Developing and Costing State-Flexible Essential Health Package (EHP) for India

Com H-2B.

Key Output

- Developed a draft framework **for a State-flexible Essential Health Package** for **34 prioritized health categories**.
- **492 health care services** across promotive, preventive, curative, rehabilitative and palliative care were identified under four broader categories: 1) Women's and Child Health, 2) Communicable diseases, 3) Non- Communicable diseases and 4) Selected broader determinants of health.
- **System Costs estimated** at different levels of care at select health facilities for the District of Mallapuram in Kerala State.
- **Unit costing** and **estimation of treatment cost for 80 health conditions.** (This included estimated treatment cost for 25 conditions contributing to 70% of DALYs).
- **Integrated care-pathway developed** for the management of four Diseases (Cardiovascular Disease, Diabetes, Tuberculosis and Anaemia) with associated cost-effectiveness framework which could be adapted and modified at the State level.

Introduction

In many countries considering or in various stages of implementing Universal Health Coverage, Essential Health Packages (EHPs) are often promoted as an effective way to reduce health inequity while improving health service delivery by focussing on effective interventions and levels at which they should be available. Overall EHPs aim to enhance universality, health outcomes, equity and access by concentrating scarce resources on interventions which provide the best 'value for money'. EHPs are intended to be a guaranteed minimum – An EHP in a low-middle-income country could consist of a limited list of public health and clinical interventions which will be provided at primary and/or secondary level care. In contrast, in richer countries packages are often described according to what they exclude. In addition to the, "content or 'scope' of the package, there are also decisions to be made about the level at which the services under EHP will be delivered, and the 'shape' of the delivery model".[2] To deliver the services outlined in an EHP, human resources, drugs, equipment and other infrastructure required to deal with interventions within the package should be available. Universal Health Coverage (UHC) is defined in the 12th plan document as *"Ensuring equitable access for all Indians to affordable, accountable and quality health services from public and private sector where the government is the guarantor and enabler, although not necessarily the only provider, of health and related services"*. The vision for UHC also addressed the wider social determinants of health through inter-sectoral co-ordination of various ministries as an important pre-requisite for achieving Universal coverage.

Essential Health Package (EHP)

Our approach to developing an Essential Health Package (EHP) not only considers disease management but also address broader determinants of health. However,currently, there is no global consensus on the methodology for development of EHPs. Countries around the world have adopted different approaches in defining health packages, some have framed benefit packages as defined set of healthcare services while others have incorporated broader determinants of health (water, sanitation, education, nutrition etc.) as part of basic population wide health services. Since health is a State Govt. responsibility in India, it was imperative to develop an "Essential Health Package" that was flexible enough to address State health priorities. A National Essential Health Package could also serve as a guide for States to eventually formulate State-specific health packages based on disease burdens, health system capacity and resource availability.

Objectives

1. This exercise provides a frame work for the development of an Essential Health Package that is flexible to State health needs.
2. To estimate Unit Level Costs for delivering the health services identified under the Essential Health Package.
3. Integrative care-pathways mapped for management of select diseases.

[1] DALYs lost based on Global Burden of Disease – WHO Data repository (2012)[2]

[2] Service Delivery Seminar Series, Draft Technical Brief No. 2, 3 July 2008: Essential Health Packages: What Are They For? What Do They Change?

Framework for Design of Essential Health Package

A framework for an EHP summarized in Figure 1 was developed based on a review of published literature and Central and State level expert consultations with multiple stakeholders. The EHP framework was developed around the following dimensions: (1) needs assessment through synthesis of global experiences, national and state level policies and programs and disease burden; (2) priority setting through a feasibility study to identify specific health conditions and corresponding services and (3) establishing linkages between various components of the health system demonstrated as care pathways proposed for select health conditions (CVD, Diabetes, TB and Anaemia).

Methodology

The study involved two phases of evidence collation and synthesis. **The first phase** dealt with identification and development of National Essential Health Package for India. This exercise involved global review of evidence from 14 countries on methodologies and approaches for developing an EHP. This was complemented by a national and sub-national level situation analysis of the Indian health system on health services, disease burden and availability of public health infrastructure.

34 broad health categories were identified that comprised of 492 health services in consultation with experts from Centre and States (academia, civil society, government officials, medical, allied health and health economics).

The second phase involved:

1. Unit cost estimation for treatment of 80 health conditions;
2. Care pathways for population level management of selected health conditions along with a framework for cost estimation.

Burden of Disease

One of the challenges in estimating disease burden in India was the presence of multiple data sources. These include, government reports (reported cases), individual studies (region specific studies), WHO data repository and other large scale surveys like NSSO (based on nationally representative samples). Many of these studies and health matrices differed in methodological assessments. After a review of a range of data sources and detailed expert consultations, a consensus was built on using the following sources of disease burden data -NCMH projections for 2015, Global Burden of Disease (GBD) data repository(WHO(2012), NFHS-3 (2004-2005), along with reported figures from National Census and the Crime Bureau of India, for priority setting.

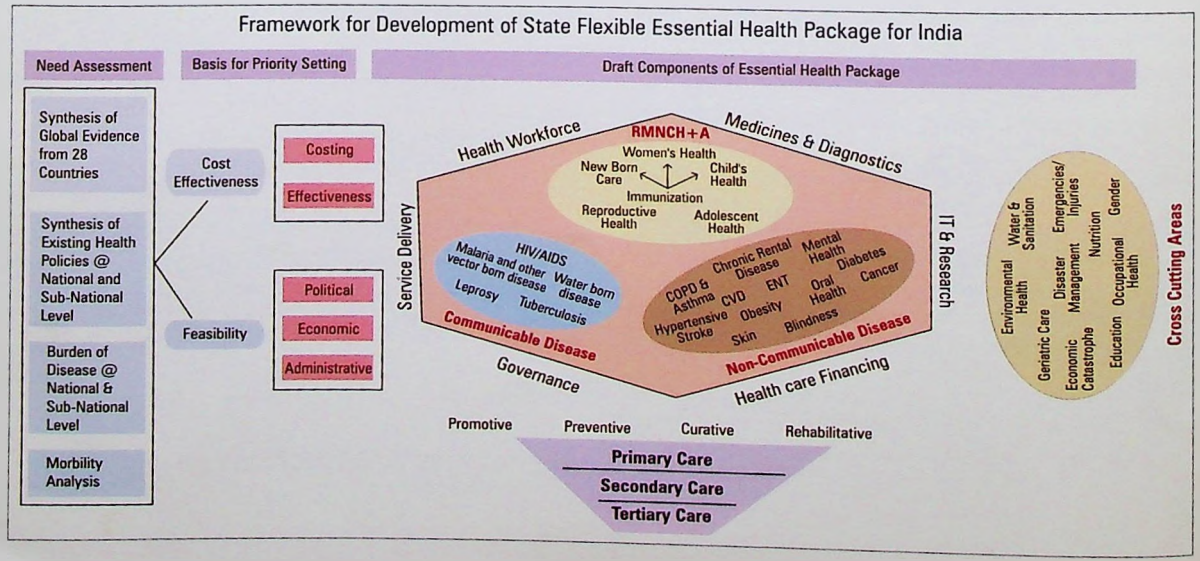
Costing Estimations at National and Regional level[3]

A costing exercise was undertaken for estimating unit costs for treatment of 80 health conditions. Unit level costing was undertaken using standard treatment protocols and expert opinion. The costing exercise included five sets of cost components (drug, health workforce, diagnostics, including estimation of system costs) for following services: Inpatient &Outpatient Care, Operation Theatre per hour and Delivery Room Utilization per delivery. The estimation for the system cost was drawn from Malappuram district in Kerala State. Our cost estimates suggests the following:

1. India need to spend ₹ 1195.78 per capita to treat 25 priority health conditions contributing to 70% of DALYs lost (As per GBD-WHO (2012) estimates) assuming 70% of total population access public health facility.
2. Estimated cost for provisioning of 80 select conditions assuming 70% of total population will access public health facilities will be ₹1626.38 per capita.

Note: While preventive and promotive services are mentioned in our framework they have not been costed in the exercise above. Two challenges faced in this exercise were: the 1) Lack of availability of accurate and complete data on existing preventive and promotive services 2) Paucity of evaluation and impact assesments of preventive and promotive services in hospitals and school health programs

Figure 1: Framework for development of EHP



Utilizing Unit Cost Estimates for Priority Setting

The calculated unit cost for treatment of 80 health conditions can be used for estimating resources required for management of selected health condition at State as well as National level. We have attempted development of disease management pathway for four health conditions. Of these conditions we have populated the pathway for Cardio Vascular Disease (CVD + Diabetes) with data from Census (Age Distribution), Age specific prevalence data on CVD from NCMH projections for 2015 and unit cost for treatment of various Cardio Vascular Diseases along with co-morbidities as calculated above. We have also estimated some of preventive and promotive health services like counselling, preventive screening (Non-Laboratory Based), and used CGHS purchase rate for laboratory based screening.

