (entirely free of charge?)	na	26, pp. 49–56; 27, p. 306; 28
RAHA Jashpur, Chattisgarh Established 1974 NGO-owned	Information on characteristics of target population: na Voluntary Individual 75 000 enrollees (1993 data)	Can be paid in rice	Free outpatient care and, after paying an initial entrance fee, members receive free hospital care up to Rs 1000	na	11, pp. 307–16

Sewagram, Sorghum Health Scheme Wardha, Maharashtra Established 1978 Provider-owned scheme	For the residents of 40 villages; for a village to be included, at least 75% of households should be enrolled Voluntary Household 40 villages (data on population: na)	Rs 48 per landless household up to 5 people (or can be paid by 15 kg of jowar)Additional fees for landowning households	50% coverage of OPD visits and planned hospitalizations (including normal deliveries) 100% coverage for emergencies and unplanned hospitalizations Hospitalizations must be at a single teaching hospital	None mentioned	11, pp. 307–16; 16; 17, pp. 265–6; 29–31
SHH Calcutta, West Bengal Established 1955 Provider-owned scheme	University students only Voluntary Institutional or individual 1 020 000 students covered in 1993–94	Rs 4 per annum collected through the schools (?1998 data)	Free doctor consul-tations, drugs and hospital stays at nominal rates	na	32; 11, pp. 307–16; 13, pp. 3(2)–3(3)
VHS Medical Aid plan Chennai, Tamil Nadu Established 1963 Provider-owned scheme	Anyone may join Voluntary Individual 124 715 members (March 1995); but 74% enrolled for free due to their low income	Membership fee graded according to monthly income	Free annual health check-up; curative and diagnostic services for outpatient and inpatient services at discounted rates	na	33; 10; 34, pp. 54–5; 13, pp. 3(2); 28
na not available RAHA Raigarh Ambikapur Health Association SHH Students' Health Home VHS Voluntary Health Services					

Among the schemes, three main patterns of scheme ownership and management emerged. First, in many schemes the NGO running the insurance scheme is also the healthcare provider. Such provider-owned schemes account for most of the schemes reviewed (Fig. 1A). For example, the Voluntary Health Services (VHS, Chennai) runs a Medical Aid Plan under which households pay an annual premium (graded according to joint monthly income) directly to VHS and, in return, they are provided with a free annual health check-up, and discounted rates on outpatient and inpatient services. Second, there are several NGO-owned schemes where the NGO is the insurer, but does not provide healthcare itself (e.g. KKVS, Raigarh Ambikapur Health Association [RAHA] and TF; Fig. 1B). This is a simple 'third-party payer' arrangement. For example, the KKVS scheme in Tamil Nadu, runs alongside a women's 'Community Banking Programme', charges a premium of Rs 100 (per woman) to Rs 150 (for a woman and her husband and/or children). After paying for inpatient care at a single local hospital, the insured are eligible for reimbursement from KKVS up to 75% of the total hospital costs to a maximum reimbursement of Rs 10 000. Third, several of the schemes involve an NGO acting as an intermediary between the target population and one of the GIC subsidiaries (Action for Community Organization, Rehabilitations and Development [ACCORD], Seba and SEWA; Fig. 1C) or, in one case, between the target population and a new private-for-profit insurance scheme (WWF). SEWA is an example of an NGO-intermediated scheme. Under SEWA's most popular policy, a premium of Rs 85 is paid by the woman (for life, health and assets insurance) and an additional Rs 55 can be paid for insurance of her husband. Rs 20 per member is then paid to the National Insurance Company (NIC), which provides coverage to a maximum of Rs 2000 per

person per year for hospitalization.

All the NGOs that own and manage schemes provide services other than just insurance. For example, some of the NGOs are involved in various development-oriented activities, including education, micro-credit, micro-savings and work-generation (e.g. ACCORD, Navsarjan and SEWA). Others are cooperatives of people working in the same occupation, in most cases, the dairy sector (e.g. TF). (It is not surprising that dairy cooperatives have been particularly active in implementing health insurance schemes. India's 'white revolution', referring to the proliferation of dairy cooperatives in the decades after Independence, resulted in many innovative schemes aimed at protecting the welfare of dairy farmers, including cattle insurance and micro-finance schemes.) Other NGOs are primarily engaged in the provision of healthcare services, e.g. RAHA, Sewagram and VHS.