Care Pathways for select Health Conditions

A well-defined Care Pathway needs two inputs:

1. The precise definition of a disease or a treatment related condition that could occur in a population.
2. The conditional probability associated with that condition, since it could manifest itself along any one of the pathways that the disease or the treatment strategy could take.

With these two inputs clearly defined, the Care Pathway can be used to answer a number of very important health systems related questions:

1. Cost of managing a specific disease in a population.
2. The infrastructure requirements associated with that specific disease.
3. The quantum and types of human resources required to handle the burden of disease in a population

The Cardio Vascular Disease + Diabetes Pathway

In this pathway Diabetes and Cardio Vascular Disease has been combined into one in order to ensure that when population level screening is done, given the high level of overlap between the risk factors for both these conditions, it does not have to be repeated for each disease type and that the need for confirmatory laboratory tests is minimised.

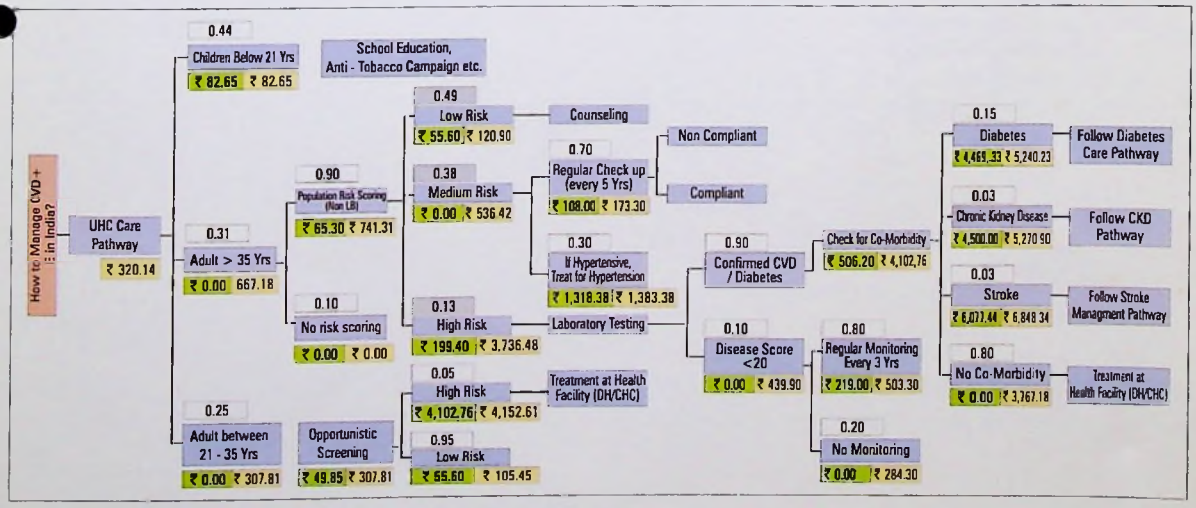
This is a complex pathway and has a number of steps.

The path for management of CVD can be graphically represented as shown below in Figure 2 and Figure 2b (with a link to the Diabetes Management Pathway). The first part is the full pathway, while the second includes the Diabetes Treatment Protocol which is a sub-pathway of the overall CVD + Diabetes Pathway.(For this exercise we have used treatment cost of managing Diabetes which can be altered by State Authorities while developing State specific policies).

In order to arrive at the cost associated with the entire Pathway, the conditional probability data needs to be supplemented with following costing data:

The conditional probabilities taken together with the associated costs produce a cost of ₹ 320.14per capita required for entire population. It is important to note here that population level (non-invasive) screening plays a key role. It has a high cost of as much as Rs.65 per adult that is older than 35 years but allows care to be focussed only on high risk individuals so that the high cost laboratory test of Rs 199.40 can be deployed in parsimonious manner. And, since the screening can be carried out by local village youth, it also ends up minimising the need for scarce skilled manpower (such as trained lab technicians).

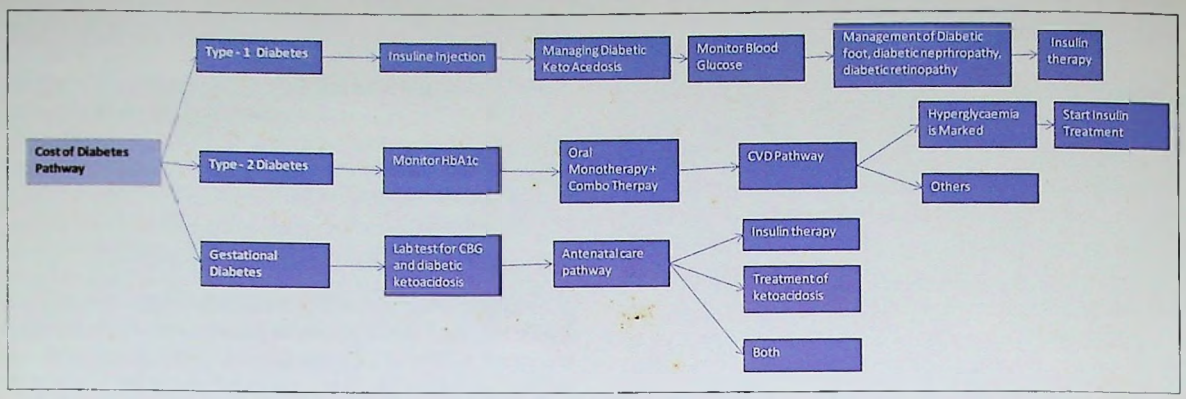
Figure 2: Care pathway for Management of CVD & Diabetes



[3] **DAL Assumptions:**

- Costing exercise were based on facility based treatment cost and doesn't include costs incurred on outreach activities, district and state level admin cost, preventive, promotive, rehabilitative and palliative services.
- Administrative overheads were taken at 10% of treatment cost estimation.

Figure 2b: Sub- Pathway for Management of Diabetes



The School based education campaign for children below the age of 21 accounts for almost a third of the total cost of ₹ 320.14. This expenditure would need to be examined very carefully as there are resource limitations. Laboratory based opportunistic screening for individuals aged more than 35 and comprehensive diet counselling adds almost Rs.255 to the overall expenditure. These approaches may need to be re-examined if there are budgetary constraints. Health education campaigns and opportunistic screening for younger adults are dependent on State level capacity and initiative.

Key Policy Recommendations

1. Service packages are critical as it serves as a blueprint to assess the kinds of resources needed to strengthen the health system for the delivery of the services.
2. Based on the care pathway the burden of Cardio Vascular Diseases can be managed by Indian States at Rs. 320.14 per capita using the proposed UHC Care pathway as against Rs. 349.83/- per capita estimated using the current conventional treatment-based pathway.[4]
3. A national level costing exercise with more representative sample is needed for developing efficient resource allocation in Health Sector.

[4] Costing on Conventional pathway is based on following assumptions
Risk of CVD is negligible in < 20 Yrs. (2) Prevalence of CVD is 9.86% in person >20 Yrs; (3) 20 % of total population does regular preventive check-up of which 90% of high risk population follow regular treatment protocol. (4) cost of managing emergency is Rs. 6077 which is treatment cost of managing hypertensive stroke.

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PUBLIC HEALTH FOUNDATION OF INDIA

Public Health Foundation of India (PHFI)
Institute for Studies in Industrial Development (ISID) Campus
4, Institutional Area, Vasant Kunj, New Delhi-110070
Phone No.: 011-49566000, Fax No.: 011-49566063 **www.phfi.org**
For queries please contact:
Pallav Bhatt, Varada Madge (pallav.bhatt@phfi.org, Varada.madge@phfi.org)

Research Team: **Mr. Pallav Bhatt, Ms. Varada Madge, Dr. Nachiket Mor, Dr. Avtar Singh**
Mr. Navneet Jain, Dr. Priya Balasubramaniam

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A health insurance scheme for hospital care in Bwamanda district, Zaire: lessons and questions after 10 years of functioning

Bart Criel and Guy Kegels

Public Health Department, Institute of Tropical Medicine, Antwerp, Belgium

Summary A voluntary insurance scheme for hospital care was launched in 1986 in the Bwamanda district in North West Zaire. The paper briefly reviews the rationale, design and implementation of the scheme and discusses its results and performance over time. The scheme succeeded in generating stable revenue for the hospital in a context where government intervention was virtually absent and external subsidies were most uncertain. Hospital data indicate that hospital services were used by a significantly higher proportion of insured patients than uninsured people. The features of the environment in which the insurance scheme thrived are discussed and the conditions that facilitated its development reviewed. These conditions comprise organizational-managerial, economic-financial, social and political factors. The Bwamanda case study illustrates the feasibility of health insurance – at least for hospital-based inpatient care – at rural district level in sub-Saharan Africa, but also exemplifies the managerial and social complexity of such financing mechanisms.

keywords voluntary health insurance, moral hazard, hospital care, district health systems, research, rural Zaire

correspondence Bart Criel, Public Health Department, Institute of Tropical Medicine, Nationalestraat 155, 2000 Antwerp, Belgium

Introduction

Health insurance as a source of finance for health care is a system in which potential consumers of health care make an advance payment to an insurance scheme, which in the event of future health service utilization will pay the provider of care some or all of the direct expenses incurred (World Health Organization 1993a). The existence of risk is the fundamental rationale for insurance. The reasons for encouraging health insurance are its potential for raising additional and stable revenue to fund the cost of health care provision, its capacity to reduce financial barriers to health care utilization and its redistributive effects (Mills 1983). There is great interest in, and sometimes indeed strong advocacy of the introduction or expansion of insurance-based health care financing schemes in Africa (Abel-Smith 1986; Arhin 1995a; Vogel 1990a;b; World Bank 1987, 1993). Several international organizations consider the study of insurance systems in developing countries as the priority area in the field of health care financing (UNICEF 1992; WHO1993b; EU 1995). This plea for the development of health insurance in developing countries is in line with the shift towards private sources of finance for health care, the most notable change during the 1980s being the introduction and increase in user fees for government

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services (Creese 1990; Van Lerberghe 1994). In this respect health insurance is a policy option which fits in with the current international trend towards the limitation of state activity and privatization (Criel *et al.* 1996).

The introduction of national compulsory health insurance schemes is being considered in some sub-Saharan African countries such as Ghana, Nigeria and Zimbabwe (WHO 1993a). This is unlikely to be an equitable and efficient financing option in a context where only a minority of the population would be covered, for instance only formal sector employees (Korte *et al.* 1992), and where the administrative capacity required for the adequate management of such schemes is limited. Vogel in his overview of formal health insurance systems, both publicly and privately organized, in 23 sub-Saharan countries concludes that the development of health insurance has neither promoted greater equity in access to health services by the poor nor has it permitted greater access (Gruat 1990; Vogel 1990b). The small middle class seems to have benefited most.

Locally developed and district-based insurance schemes targeting poor rural self-employed populations remain relatively rare in developing countries. These 'community-based' health insurance schemes are less common than formal social security systems despite their *a priori* attractiveness (Baza *et al.* 1993; Carrin 1987; Dumoulin & Kaddar 1993). Only within the last 10 or 15 years have experiments in rural health insurance catering for self-employed people been developed in sub-Saharan Africa (Shepard *et al.* 1990; Chabot *et al.* 1991). There is still little analytical information available about such health insurance schemes (Arhin 1995b), and further operational research on the design and organization of insurance schemes covering people in the informal sector is urgently needed (WHO 1993a; Noterman *et al.* 1995).

We discuss one of the few well-established experiments in health insurance at district level in sub-Saharan Africa: the insurance scheme for hospital care in the Bwamanda district in Zaire. Its origin, design and implementation have been documented (Moens 1990; Moens & Carrin 1992; Ilunga 1992). Our principal aim is to focus on the evaluation of this scheme, on the conditions for reproducibility, and on avenues for future research. Institutional features and the practical organizational details of the scheme will first be briefly presented. Bart Criel worked in the Bwamanda district from September 1986 to July 1990, initially as a general medical officer and later as district medical officer. The Bwamanda insurance scheme is still functioning to date. In our view, this case study illustrates the feasibility of health insurance at rural district level in sub-Saharan Africa, but also exemplifies its managerial complexity and difficulties encountered in its evaluation. The paper hopes to contribute to clarifying the many issues and questions district health planners face when considering health insurance in similar environments.

Some theoretical considerations relative to health insurance

What is health insurance about?

Insurance rests upon the principle of risk-sharing between many people. It reduces individual uncertainty concerning the timing and amount of future possible expenses that may be incurred and thus contributes to an increase in well-being (Dubuisson 1995). Insurance relies on the fact that what is unpredictable for an individual is highly predictable for a large number of individuals. The principle is one of insurance based on risks or probabilities and not one of prefinancing or prepayment for known future events (Mills 1983). Premiums are paid to an institution which compensates – partly or totally – any insured victim of the event for the financial loss resulting from the event. In the case of health insurance this insurance institution may also be the health care provider. Such a situation is referred to as direct insurance (Kutzin & Barnum 1992), or a direct pattern of insurance (Roemer 1969).

Adverse selection and moral hazard: a brief overview

In voluntary health insurance schemes it is important to minimize the preferential selection of high-risk individuals, a phenomenon the insurance industry calls adverse selection. Adverse selection occurs when those who anticipate needing health care choose to buy insurance more often than others: for instance, in the case of health insurance, patients with chronic diseases or individuals with a high predictability of health service utilization (pregnant women for instance). It occurs when insurance suppliers lack full information about the risk of individual insured persons or when, on grounds

of equity, they offer insurance policies based on *community-rated* premiums (Arhin 1995b). Community rating refers to a policy in which the premiums are related to the risk of the group in its totality; that is, all subscribers will pay similar premiums (except for adjustments for family size). The premiums will thus not vary according to age, sex, health risk, occupation, etc., as is the case with *actuarially based* premiums. Community rating discourages those of low risk from purchasing insurance while making it more attractive to high-risk individuals. The occurrence of adverse selection is a function of the nature of the subscription unit (individual or household) and also of the proportion of people who join the scheme. The former determinant can be controlled in the design of the scheme; the latter cannot, unless a minimum level of participation is imposed before the insurance scheme can function.

Moral hazard also has received considerable attention from the insurance industry. It is defined by Mills (1983) as 'the tendency of individuals, once insured, to behave in such a way as to increase the likelihood or size of the risk against which they have insured'. Moral hazard thus results in an 'over-consumption' of health services for health problems that could find an adequate solution at lower levels of the system. Moral hazard can be induced by the patient himself, but also by the health care provider's behaviour (Donaldson & Gerard 1993). It is likely to occur in a context where the organization of the health services system lacks basic rationalization: for instance, a situation where people insured for hospital care have unlimited access to hospital services in the absence of an effective referral system between the different levels of care. The well-documented case of the health insurance experiment in the Masisi district in eastern Zaire is illustrative in that respect (Noterman *et al.* 1995). Preliminary data on the Nkoranza scheme in Ghana also indicate the occurrence of moral hazard (Moens 1995). Methods have been developed in order to counteract moral hazard. One of the most widely used methods, but not necessarily the most effective one, is to institute co-payments or co-insurances. The insured persons then pay part of the fee at the time of health service utilization. Co-payment may be useful, not only in limiting excess demand, but also in generating additional resources.

The occurrence of moral hazard is considered one of the major problems that health insurance under social security systems in industrialized countries is facing. It has contributed to an increase in unjustified consumption of health services at inappropriate levels of care in the health pyramid, and the achievement of an *integrated* health system, i.e. a system where the various tiers have a specific role and function in a complementary way (Unger & Criel 1995), may be jeopardized. The consequences are cost inflation, loss of individual and collective autonomy, excessive medicalization, etc. (WHO 1977). Hence one of the major challenges a district health planner in a developing country will face when implementing health insurance is the need to minimize the undesirable and potentially harmful effects of enhanced financial accessibility to health services.

Rationale, design and implementation of the Bwamanda hospital insurance scheme

Bwamanda district

Bwamanda district is located in the north-west of Zaire. It covers an area of 3000 km² and had a population of about 158 000 in 1994. About 90% of the population are farmers. Their annual per capita income is about US$ 75. The health services in this district are based on a two-tier system: a network of 23 health centres scattered throughout the district and a 138-bed referral hospital. The diocese is the formal owner of the hospital but in functional terms the Bwamanda hospital fully acts as a referral hospital for the Bwamanda area in accordance with prevailing national health policies.

The development of the health services in Bwamanda was one of the activities of a larger integrated development project, the CDI Bwamanda *(Centre de Développement Intégral)*. The CDI Bwamanda is a Zairean non-profit organization; it was established at the end of the sixties and gradually developed a wide range of activities in other fields than health care, such as agriculture, communications infrastructure, primary education and rural development. It received considerable external support in terms both of finance and of human resources. Government subsidies always remained very limited.

By the mid-eighties the district health system had reached a relatively high level of functioning. Quality health care was accessible to the vast majority of the population through the establishment of an integrated

district health system. Most of the population had reasonable access to a health centre (95% lived within 7 km of a health centre). The population covered by a health centre ranged between 3000 and 13 000 inhabitants. The villages in the area of responsibility of each health centre were organized in rural committees for integrated development (*Comités Ruraux de Développement Intégral* or CRDI), which met monthly to discuss health issues as well as other problems related to development. In 1986, the average utilization rate for the curative clinics at health centre level was 0.6 new cases/inhabitant/year; coverage for antenatal care was 84%; coverage for measles vaccination was 50%. The annual hospital admission rate was about 30/1000. Referral and counter-referral systems functioned reasonably well.