Membership in almost all the schemes is voluntary. In only a few schemes is enrolment at the level of individuals (e.g. individual students enrol in the SHH scheme). For both the KKVS and SEWA schemes (possibly WWF also), individuals enrol in the schemes, but husbands and children can only be enrolled if the adult woman is enrolled. This pattern of enrolment reflects the fact that both schemes are run by NGOs that focus their activities on women. Individual enrolment can expose a scheme to adverse selection, wherein the most risky individuals in a population—those most likely to fall ill, such as the elderly, smokers, or the chronically ill—are the most likely to join. One mechanism that can be employed to prevent adverse selection is the enrolment of groups rather than individuals. Most of the Indian schemes enrol 'households' or 'families'. There are only a few schemes where enrolment is of groups larger than the household, such as self-help groups (e.g. some of the savings/credit groups under the KKVS scheme), cooperatives (e.g. Mallur and TF-new), and educational institutions (SHH). In these cases, the premium is automatically paid from a fund established by the groups.

Three additional mechanisms that can be employed to prevent adverse selection are (i) the explicit exclusion (from membership) of those who are more likely to require the insured services; (ii) a waiting period between enrolment and eligibility for scheme benefits; and (iii) exclusion from coverage under the scheme of certain illnesses/diseases (typically 'chronic' or 'pre-existing conditions'). The 'pre-existing conditions' will be discussed below, along with the description of the benefits packages. Schemes associated with the GIC (the NGO-intermediated schemes) or those closely modelled after the GIC's policies (e.g. KKVS) seem to employ such mechanisms. For example, SEWA restricts its membership to individuals <58 years of age and the KKVS scheme to individuals <55 years of age. The KKVS scheme has implemented a strict waiting period of 15 days, and RAHA a waiting period of 2 months before service entitlements.

The premiums paid to the schemes are generally flat-rate ones paid on an annual or monthly basis. It is difficult to compare the price across schemes, given that the data are for different years. But for schemes that cover hospitalization only (the schemes for which our data tend to be most up-to-date) premiums range from a minimum of Rs 10 per household (TF, highly subsidized by the dairy cooperative) to Rs 125 (and more) per adult (WWF). As discussed by Dave,11 a few of the schemes have employed mechanisms to facilitate membership by poor or rural populations.

' Sewagram (has) membership fees related to ability to pay… Membership contributions are graded according to these categories…. At Sewagram, contributions may be made in sorghum, at RAHA in rice…' Add to these the VHS scheme, where the membership fee is charged on a sliding scale, according to the monthly household income.

Almost all the schemes collect membership fees/premiums during an annual membership drive. Very few schemes allow individuals/members to join the scheme round the year (the exceptions being SHH, TF-old and VHS).
Roughly half the schemes cover inpatient services only, and half cover both outpatient and inpatient services. Almost all the schemes that restrict their benefits to inpatient services are associated with the GIC or a private-for-profit insurer (e.g. ACCORD, Navsarjan, Seba, SEWA, WWF). Schemes that cover both outpatient and inpatient services are generally provider-owned schemes, where the NGO acts both as insurer and healthcare provider (e.g. Mallur, Sewagram, SHH).

Under two of the schemes—ACCORD (previously) and SEWA—health insurance is bundled with life and assets (house) insurance. Under the KKVS scheme, people can choose to enrol in the health insurance scheme, a life insurance scheme, or both.

Most of the GIC-associated schemes (and KKVS) exclude certain conditions from coverage (Table III). Most

commonly these are pre-existing conditions (i.e. diseases that are manifest at the time of enrolment in the scheme), chronic conditions (at least during the first year of coverage), treatment related to pregnancy/childbirth, and HIV/AIDS and its complications. Of the NGO-intermediated schemes, it is the WWF scheme, in collaboration with a private-for-profit insurer, that is the most exhaustive/inclusive in its coverage, in that it provides coverage for 'maternity care' to a limit of Rs 3000. The box (page 84) explains how SEWA (despite insuring with the GIC's NIC) has managed to provide coverage for many of the conditions that are generally excluded under GIC policies. The other schemes (provider-owned and NGO-owned) tend not to exclude any conditions from coverage.