In the mid-eighties many of the health centres in the district succeeded in recovering their recurrent costs through community financing mechanisms. These costs related to staff salaries (on average three staff members in each centre: a nurse, a nursing aid and a general hand), drugs, medical and other minor supplies. They did not include depreciation costs, nor the cost of the monthly supervision visits. The method of payment was a flat fee per episode of illness and episode of risk. In 1987 for instance, 9 of the 21 health centres in the district managed to recover these recurrent costs; the 12 other centres reached levels of cost recovery ranging between 73% and 98% (Bwamanda Health District 1987). Such high levels of cost recovery were certainly not exceptional in Zaire and are confirmed by the results of a large study by USAID on the financing of 10 effectively functioning health districts in Zaire (Resources for Child Health Project 1986). Other data pertaining to Zaire have indicated an average cost-recovery rate for health centres of almost 50% (Pangu 1988). The USAID study also indicated that the salaries of hospital and health centre staff constituted, respectively, 50% and 35% of the recurrent expenditure of these health institutions. These salaries always remained very poor.

In the case of a hospital admission a flat fee per type of admission was paid, with 5 possible fees according to the type of care required. In practice this amounts to a simplified diagnosis-related groups system: one fee for admission in paediatrics, internal medicine or gynaecology, and 4 progressively higher fees for surgical interventions categorized from minor to major (Table 1). In 1985 revenue from patients in the Bwamanda hospital constituted 40% of the total hospital revenue (Ilunga 1992). The remaining 60% came from subsidies from the mother organization, i.e. the CDI Bwamanda, from external funds of the Belgian bilateral aid agency and from various NGOs.

The fee schedule presented in Table 1 clearly indicates that the functioning of the Bwamanda hospital was largely subsidized. For instance, the *total* fee charged for a Caesarean section in 1985 (category surgery IV) was US$ 5, which is obviously inadequate to cover actual costs. Surveys of hospital recurrent cost analysis carried out in relatively similar settings support this statement. A recurrent cost analysis of an effectively functioning rural district hospital in Uganda showed that the average cost of a single major surgical operation was US$ 11 in 1992. If the cost of 10 inpatient days (an average length of stay in hospital for a patient receiving major surgery) is added to this figure, then the total cost was US$ 30 (unpublished data). A study of unit costs for in-patient services carried out in 3 Zimbabwean hospitals identified an average cost for major surgery of approximately US$ 35 (UNICEF 1996); another study in 6 Malawi hospitals identified a cost per single inpatient (all services together) ranging from US$ 20 to $ 30 (Mills *et al.* 1993); and a Medicus Mundi International (MMI) survey of 59 non-governmental hospitals in sub-Saharan Africa identified a median cost per inpatient of US$ 33 (Van Lerberghe *et al.* 1992).

Table 1 1985 fee structure *before* the introduction of the health insurance system (in 1985, 50 zaires = 1 US $).

	Paediatrics intern. med gynaec.	Surgery I	Surgery II	Surgery III	Surgery IV
Children	30 Z	100 Z	150 Z	200 Z	250 Z
Adults	120 Z	100 Z	150 Z	200 Z	250 Z

A health insurance scheme for hospital care

Problem definition

In the eighties the Bwamanda hospital faced a steadily increasing cost of medical care due to inflation, and hospital charges had to be raised several times a year. At the same time increasing reluctance of external donors to subsidize the hospital's recurrent costs and virtual non-existence of government funding led the health district managers to identify other stable sources of funds. In addition there was a problem of financial accessibility to hospital care, at least during certain periods of the year, and payment of hospital fees became an increasing problem for the poor rural population of Bwamanda district because of fluctuating availability of cash income due to seasonality of crops. Some patients referred from the health centre only arrived at the hospital after several days due to the time needed to find the necessary funds. Hence the challenge for the district management team was to design a financing strategy with improved access to hospital care for all people in need while maintaining the hospital's financial viability.

Design and organization of a hospital insurance plan

The district management team discussed and compared various possible financing alternatives. The following criteria were used: political and social acceptability, ability to pay, risk-sharing potential, likely effect on the financial viability of the hospital and likely effect on the hospital's financial accessibility. An insurance scheme was considered superior to the current system of fees per type of hospital service. The team identified the main variables relevant to a health insurance scheme about which a decision needed to be taken: What nature of insurance premium payments? What time and frequency of payments? Which unit of membership? Which services covered by the insurance scheme? Should co-payments or deductibles be considered?, etc. The discussion was pursued with the nurses heading the health centres during one of the regular workshops organized for them in Bwamanda. The various options concerning the above-mentioned variables were analysed and compared. Eventually a consensus was reached on the following features of the scheme:

- a cash payment of a premium identical for all, independent of age, sex, domicile, health status, etc., i.e. a community rating system;
- one annual subscription period at a time coinciding with the purchase of the coffee and soy bean crops (months of March and April);
- the family as subscription unit, with individual premiums;
- risk coverage limited to hospital care, with a 20% co-payment rate;
- decentralized collection of premiums at health centre level;
- implementation in the whole district at the same time, and *only* for the district population;
- management by the district management team.

Finally, the basic elements of the concept of insurance were presented to community representatives of each health centre. They expressed a preference for a scheme without co-payments, but the district management team thought it wise to have a 20% co-payment, which constituted a financial security margin in a context of high inflation and could act as a deterrent to unnecessary hospital utilization. At the specific request of the nurse in charge of the maternity department, an exception was made and no co-payment was charged for insured patients using maternity services. The rationale of this request was the concern to increase the workload at the maternity unit for the training of the local midwifery students. Women who had not attended antenatal care during their pregnancy, however, were not covered by the insurance and had to pay the full fee.

Questions were also raised concerning the possible situation of families who joined the scheme but did not undergo any hospitalization. Would they then get a refund? This concern is not surprising. Indeed, the widespread local mutual help mechanisms, such as traditional solidarity mechanisms within the extended family and mutual aid associations (*tontines* in francophone Africa, or ROSCAs, Rotating Savings and Credit Associations, in the anglophone literature) are very often based on a principle of voluntary balanced reciprocity (Dubuisson 1995) rather than on a principle of solidarity. Eventually, however, the majority of the community representatives agreed with the launching of this innovative financing scheme in 1986.

The first subscription period was the month of March 1986. During this one-time annual enrolment period of one month, membership premiums were collected by the

staff of each health centre and representatives of the village committees. The level of the premium was empirically set at 20 Zaires, which approximately corresponded to US$ 0.3. This amount was deemed affordable: it was less than half the flat fee charged for an outpatient consultation at health centre level. Twenty Zaires was also the equivalent of the price paid to Bwamanda farmers for 2 kg of soy beans, a common crop in the area. As proof of payment of the premium, a stamp was affixed to the family record kept for each family at the health centre. A census of the district population had been carried out in 1985 and 1986, and on that occasion a family file had been opened for each household. In addition a membership register was opened at each health centre. The nurses in charge of the health centres eventually handed in the collected monies to the district health services administrator, who deposited the funds in a separate health plan account. The health insurance scheme was not run by a separate 'third party' institution; it was managed by the district health authorities themselves and can thus be described as a direct pattern of insurance. On the whole, the administrative costs incurred for the practical organization and management of the insurance scheme remained relatively low. These costs covered transport and stationery expenses, staff bonus payments, and salaries of the scheme's administrating and clerical staff. Data for the period 1987–89 indicated total administrative costs ranging between US$ 510 and 1800, i.e. between 4 and 6% of total expenses (Shepard *et al.* 1990). Recent data for the 5-year period 1990–95 reveal that the yearly cost of administering the scheme ranged between c. US$ 1000 and $ 3500, i.e. between 5% and 10% of the total expenses (These costs have been calculated through a conversion of Zaires into US$ at the exchange rates prevailing at that time. The sky-rocketing inflation rates, especially in the 1990s, make cost estimates in foreign currency a perilous exercise. This may contribute to the explanation for the variation in administration costs identified in the period 1990-1995).

The routine functioning of the insurance plan can be summarized in a decision tree in which administrative and managerial procedures are presented in a sequential way (Figure 1). It is important to stress that members of the scheme who used the hospital outpatient department without being referred by their health centre could not benefit from the insurance, except in emergencies. Referral from health centre to hospital was mandatory if the insurance was to take effect. Table 2 presents an overview of the hospital fee structure for the month of September 1986.