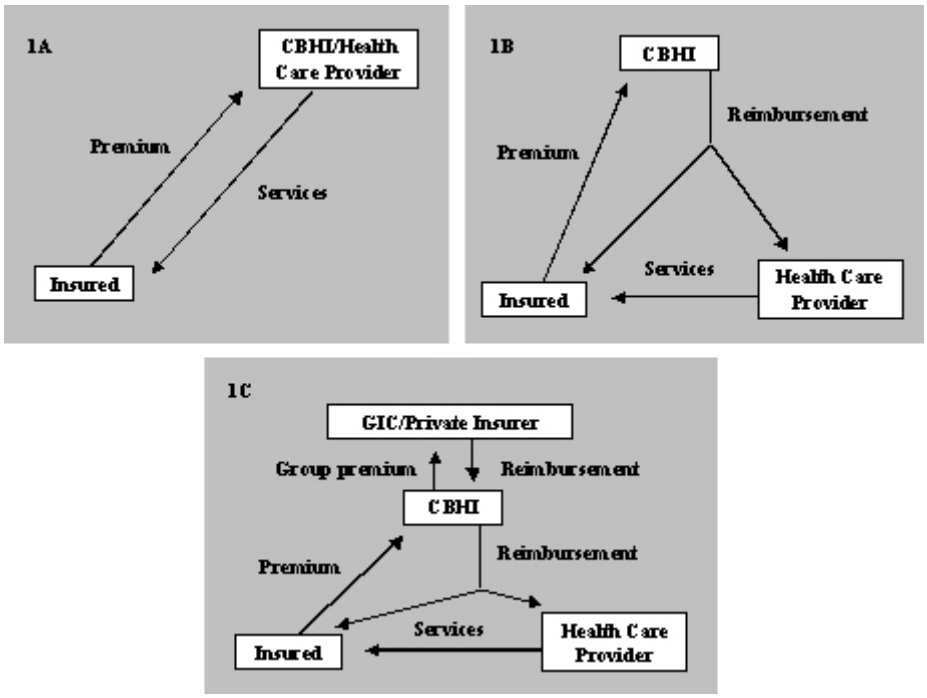

Fig. 1. Three patterns of community-based health insurance (CBHI) scheme ownership and management: (1A) the provider-owned scheme; (1B) the non-governmental organization (NGO)-owned scheme; and (1C) the NGO-intermediated scheme GIC Government Insurance Company

How Vimo SEWA (SEWA Social Security) has compensated for excluded conditions

Initially, SEWA's health insurance was administered jointly by SEWA and the United India Insurance Company. As per GIC, coverage included only allopathic, inpatient care (not including gynaecological illnesses, maternity care, occupational illnesses).

In 1994, SEWA assumed complete control of the medical insurance component. In 1995, coverage was expanded to include treatment from traditional bone-setters, occupational diseases, obstetric and gynaecological problems and, in exceptional cases, homoeopathic or traditional medical care.

In 2001, to protect itself from catastrophic losses, SEWA stopped running the insurance itself, instead purchasing it from the National Insurance Company (NIC). SEWA refused any change to its exclusions (i.e. traditional bone-setters, occupational diseases, obstetric and gynaecological emergencies are still covered).

In order to motivate people to join as long term members (by making a fixed deposit, the interest of which is used to pay the premium) special coverage is provided to long term members for: maternity care (one-time payment of Rs 300, started in 1995), dentures (one-time payment of Rs 600, started in 1999) and hearing aids (one-time payment of Rs 1000 started in 1999).

Unlike the GIC, SEWA will provide coverage for the first hospitalization related to HIV/AIDS (but only the first). SEWA is committed to helping its members with HIV/AIDS to access (low-cost) government services for outpatient treatment and hospitalizations beyond the first.

However, SEWA has one restriction that GIC does not have, namely, hospitalizations for each chronic disease will be reimbursed only once, regardless of how many years the insured stays with the scheme.

Almost all the schemes that cover the costs of hospitalization are fixed-indemnity schemes, providing coverage only to a pre-defined limit (or cap/ceiling). For example, the KKVS insures to a maximum of Rs

10 000 per family per year, RAHA to Rs 1000 per individual per year (although this may be old data), and SEWA to Rs 2000 per member per year. Such limits may enhance a CBHI scheme's financial sustainability, by preventing it from excessive losses, but these caps may limit the financial protection conferred by the schemes on their insured members.

Of those schemes that provide coverage without an upper limit, it appears that a user fee or co-payment is levied by some (e.g. SHH and VHS) while inpatient care is entirely free of charge at others (e.g. TF).

To improve access among the poor, benefits of the insurance scheme should be available to the insured at the time of service utilization. This is true of all of the provider-owned schemes. Under the NGO-owned schemes, benefits are available at the time of discharge (e.g. TF) or soon thereafter (e.g. within one week at KKVS). Under all the NGO-intermediated schemes, the insured must pay for care out-of-pocket and then seek reimbursement from the insurer.

Table III compares the premiums and benefits under the GIC's standard Mediclaim Policy and Jan Arogya Bima Policy (which targets the lower income group of society and common masses) with the policies purchased by SEWA (from the NIC) and WWF (from Royal Sundaram). It is somewhat difficult to make comparisons between the schemes, given that they differ in many ways. Here, I focus on three variables: (i) potential return per rupee of premium paid (i.e. the maximum amount reimbursed for hospitalization/total premium paid); (ii) the maximum amount reimbursed for hospitalization, in absolute terms (a measure of the financial protection provided by the scheme); and (iii) the inclusion/exclusion of delivery and illnesses related to pregnancy. I have chosen to focus on coverage of maternity care as other disease exclusions seem to be almost identical under the four schemes (although limited information is available on the WWF scheme). For example, all four schemes seem to exclude pre-existing and chronic disease, at least within the first year of coverage.

The strength of the SEWA scheme is that it provides good value for money, in that Rs 100 of coverage is provided for each rupee paid as premium—this is the highest potential return among the four policies examined. However, the SEWA scheme provides the lowest level of financial protection (to a maximum of Rs 2000) and only a small amount as maternity benefit. The potential returns per unit of premium paid under Mediclaim and Jan Arogya Bima policies are almost identical, and are considerably lower than that for the SEWA scheme (ranging from Rs 42 to Rs 75 per rupee paid as premium). Furthermore, these two schemes provide no maternity benefit. However, these policies provide higher maximum levels of coverage than the SEWA scheme (Rs 5000 under Jan Arogya and Rs 15 000 and above under Mediclaim). The potential returns under the WWF scheme are the lowest (Rs 29 to Rs 56 per rupee paid as premium) but this must be viewed in the light of relatively high levels of protection (maximum of Rs 5000 per hospitalization, the same as Jan Arogya) and fairly substantial maternity benefits (Rs 3000). In brief, each of these policies has its strengths and weaknesses and, of the three that might be affordable to the poor (Jan Arogya, SEWA and WWF), there is no clear winner.

Table III. Insurance policies from the GIC (Mediclaim and Jan Arogya), SEWA and WWF

Feature	Mediclaim	Jan Arogya	SEWA (with National Insurance Company)	WWF (with Royal Sundaram)
Age/gender restrictions	5 to 80 years of age (children 3 months to 5 years only of 1 or more parent insured)	5 to 70 years of age (children 3 months to 5 years only of 1 or more parent insured)	Women 18–58 years of age and their husbands	Members of the women's group, their spouses and dependant children
Premium	<25 years Rs 201 36–45 years Rs 219 46–55 years Rs 312 56–65 years Rs 358 66–70 years Rs 403 71–75 years Rs 429 76–80 years Rs 520	Adults <46 years Rs 70 46–55 years Rs 100 56–65 years Rs 120 66–70 years Rs 140 Dependant children (5–25 years) Rs 50	Rs 20 (slightly more actually, as there is a Rs 5 service charge on	Children Rs 65 per year Adults < 45 years Rs 125 per year >45 years Rs 175 per year

Maximum hospital benefit	Rs 15 000	Rs 5000 per annum	Rs 2000 per annum	Rs 7000 per annum Limit per claim Rs 5000
Simple calculations, potential return per rupee spent, for a person of age				
30 years	Rs 75	Rs 71	Rs 100	Rs 40–56
40 years	Rs 68	Rs 71	Rs 100	Rs 40–56
50 years	Rs 48	Rs 50	Rs 100	Rs 29–40
60 years	Rs 42	Rs 42	Not covered	Rs 29–40
Maternity care (including treat- benefit but ment arising from pregnancy or	None	None	For fixed deposit members,	For fixed deposit members,
subject to a waiting period of childbirth, including caesarean section) enrolment			Rs 300	9 months after first enrolment
GIC Government Insurance Company SEWA Self-Employed Women's Association WWF Working Women's Forum				

OUTCOMES BASED ON WHICH SCHEMES WERE EVALUATED

Recently, there has been much discussion regarding the outcomes, based on which health systems, and changes to health systems, should be assessed. While this continues to be debated, the three final (or distal) health systems goals proposed by the World Health Organization1—better health, fair financing and responsiveness—are fairly widely accepted. Unfortunately, there are seldom the necessary data to evaluate specific CBHI schemes based on these parameters, so more proximal indicators (including input and process indicators) have to be used.