Results

Financial impact

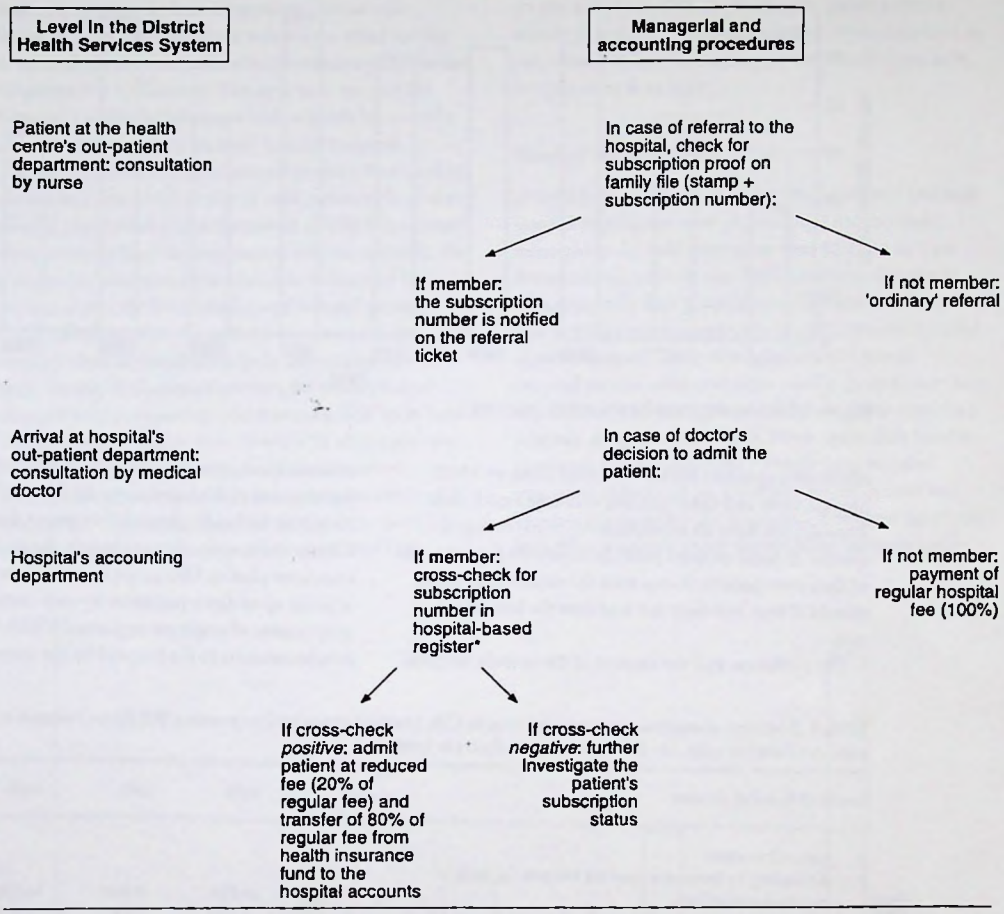
The interest shown by the Bwamanda community in this voluntary insurance scheme for hospital care was overwhelming and beyond most expectations. In 1986, 32600 people – i.e. 28% of the district population – joined the scheme within 4 weeks. The financial balance after the first year of operation was positive, with a small surplus of approximately US$ 1300. In the following years the membership rates steadily increased, indicating a high degree of social acceptability (Figure 2). In 1987, 60000 people joined the scheme, and in 1988, 80000. The membership rate tended to stabilize around 60–65%. Each year the subscription charge was adjusted in line with inflation. The value of the charge remained approximately equivalent to the purchasing price of 2 kg of soy beans – approximately one-third of a US dollar – though with small variations over the years.

It is striking that this interest remained even during the dramatic social and political turmoil which Zaire has been experiencing since the beginning of the nineties. This is somewhat surprising, since one would expect expenditure for a hospital insurance scheme to drop on people's priority list when the daily search for food becomes a major challenge. However, membership

Table 2 Hospital fees in September 1986 (in Zaires) (in 1986, the average annual exchange rate was 61 Zaires for 1 US$)

Type of admission	Fee for uninsured patients	Fee for insured patients
Paediatrics	125	25
Internal medicine	500	100
Gynaecology	500	100
Maternity	500	—*
Surgery I	350	70
Surgery II	500	100
Surgery III	700	140
Surgery IV	900	180

*the use of the maternity services was free of charge for insured patients only if they had attended antenatal care.



*Each individual health centre team notifies names and subscription numbers of all people who joined the scheme in a register which is transferred to the hospitals's accounting department at the end of the enrolment period.

Figure 1 Managerial flow-chart for referred and admitted patients (adapted from Moens & Carrin 1992).

dropped significantly from 66% in 1991 to about 40% in 1992, and from 66% in 1993 to 41% in 1994. In 1992 severe ethnic tensions in the Bwamanda area, with a climate of social unrest, were probably responsible for the fall in subscriptions. In 1994 the enrolment period was preceded by the nationwide change in currency from *anciens* to *nouveaux* Zaires, limiting cash availability for many people.

The size of the population joining the scheme made genuine risk-sharing arrangements possible. High membership rates, together with the option to have the household as subscription unit, greatly reduced the risk of a preferential selection of high-risk cases (i.e. adverse selection). These membership rates are in fact a slight underestimate of the real subscription rates, since a sub-population of a few thousand people in the Bwamanda health district – most of them employees of the different CDI project services – are covered by mandatory

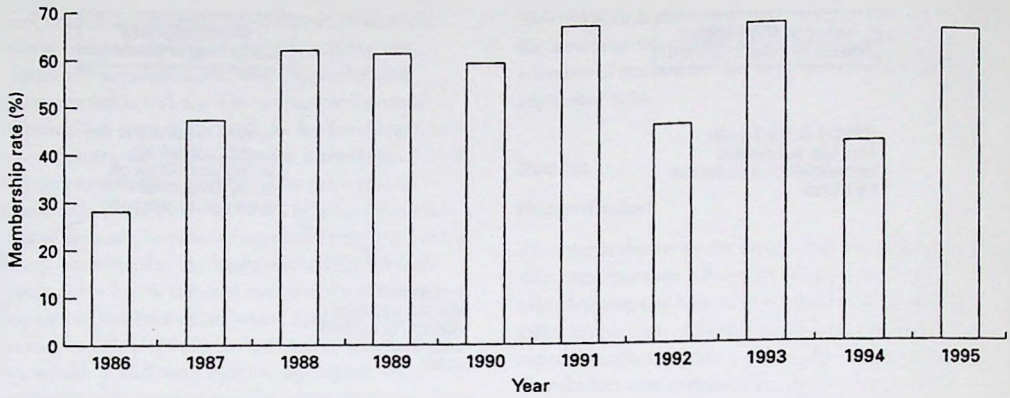


Figure 2 Membership rates for the period 1986-1995

employer-organized health insurance schemes which provide them and their families with free health care. They did not have an immediate incentive to join the scheme. If some of them paid the insurance premium out of their own pocket, it was with the objective of being insured if they lost their job and thus the benefit of free care.

The evolution and the sources of Bwamanda hospital revenue for the period 1985–89 are presented in Table 3. Revenue raised from payments for hospital care ('internal' or locally generated revenue) doubled from US$ 21 180 in 1985, the year before the start of the insurance plan, to US$ 44 475 in 1989. Internal revenue is made up of direct payments by non-insured patients, prepayment of employer-organized health care schemes, reimbursements to the hospital by the insurance fund

Table 3 Evolution of hospital revenue (1986–1989) in US$. (Average annual exchange rates: 1 $US for 50 Zaires in 1985, 61 Zaires in 1986, 128 Zaires in 1987, 187 Zaires in 1988, 400 Zaires in 1989)

Source of hospital revenue	1985	1986	1987	1988	1989
A. Internal revenue					
A.1. Refunding by insurance fund for insured: i.e. 80% of regular hospital fees	—	10,670	8,620	14,700	19,630
A.2. Co-payment by insured: i.e. 20% of regular hospital fees	—	2,670	2,155	3,675	4,900
A.3. Prepayment by employers for health care of employees and their families	—	6,465	10,990	9,635	13,810
A.4. Direct revenue from patients*	21,180	11,655	10,870	7,010	6,135
Total internal revenue (% of total hospital revenue)	21,180 (41%)	31,460 (61%)	32,635 (82%)	35,020 (75%)	44,475 (79%)
B. Subsidies** and gifts (% of total hospital revenue)	30,635 (59%)	20,040 (39%)	7,200 (18%)	11,515 (25%)	11,910 (21%)
Total hospital revenue (A + B)	51,815 (100%)	51,500 (100%)	39,835 (100%)	46,535 (100%)	56,385 (100%)

Source of data: Ilunga (1992) & Bwamanda Health District (1985–1989).

*Non-insured self-employed patients.

**The last government subsidies for the Bwamanda hospital were in 1984. Since then the only external hospital funding came through the CDI project.

and co-payments by insured patients themselves. Between 1986 and 1989 there was a clear trend for the revenue from the insurance scheme (reimbursements and co-payments) to increase. The insurance ensures the hospital a source of income which is stable because the number of non-paying patients is much reduced.