Based on more easily accessible data, measures that should be used to evaluate and compare CBHI schemes are as follows:

1. The diversity (particularly in terms of health and wealth), size and growth of the member population. To optimize risk-sharing, it is desirable that the schemes attract heterogeneous populations (in terms of demographic variables such as age, gender, occupation, etc.) so that there is a diverse risk profile. Schemes with larger and more diverse member populations are less likely to succumb to co-variate risks, i.e. to sustain large financial losses when a larger-than-anticipated percentage of the insured claim the benefits, for example, due to a malaria epidemic. It is also generally desirable, from a societal or health systems' perspective, that members be heterogeneous in terms of their wealth so as to enable wealth transfer.
2. Rates of healthcare utilization among the insured vis-a-vis the non-insured. Higher rates of utilization are expected among the insured, as they face a lower direct cost at the point of service utilization. Among the insured, the differences in rates of utilization between the poorest and the wealthiest households should be diminished.
3. Financial burden of healthcare among the insured vis-a-vis the non-insured. Health insurance does not aim to decrease the average direct healthcare expenditures per household. Rather, it aims to spread very expensive episodes of healthcare seeking over many individuals or households. Thus, insurance should decrease the frequency with which households go into debt or poverty after paying for healthcare.
4. Financial viability of the CBHI scheme. Perhaps of less importance from the overall health sector perspective, the financial viability of a scheme is often the primary goal of scheme administrators, and so should be considered as a part of any evaluation.

   The first three measures were used in a recent comparative analysis of CBHI schemes carried out

by the World Bank.35 Unfortunately, most evaluations of the Indian CBHI schemes simply describe the schemes and their management, with little data on their outcomes.
This section presents available data on the impact of Indian CBHI schemes in terms of (i) size and diversity of membership; (ii) access to healthcare services; (iii) financial protection/prevention of indebtedness; (iv) cost recovery; and (v) other less tangible social consequences.

Size and diversity of membership
The smallest schemes covered only hundreds of people (WWF), while larger schemes covered tens of thousands (SEWA, RAHA, VHS) and the largest more than a million (SHH). There is evidence from several schemes of adverse selection, i.e. over-representation among members of those who are the most likely to fall ill. For example, people often join the TF-old and VHS schemes only after they have fallen ill. Members of the SEWA scheme were substantially older and more likely to have reported recent acute illness than were controls.21 Furthermore, schemes have generally had difficulty in including people of diverse levels of wealth. The SEWA scheme may be an exception in this regard, in that its member population does not differ markedly from the general population, i.e. it is inclusive of both the wealthy and the poor.21 The VHS scheme, in contrast, has attracted a predominantly poor population, thus limiting its financial sustainability. Other schemes tend to exclude the very poor, either because of high premiums, or because of their association with work cooperatives (for example, Mallur11 and TF). There is evidence from several schemes (including Sewagram) that distance to the scheme (or the provider) proves a barrier to enrolment.

Access to healthcare services
A household survey comparing rates of hospital utilization among individuals insured by the SEWA and TF schemes revealed that they were no more likely to have reported hospitalization over a 1-year period than the non-insured.21 In both cases, this could be attributed in part to members' lack of knowledge regarding the insurance scheme, or their membership in it. The Sewagram scheme was hailed by one author as having enhanced allocative efficiency by increasing the utilization of preventive and promotive

care. According to Jajoo,30 'no vaccine-preventable illness was reported in children or mothers since mass immunisation was instituted under the (Sewagram) scheme' (p. 173).

Financial protection

In a recent analysis of the SEWA claims database, 1930 claims submitted over 6 years were analysed.22 Eleven per cent (215) of the claims were rejected. Among the 1712 claims that were reimbursed, the median level of reimbursement was 93% (and the mean 77%). Reimbursement by SEWA significantly reduced the financial burden of hospital expenditures for claimants. For 581 (35.6%) of the 1631 claims that were ultimately reimbursed (and for which there were data on income), the total spent on hospitalization would have been catastrophic (>10% of annual household income) in the absence of reimbursement. After reimbursement, the number of hospitalizations that were catastrophic was more than halved, to 246 (15.1%) of the 1631 claims. Expenditures in the absence of reimbursement would have meant that 107 (6.6%) households (out of the 1632 claims ultimately reimbursed) would have become impoverished (i.e. they would have shifted from above to below the poverty line). Reimbursement by SEWA prevented 56 (3.4%) of 1632 reimbursed claimants from falling below the poverty line. In the two most recent years, the lag time between hospital discharge and reimbursement was just over 3 months. Data are not available on the degree of financial protection provided by other CBHI schemes.