Direct payments by non-insured persons decreased by almost half from US$ 11 655 in 1986 (when 72% of the district population was not insured) to US$ 6 135 in 1989 (when only 39% of the population was not insured). An *a posteriori* analysis of the evolution in hospital fees indicated that the fee levels for non-insured persons – and at the same time the 20% co-payments for the insured – had in fact dramatically increased over the same period. A Caesarean section, for instance, was charged at approximately US$ 5 in 1985, US$ 15 in 1986, US$ 14 in 1987, US$ 19 in 1988 and US$ 28 in 1989 (see Figure 3). On the other hand, subsidies *(external* revenue) to the hospital decreased in 1989 to about one-third of the 1985 level (from US$ 30 635 to 11 910), whereas total hospital revenue increased from US$ 51 815 in 1985 to US$ 56 385 in 1989. Table 3 shows clearly that the relative proportion of internal revenue in total hospital income increased dramatically from 41% in 1985 to 79% in 1989.

Hospital utilization data

In 1986 hospital admission rates for the insured and non-insured population were 36.2 and 24.8 per thousand, respectively. In 1988 these rates were 35.6 and 24.6 per thousand, respectively (see Table 4). These differences are statistically highly significant. Hospital data for the year 1989, based on a one-in-10 sample from the hospital register, showed that insured patients had specific hospital service admission rates 1.9–6.7 times higher than non-insured patients not covered by employer-organized schemes (Shepard *et al.* 1990). More recent data for the 12-month period April 1993 – March 1994 revealed admission rates of 49 per thousand for the insured and 24.9 per thousand for the uninsured. The latter figure can be further split into 17 per thousand for uninsured self-

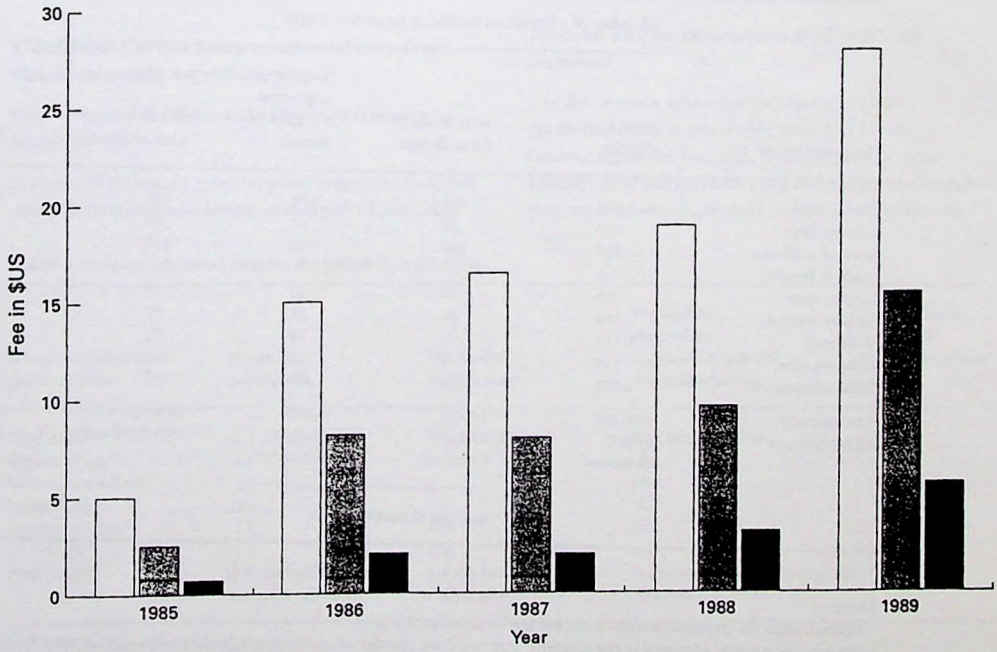


Figure 3 Hospital fees 1985-1989, □ Surgery IV, ■ Internal medicine, ■ Paediatrics.

Table 4 Hospital admission rates in insured and non-insured populations of the Bwamanda district (years 1986 and 1988).

Year	Admissions/ insured population (in per thousand)*	Admissions/ non-insured** population (in per thousand)*	χ^2 and P-value
1986	1,181/32,614 (36.2 ‰)	2,133/85,998 (24.8 ‰)	($\chi^2 = 113$; $p < 0.001$)
1988	2,863/80,495 (35.6 ‰)	1,200/48,749 (24.6 ‰)	($\chi^2 = 119$; $p < 0.001$)

*These ratios are considered to be true proportions, which in reality they are not since the numerator may contain several admissions for one same individual.

**The data concerning the non-insured population also include admissions of patients covered by employer-organized schemes.

employed persons and an estimated 184 per thousand for people covered by an employer-organized scheme (Table 5). During the last 3 or 4 years people from outside the district frequently claimed to live within the district boundaries to be eligible for subscription to the insurance plan during the enrolment period. They had their names added on the family file of a 'host' family (which was often composed of relatives). This happened mainly in the areas of the two Bwamanda town health centres and in the areas of two health centres situated at the edges of the district. Hence the figure of 49 per thousand admission rate for insured persons from the district is probably a slight overestimate.

Table 5 also shows that in the period 1993–94 about 15% of all admissions (1078 out of 7362) were patients living in neighbouring districts. This is not a new finding: Bwamanda hospital has always been a facility with a substantial proportion of users from other districts. Data for the year 1987 indicate that 17% of admissions (691 out of 4090) were patients from outside the district (Bwamanda Health District 1987). In 1995 this figure increased to 20.4% (1599 out of 7843) (Bwamanda Health District 1995).

Table 5 Hospital admission data for the period 1/4/93–31/3/94

	Number of admissions according to patient origin				
Hospital service	Insured from district	Non-insured from district	Employer organized schemes in district	Out of district	Total
Paediatrics	1,267	168	221	132	1,788
Gynaecology	278	39	21	68	406
Internal medicine (male + female)	547	201	42	356	1,146
Surgery men	452	20	17	78	567
Surgery women	370	15	32	87	504
Maternity	1,119	82	29	35	1,265
Intensive care	939	326	99	322	1,686
Total admissions	4,972	851	461	1,078	7,362
Denominator	101,353	50,131	2,500*	non-applicable	non-applicable
Admission rate	49 per thousand	17 per thousand	184 per thousand	non-applicable	non-applicable
		24.9 per thousand			

*This figure is an estimate.

Notes:

– Patients from the trypanosomiasis ward are not included in this table.

– Most of the patients admitted in the intensive care ward are transferred to other wards after a few days; these admissions are thus counted twice and the real number of admissions is therefore lower.

This pattern of higher hospital admission rates for the insured population may, generally speaking, be due to a combination of moral hazard and better access for those who need it. Within the limits of the available information it is difficult to assess the relative importance of each single possible cause. The fact that insured patients can benefit from the insurance scheme only when referred by a health centre and the system of co-payment at hospital level are factors which *a priori* tend to counteract any substantial degree of inappropriate hospital utilization.

It is important to acknowledge the fact that the increment in hospital utilization by the insured population seems to be highly variable. The data in Table 6 indicate that excess use is particularly high for surgical services, both female and male, but that it is hardly apparent for internal medicine services. The very high admission rates for the (small) population covered by employer-organized prepaid health care schemes are not surprising, for these patients – the majority of whom live in and around Bwamanda township – have no financial cost to bear in case of hospital admission.

Discussion: What lessons can we learn from the Bwamanda experience?

Can we regard the Bwamanda insurance scheme as a success?

A recent WHO study group acknowledged the fact that many different criteria for the evaluation of financing systems exist. The group proposed a framework for the evaluation of financing schemes based on the following criteria (WHO 1993a): the level and reliability of resources raised; the efficiency and the equity of the scheme; its viability in terms of social acceptability; and finally its health impact. The group recognized that currently information is least available for the last area of evaluation of health gains.

The social acceptability of the Bwamanda scheme seems beyond dispute given the high subscription rates. The other evaluation questions relating to the scheme's financial performance, to its effectiveness, efficiency and equity are discussed in more detail in this section. The initial objectives set forth by the district managers were as follows: on the one hand there was the need for a stable source of local revenue allowing the hospital to function properly virtually without government funding and with most uncertain future levels of external subsidies. On the other hand, there was the concern to keep hospital fees at an affordable level for the population of the district so that financial accessibility was maintained.

Financial performance: attraction of additional resources?

The Bwamanda scheme evidently succeeded in generating reliable and stable resources for the functioning of the hospital. Locally raised revenue virtually doubled between 1985 and 1989, even though total revenue remained more or less the same around

Table 6 Hospital admission rates for the period 1/4/93–31/3/94

Admission rates in per thousand	Insured population	Uninsured population	Population covered by employer-organized pre-paid schemes	Ratio admission rate insured/ admission rate non-insured
Paediatrics*	12.5 per thousand	3.3 per thousand	88.4 per thousand	3.8
Gynaecology*	2.7 "	0.8 "	8.4 "	3.4
Internal medicine*	5.4 "	4 "	16.8 "	1.35
Surgery men*	4.4 "	0.4 "	6.8 "	11
Surgery women*	3.6 "	0.3 "	12.8 "	12
Maternity*	11 "	1.6 "	11.6 "	6.9
Maternity**	27.6 per hundred expected deliveries	4.1 per hundred expected deliveries	29 per hundred expected deliveries	

*The denominator is the general population.
**The denominator is the number of expected deliveries (birth rate is 40 per thousand).

approximately US$50 000 a year. The precise amount of subsidies allocated to the hospital was in fact never decided on a predetermined basis – at the start of every new budgetary year for instance. The hospital thus had no real budget. The policy of the CDI project was to systematically cover the hospital's deficit as long as the project had the necessary financial means to do so and as long as this deficit remained within reasonable limits. Obviously the room for financial manoeuvre shrank continuously in the second half of the eighties and the first half of the nineties, due to the steep deterioration in the socio-economic situation (the decrease in prices paid for locally grown coffee, traded on the international market, meant a serious reduction in income for the project) and to the reluctance of donors to fund operating costs. Nevertheless it seems possible that the Bwamanda insurance scheme actually *relieved* the CDI project from subsidizing the hospital to the same extent as in the past. This may have led to displacement effects where other activities within the CDI project, more in need of financial resources, would have benefited from higher financial support. But as Zschock (1979) argues, displacement is not necessarily a negative feature.

The financial data presented in the previous section support the conclusion that Bwamanda hospital has become less dependent on external funding sources. This trend is clear, even though there probably are problems with the accuracy and completeness of the financial data because of the complex accounting procedures and mingling of funds within the Bwamanda district, and because of the difficulty to convert local into foreign currency values. It is reasonable to assume that this trend was maintained in the early nineties, since many fund-providers and aid organizations decided in the period 1990–91, for political reasons, to reduce or even to stop altogether any further aid to Zaire.

Finally, it must be acknowledged that an annual hospital recurrent expenditure of US$ 50 000, i.e. a mean expenditure of US$ 370 per inpatient bed, is very low compared to similar hospitals in sub-Sahara Africa. In the 130-bed hospital in Hoima district in Uganda, the mean expenditure per inpatient bed was US$ 830 (unpublished data) and the Medicus Mundi International survey of 59 NGO hospitals in sub-Sahara Africa indicated an average figure of approximately US$ 1 000 (Van Lerberghe *et al.* 1992). One explanation for this low figure may be the extreme level of rationalization of resource use in the Bwamanda hospital. For example, the trainees of the local nursing school were involved in routine hospital work from the very beginning of their 4-year training curriculum.

Effectiveness and efficiency of the scheme: does it facilitate access to the hospital for those patients who need it?

The answer to this question is less clear-cut. It appears that insured persons have used the hospital services at a significantly higher rate than the uninsured. The admission rates in the insured population increased from 35.6 per thousand in 1988 to 49 per thousand in the period April 1993 to March 1994 ($\chi^2 = 198$; $P < 0.001$) whereas these rates hardly changed for uninsured persons: 24.6 per thousand in 1988 and 24.9 per thousand in 1993–94 ($\chi^2 = 0.1$; $P = 0.75$). In 1988 the ratio of hospital admission rates for insured compared with non-insured patients was almost 1.5; in 1993–94 this figure increased to a ratio of about 2. This ratio was 2.9 in the period 1993–94 when non-insured admissions excluding patients covered by employer-organized insurance schemes are concerned. If we consider higher admission rates as an indicator of better accessibility to the hospital, then the answer seems straightforward, even though the scheme may have selected precisely those families who were the higher hospital users even before the insurance scheme was implemented.

Hospital utilization is not, however, a goal in itself: an increase in hospital utilization is a positive phenomenon if it reflects the treatment of problems where the hospital's know-how and technology are needed. To what extent is this excess in hospital utilization explained by an increase in 'appropriate' hospital utilization? Some of the arguments supporting the hypothesis that it is not due to a phenomenon of moral hazard have already been pointed out. Firstly there is the mandatory referral of the patient by his health centre (except for emergency situations), and secondly there is the system of small co-payments. It is possible that health centre nurses may now and then have been put under pressure by the patient to be referred. If this did occur, however, there was a further control: on arrival at the hospital the patient would first be seen by the medical officer at the referral consultation, who would decide whether admission was appropriate or not.

However, the fact that the excess in hospital utilization by the insured population varies considerably from one hospital department to the other indicates that moral hazard is not by any means a homogenous phenomenon. It may exist for some health problems and less so, perhaps not at all, for others. The level of predictability of some health problems or events requiring intervention at the hospital may be one of the explanations. The distinction between predictable and unpredictable health problems as an instrument for assessing moral hazard has been applied in the evaluation of the Masisi hospital insurance scheme in eastern Zaire (Noterman *et al.* 1995). The predictability hypothesis may constitute a plausible explanation for the considerable increase in utilization of the hospital's maternity services, and perhaps even for the striking increase in utilization of surgical services. The latter could be explained by a high proportion in this incremental utilization of non-urgent surgery for abdominal and inguinal hernias which are very prevalent health problems in the Bwamanda area. Our data neither confirm nor disprove this hypothesis. Further investigation is needed to elucidate this phenomenon of differences in hospital utilization.

The administrative costs of the scheme in the nineties were between 5% and 10%, suggesting a relatively satisfactory level of administrative efficiency. These costs are indeed far below the operating costs of social insurance funds in other African countries (ILO 1988; Gruat 1990; Shaw & Griffin 1995). It is not surprising to find the highest proportion of administrative costs (about 10%) in the years 1992 and 1994, when subscription rates were lowest.

The data do not provide information on the effect of the health insurance scheme on patients' delay in seeking treatment. Comparison of admission rates between insured and uninsured patients shows that insured individuals use the hospital more often, but does not indicate whether patients actually come more timely. This is clearly one of the priorities for further study, since the problem of patient delay was one of the reasons which led to the development of hospital insurance in the first place.

Equity of the scheme?

In Bwamanda all families subscribing to the insurance scheme pay the same premium per individual household member, and all enjoy the same benefits in the event of hospital admission, independently of the family's socio-economic status and the other costs to the family of an admission. These other costs are often substantial: indirect costs such as transport expenses, expenses for food, expenses for the lodging of family members in Bwamanda town, etc. are often higher than the direct costs, i.e. the fee to be paid to the health care institution. Two things need to be acknowledged at this stage: firstly the fact that in a rural environment like Bwamanda, the farther people live from the hospital, the higher are these indirect costs and the higher the opportunity cost of an admission, and secondly the fact that the farther people live from the hospital the lower their hospital utilization (King 1966; Kloos1990). Hence members of the insurance scheme who live far from the hospital, but pay the same premium as members living close to it, actually subsidize the scheme. The premiums in the Bwamanda scheme are *de facto* regressive.

There is a need to study the design of systems which aim to increase the solidarity basis of similar schemes. Such systems must not only be technically feasible, but financially affordable and socially acceptable (Gilson *et al.* 1995) as well. A system of sliding scales according to distance from health centre to hospital was tried out in Bwamanda in 1988 with the objective of tackling this problem. It was designed to channel benefits to a well-defined target population, in this case people living far from the hospital. This is what Glewwe & van der Gaag (1988) call *characteristic* targeting, in this case according to the geographical area where people live. In Bwamanda the district team divided the health centre network into 3 subgroups: a first group of health centres ($n = 7$) located less than 25 km from the hospital, a second group ($n = 8$) 25–45 km away and a third group ($n = 7$) more than 45 km from the hospital. The greater the distance from health centre to hospital, the lower the co-payment to be paid by the members when admitted to hospital (see Table 7). This system of characteristic targeting did not have a positive impact on the hospital admission rates of the more remote insured populations. A comparison of 1987 (without targeting) and 1988 (with targeting) revealed that the rates remained similar for groups 1 and 2, and that the rate for group 3 actually fell in 1988 (see Figure 4).

In the following year it was decided to discontinue this experiment with sliding scales because of the absence of effect in terms of equity and to a lesser extent

Table 7 Hospital fees in 1988 (Zaires). Sliding scales according to distance. (In 1988, the average annual exchange rate was 187 Zaires for 1 US$)

Type of admission	Fee for uninsured patients	Co-payment for insured patients from group 1*	Co-payment for insured patients from group 2**	Co-payment for insured patients from group 3***
Paediatrics	600	120	60	30
Internal medicine	1800	350	180	100
Gynaecology	1800	350	180	100
Maternity	1800	—	—	—
Surgery I	1000	200	100	50
Surgery II	2500	500	250	120
Surgery III	3000	600	300	150
Surgery IV	3500	700	350	180

Patients living in the catchment area of health centres situated* at less then 25 km from the hospital,** between 25 and 45 km from the hospital,*** at more than 45 km from the hospital.

because of the more complex management and control procedures required (for instance, the origin of the admitted patients had to be systematically checked). However, some members of the district management team argued that the considerable social acceptability the proposal had achieved among all 3 population groups constituted a strong enough case for continuing the experiment. Moreover, the data did not permit breaking down the number of admissions according to the nature and severity of the health problems for which people were admitted.