Cost recovery

In the literature, cost recovery (expressed in terms of premiums paid by members as a percentage of benefits paid plus administrative costs) was the most common measure used to determine the success of Indian health insurance schemes for the informal sector. This may reflect: (i) some scepticism regarding the schemes' financial viability; (ii) that this is the outcome of greatest concern to scheme managers; or (iii) the fact that these data are generally readily available. Rates of cost recovery varied tremendously. Premium revenues represented only 4% of total revenues at the VHS scheme (1987–88 data)18 while all healthcare costs of members of the Mallur Milk Co-operative scheme were fully covered by the interest on past contributions.27 TF was one of many schemes where viability was dependent upon generous external donors; the concessions provided to TF members at the single referral hospital covered under the scheme were offset by an annual donation by a local business (Kaira Can) and debts to the hospital itself. The claims/premium ratio under SEWA's Medical Insurance Fund has consistently been less than 100% (32%–83% per annum over the 7-year period, 1994–2001) suggesting a rosy financial picture. However, this does not take into consideration the substantial costs of administering the scheme.

Social consequences

Some authors suggested that the schemes may also have less tangible impacts on the insured. For example, organizers of the SHH scheme had apparently aimed 'to develop in (students) the idea of civic responsibilities towards themselves and to the community'.31 No indication was given as to whether or not this objective was achieved. Jajoo30 stated that the Sewagram scheme has had positive social consequences by fostering 'a perception by people that they have a right to demand healthcare of high quality', and by stimulating 'self-confidence, organisational ability, and development activities'.

FACTORS UNDERLYING SUCCESS

A number of broad contextual factors were cited as having influenced the outcome of the Indian insurance schemes. For example, the Mallur Milk Co-operative scheme benefited from the strong economic condition of the community, the political power of the milk co-operative, and a supportive political environment.26,27 Consistent with the hypothesis that social capital can enhance enrolment in, and viability of, CBHI schemes,36–38 one author attributed success in enrolling people in the KKVS scheme to solidarity arising from community banking activities:

' The benefits of the community banking programme had started having its impact on the general well-being of the families of the members and also on the solidarity among the members. Hence enrolment of members into the insurance scheme has been becoming easier with each passing year.'

Authors attributed the success or failure of Indian schemes largely to aspects of scheme design and management. Mechanisms seen as having a positive impact on the equity of financing included the provision of subsidy for the payment of premiums at the ACCORD scheme;14 and the Sewagram scheme's flexibility in allowing people to pay in cash or kind.30 Dave Sen26 suggested that the TF-old scheme improved equity of healthcare delivery by providing free outpatient care to the non-enrolled. A variety of mechanisms were cited as having limited adverse selection and moral hazard. For example, the two-month waiting period prior to the entitlement to benefits at RAHA,11 and the minimum membership of 75% of households under the Sewagram scheme, were thought to have limited adverse selection. Dave11 suggested that the Sewagram scheme benefited from its policy of strictly excluding the non-enrolled from

scheme benefits (i.e. preventing free-riding).

Managerial (and actuarial) skills appear to have been important to the success of Indian insurance schemes. The SHH scheme32 failed in recovering costs as a result of premiums being set too low. The KKVS—lacking in 'historical data regarding the death experience or the hospitalisation'—calculated its premium and designed its benefits package by closely studying the GIC's Mediclaim Insurance Policy. Both the Mallur Milk Co-operative26 and the Sewagram schemes were seen to have benefited from strong and dynamic leadership. Organizers of the SEWA scheme emphasized the importance of trust in the scheme's management and leadership: '…the key (to success), apart from quality and time-liness, is the faith and trust in the institution which organises these services'.19

Very few factors related to the role of beneficiaries, healthcare providers, government and external donors were cited as contributing to the success or failure of the Indian schemes. Success of the Mallur Milk Co-operative26 and the ACCORD14 scheme were attributed in part to community organization, ownership and participation. Jajoo30 alone commented on the importance of the (perceived) quality of healthcare, arguing that the success of the Sewagram scheme was related to the trust of the villagers in the healthcare services. The Mallur Milk Co-operative scheme benefited from the technical support provided by a nearby medical college.26

SUMMARY OF FINDINGS

CBHI schemes in India are extremely diverse in terms of their design, size and target population. While some of the schemes are run by NGO providers (which may or may not own the healthcare services itself), there is an increasing trend towards collaboration with the GIC. In its partnership with NGOs, the GIC seems to have provided favourable group plans compared to the individual Mediclaim and Jan Arogya policies. We have little empirical information on the impact of existing CBHI schemes (most importantly, in terms of access and protection from indebtedness), and even less on factors that make for a successful scheme.

PROBLEMS WITH THE DATA

Empirically derived data on the existing schemes are extremely limited. This results in too heavy a reliance on the few schemes (particularly ACCORD, SEWA, TF-old and, less so, Sewagram) for which there are some data. Furthermore, the study may have excluded altogether some schemes that were implemented and then discontinued, without ever having been documented. Thus, there is a selection bias in favour of schemes that are longer running and well documented. This, along with the fact that much of the published literature on the CBHI schemes has been produced by scheme organizers and administrators, has undoubtedly led to some bias in reporting; positive experiences with (and impacts of) CBHI are more likely to be documented in the literature than are negative ones. In this review, I have tried to counter this bias by highlighting some discontinued schemes (TF-old and Navsarjan Trust's insurance scheme). Doubtless, there are valuable lessons to be learned from primary data collection regarding CBHI schemes that have failed to stand the test of time.

DISCUSSION

This review suggests that there is a demand for health insurance services among the poor. However, it remains to be seen whether the poorest in society will be able to afford the insurance premium, even when it is inexpensive. Evidence to date suggests that the poorest of the poor choose not to join the schemes, for reasons unknown (i.e. financial versus other). Only one scheme (VHS) has completely exempted the poor from paying the premium, with negative results in terms of adverse selection (only the poor are joining) and the scheme's financial viability. Other methods for encouraging the poor to join (e.g. the sliding scale premium) are imperfect, in large part due to the difficulty of 'means testing', and have met with little success. It seems that the schemes might most effectively reach the 'wealthy' among the poor, so strategies still need to be developed to provide healthcare and financial protection for the poorest among the poor.

There is little evidence to suggest that insurance schemes can increase the access to, and utilization of, inpatient care among poorer populations. Is this because the schemes have failed to adequately lower the financial barrier? Quite possibly, given that most of the schemes provide fixed indemnity coverage, and many provide reimbursement only after the insured has paid for the hospitalization out-of-pocket, so people may still avoid hospitalization for fear that all their costs may not be covered. Existing schemes appear to invest little in after-sales service. After purchasing insurance, people may fail to use it because they do not understand what the insurance is supposed to do, they may not have the confidence to use the service they have paid for, or they may simply forget that they have insurance. Whatever the relative importance of these reasons, first-time buyers of insurance services need to be nursed even after they

have made the purchase. Alternatively, it may be that other, non-financial, barriers prevent people from seeking care, even when health insurance has removed/lowered the financial barrier. Presumably, before implementing an insurance scheme, one should know the relative importance of cost as a barrier to healthcare seeking versus other potential barriers including distance, illiteracy, culture and gender (e.g. women's health is a lesser priority). Such barriers may need to be addressed along with providing the health insurance.

NGOs seem to have been a relatively successful platform for providing health insurance services to the poor. There are a number of reasons as to why NGOs should make good insurers for poor populations [adapted from van Ginneken W (ed). Social security for all Indians. Oxford:Oxford University Press, 1998].3

1. NGOs can address many of the felt needs of the population, not just the need for insurance.
2. People may come to trust an NGO through repeated, successful encounters with it and, for this reason, are more willing to enrol in an insurance scheme.
3. NGOs know the needs of their client groups so they can develop appropriate strategies to assist them.
4. NGOs typically involve beneficiaries in the design and implementation of programmes.
5. The effectiveness of health insurance schemes may be enhanced by other aspects of the NGOs' work; for example, in the fields of employment and education.
6. Because they are non-profit, they can provide health insurance at a lower cost than for-profit insurers (this is arguable—in fact, they may be less efficient due to the lack of a profit motive).

There does seem to be a trend in that many of the newer schemes involve collaboration with the GIC, or are closely modelled after the GIC's policies. This seems a reasonable strategy given that data on the frequency of illness/hospitalization are not available for many of the populations targeted by the schemes, and CBHI schemes generally do not have the skills necessary to make use of such data in setting premiums and benefits packages. SEWA refers to the GIC as a re-insurer, i.e. financial back-up in case of a rush of claims. But is such back-up really necessary given the low maximum amount reimbursed by most of the schemes? Or do the group rates provided by the GIC actually represent a government subsidy? It would be interesting to study the NGO-intermediated schemes to see whether these schemes end up generating profits or losses for the GIC. If profits, then this is a great example of a public–private collaboration that has resulted in a win–win situation, wherein the poor are provided with a valuable service, while the government fulfils policy objectives (e.g. helping poor, rural populations) while at the same time generating a profit.

Binding health insurance to other forms of insurance (e.g. life, house/assets) seems an interesting way of generating demand for health insurance (particularly in settings where life insurance is better known and more popular). But what is the net impact of grouping together different kinds of insurance? The problems of combining different types of insurance in a single policy might include higher premiums, and the resulting exclusion of the poor; difficulties in educating the insured around a complex package of benefits; and greater financial risks to the insurer due to co-variance of risks under the non-health components. With respect to the latter, SEWA has found the health insurance component to be consistently profitable, while the assets insurance component has resulted in periodic losses that would have been catastrophic in the absence of external donors; SEWA has incurred substantial losses due to the destruction of many members' homes due to flooding (2000), earthquake (2001) and riots (2002).

This paper has focused on schemes that cover at least some fraction of the costs of inpatient care. Theoretically, there is the danger that schemes covering only inpatient costs may result in moral hazard, i.e. that people may fail to make use of primary or preventive care (at cost to themselves) but will instead wait until they are so ill as to require (free or reduced-cost) hospitalization. It is hard to say whether this moral hazard is likely to occur in the settings in which these schemes function (i.e. where there are generally many other barriers to seeking hospital care such as distance, transportation costs and the opportunity cost of lost work). As data are gathered regarding the different schemes, it would be very interesting to compare the impact (in terms of rates of hospitalization, death, morbidity) of schemes that cover outpatient/preventive/primary care versus those that do not.

Even if such schemes are shown to improve access, and to protect families from medical indebtedness, it cannot be assumed that they are necessarily improving the health of the insured. Among the greatest challenges faced by CBHI schemes in India is improving the quality of care to which the poor have access. Improving access (by removing financial barriers to care) without addressing the issue of quality could

hamper any impact on more distal outcomes such as mortality and morbidity. In theory, CBHI should help to improve the quality of care to which members have access, by putting the purchasing power in the hands of an informed and influential agent, thus enabling strategic purchasing. To date, the CBHI schemes have not found very innovative ways of dealing with quality. Most either provide care themselves or restrict benefits to a single provider. The very few schemes that do allow for some choice of provider (SEWA and WWF) rely on the same measures of quality used by the GIC (i.e. more than 15 beds or registered with a local authority) which probably guarantees little, if anything, in terms of quality.

CONCLUSIONS AND FUTURE RESEARCH

The data currently available in the literature on CBHI in India are extremely limited. Newer schemes, such as TF (new) and WWF, have not been studied at all. Older schemes are described in terms of their design, but rarely have they been empirically evaluated in terms of their impact. For those who wish to implement a new CBHI or wish to make improvements in existing CBHI schemes, or health policymakers wondering whether such schemes should be supported, there is an extremely limited evidence base on which to make decisions. Given this lack of evaluative information, the following conclusions are offered tentatively:

1. Collaboration between NGOs and the GIC (or new, private-for-profit insurers) seems to be increasingly common, and has the potential to benefit both parties. The success of such partnerships requires that NGOs develop the capacity to shop among, and negotiate with, insurers. When NGOs decide to launch a CBHI scheme alone, actuarial and accounting skills are required to set premiums and benefits packages.
2. To optimize financial protection, CBHI schemes should cover either 100%, or all but a small percentage, of total costs, and reimbursement should be made directly to providers, so that nothing has to be paid by the insured at the time of service utilization.
3. To include the very poor, CBHI schemes may have to subsidize premiums paid by very poor households, or allow some flexibility in terms of when and how (e.g. in cash or in kind) the premium is paid.
4. An ongoing behaviour change campaign (BCC) is likely to be necessary as part of a CBHI scheme; even after they have purchased the insurance, first-time buyers need to be nursed so that they actually use the insurance.
5. CBHI alone is unlikely to increase access to healthcare services. CBHI must be accompanied by interventions to address the other barriers that may prevent the poor from seeking healthcare, such as distance and limited awareness of the health services available.
6. Voluntary membership by households (rather than individuals) has the potential to limit adverse selection, and is relatively easy to implement. Similarly, a waiting period between enrolment and eligibility for scheme benefits may also limit adverse selection, and is not very controversial.
7. The exclusion of certain categories of individuals (e.g. infants or the elderly) from membership in a CBHI scheme, and the exclusion of certain diseases (e.g. 'pre-existing' or chronic conditions) from coverage under the scheme, may serve to protect the scheme from adverse selection. However, such exclusions may severely limit the impact of CBHI schemes, particularly in terms of financial protection of poor households.
8. A strong and dynamic leadership trusted by the target population is of great importance.
9. The context or environment in which a scheme is implemented is undoubtedly of great importance, but the data provide no indication as to the relative importance of such factors as strong local economy, support from politicians, sense of solidarity or community among the target population, and strength of public healthcare services.
   As the next step towards building an evidence base on CBHI in India, I plan to visit all CBHI schemes (as defined above) currently functioning in India with the aim of collecting practical information regarding aspects of design and management that can be readily applied by other NGOs wishing to implement health insurance schemes (perhaps producing a 'how to' guide). A second aim of this work will be to facilitate the already evolving network of communication and exchange existing between the schemes functioning in India.

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