The membership rate never exceeded two thirds of the total district population. A survey carried out in 1987 indicated that the very poor were represented to a higher degree in the non-member population (Moens 1990). Differential premiums and fees for the poor, perhaps even exemption of payment, could be considered. Such a policy is called *direct* targeting, i.e. a system where the provision of benefits is limited to individuals or households identified as belonging to the target group (Glewwe & van der Gaag 1988). Direct targeting, in contrast to characteristic targeting, requires means-testing, i.e. a process where specific individuals are classified as eligible or ineligible for benefits (Willis & Leighton 1995). Means-testing procedures could be tested in Bwamanda within the framework of the hospital insurance scheme.

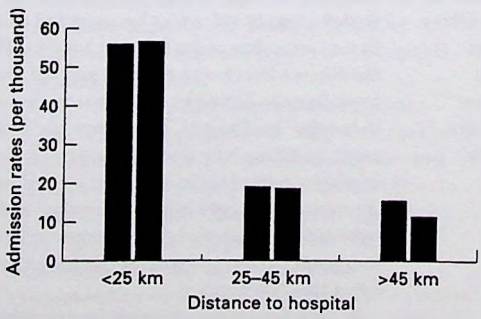


Figure 4 Effect of sliding scale of co-payments for patients living at different distances from the hospital (see Table 7). Admission rates for ■ 1987 and ■ 1988.

Description of the environment in which the Bwamanda scheme thrived

The authors' hypothesis is that the relatively successful development of the Bwamanda scheme, as well as its viability, was possible because it took place in a specific environment. However, the various constitutive features of the Bwamanda environment in which the scheme was conceived and in which it thrived cannot, strictly speaking, be considered *conditions*. The identification of conditions for a successful development would imply a more formal research perspective in which different conditions, or a set of conditions, were tested with the object of assessing whether and to what extent they were necessary for a satisfactory development. This was not the case in Bwamanda. Hence caution is needed in the interpretation of the relative importance of each factor

in the development of the Bwamanda scheme. The features of the Bwamanda environment are tentatively classified in four categories:

Organizational/managerial factors

The insurance scheme was launched in a context in which the district health service system had reached a relatively high level of operational efficiency. In the mid-eighties Bwamanda district was considered one of the best-functioning health districts in the country. It was headed by a strong district management team of medical doctors, senior nursing staff and health service administrators. From the early seventies on it had enjoyed continuous external support, especially from Belgian bilateral aid. On average, two expatriate Belgian doctors and two Dutch nurses (sisters of the Medical Mission) were working in the Bwamanda hospital from 1970 to 1990. In 1986 the district health system functioned as an integrated two-tier system, i.e. a system in which health centres and hospital fulfil their specific roles in a complementary way (Unger & Criel 1995). Use of resources was highly rationalized. The referral and counter-referral system functioned well and contributed to the effective and efficient functioning of the health services. Particularly important was the fact that mechanisms of control to secure rational utilization of the health services were in place: the network of health centres covered the whole of the district area; direct hospital utilization – bypassing the first line – was virtually non-existent; a hospital admission was decided on by the hospital doctor after the patient's referral by the health centre nurse, etc. In such circumstances it was feasible to keep moral hazard within reasonable proportions.

The hospital offered relatively high standards of care and there were no social or cultural barriers to its utilization. Moreover, as the only hospital in the district, it occupied a virtual monopoly position for most people in the district although people living in the southwest of the district had easy access to the hospital in the neighbouring Tandala district. Hence people's willingness to subscribe to a hospital insurance scheme was high.

The scheme's design represented a direct pattern of insurance: the insurers were also the health care providers. In an environment in which rational resource use was a strong tradition such a direct insurance system fostered efficiency.

Preparation of the scheme took more than a year, and both health centre staff and community representatives were closely involved in the initial process of planning and in the implementation of the scheme. There was a huge effort of communication and mobilization every year in the weeks preceding the enrolment period. Staff from other sectors (for instance rural development and agriculture) also contributed to the effort.

Economic/financial factors

The district management team received substantial support from the CDI's general infrastructure and administration facilities. For example, value-maintaining mechanisms for the collected funds were developed in a context of high inflation. Initially the premiums collected were deposited in a special fund at the CDI, which then paid interest rates of 3% per month. Later the collected premiums were invested in the purchase of drugs by the CDI-supported inter-diocesan pharmacy. In the 1990s, when inflation became very high, the revenue from the insurance plan was immediately introduced into the local and regional economic circuit via the CDI's economic activities.

The CDI agreed at the start of the scheme to act as financial guarantor. This back-up was of crucial importance in case the scheme turned out not to be financially viable. Financial viability was unpredictable at the time when the scheme was launched in 1986. The CDI committed itself to cover a financial deficit which could jeopardize the credibility of the insurance scheme. In the period 1990–95, for instance, a deficit occurred twice: on the first occasion the deficit was met by a gift from a donor, and on the second the CDI lent the necessary funds.

The Bwamanda area is typical of a rural context where the availability of ready money is irregular. It was for that reason that the enrolment period was fixed at the time of year when the CDI buys the coffee and soy bean crop in the Bwamanda area.

Social factors

The CDI project initiated its economic and social activities in the economically much disadvantaged Bwamanda area around 1969–70. Initially the Catholic mission in Bwamanda was the structure around which the project's activities were organized and expanded. Gradually a certain number of social services were developed in a spirit of 'integrated' development: the

health infrastructure was upgraded and extended, and the health care delivery system in the district was organized; the local primary and secondary education systems received support; activities in the field of rural development were launched; local communications and transport infrastructures were rehabilitated, etc. Gradually a relationship of trust grew up between the CDI and the population in general and between the health services and the population in particular. This confidence certainly influenced the community representatives in their decision in 1985–86 to join in a hospital insurance scheme even though not all the issues involved were clearly understood at the time. There was also faith in the district management team's ability and trustworthiness to manage efficiently the financial aspects of the insurance scheme.

Political factors

Under the Zairian decentralization policy health districts were to be largely self-financed. Consequently the Bwamanda district management team had sufficient autonomy to allow them to experiment with innovative financing schemes. The overall environment in which the initiative took place was characterized by the virtually total absence of the state, both in terms of resource allocation and in terms of planning, regulation, control, etc. This *de facto* vacuum left district teams with almost total autonomy to manage (or not to manage) the health systems for which they were and are responsible. The lack of government support for the district health services was a general trend in Zaire for many years: the last subsidy from the government to the Bwamanda health services was in 1984. In fact in the case of Bwamanda the absence of government funding of the hospital's recurrent costs was at the core of the problems which led the district team to consider an insurance scheme in the first place.

Policy conclusions

Replicability of the Bwamanda scheme?

As argued in the previous section, the Bwamanda experiment was launched at a time when the overall performance of the district health services system had reached a high standard and local managerial capacity was strong. These features were not, however, specific to the Bwamanda setting alone. During the seventies and eighties many other districts in Zaire developed, often with substantial donor support, highly effective district health services. What was specific to Bwamanda was the existence of the CDI project and its financial, logistical, technical and institutional support. The CDI increasingly took over some of the basic responsibilities that would normally fall on the state. Indeed, the project's activities partly filled the vacuum created by the virtually complete withdrawal of the Zairian state from the public service arena. The reproducibility of the Bwamanda scheme in other parts of the country – and perhaps in other parts of the region – seems therefore largely dependent on the presence of support by a public interest-orientated body or institution. As the state of Zaire has effectively collapsed and is not capable of performing this supportive role it is probable that such an enabling environment can be created only through effective and sustained NGO-supported development projects.

Avenues for further research

Several areas for investigation and study were identified in the previous sections: the need for tools and methods for the identification of moral hazard; the need for research on the impact of health insurance on patient delay; the need to design and test mechanisms increasing the solidarity basis and equity of the scheme. Research on these managerial issues would contribute to a better understanding of the Bwamanda scheme and to more appropriate design and organization procedures.

Health insurance is, however, socially not a neutral phenomenon. In his analysis of the social functions of health insurance in both modern and traditional societies Rushing (1986a, b) argues that the introduction of insurance leads to qualitative transformations in terms of social relations, that health insurance may also bring important non-medical benefits, and that it may exert substantial influence on social integration and cohesion in the community. An evaluation which limits itself to the more quantitative aspects of the scheme would necessarily remain incomplete. Hence it would also be interesting to study in more detail the social perception and the social impact of the Bwamanda scheme after 10 years of operation. For instance, is there in the community a feeling of 'collective ownership' of the scheme? Or is it (still?) considered a 'foreign' initiative taken by the health service? How do people perceive the social concern of risk-sharing which guided

the district team in its decision to consider health insurance rather than other hospital financing methods? What are the reasons motivating people to join (or not to join) the scheme? Has the insurance scheme had any influence on existing social organization patterns, more particularly on the very many small-scale family and group mutual aid mechanisms?, etc. Obviously more qualitative research methods would need to be used.

Conclusion

Notwithstanding the specific features of the environment in which the Bwamanda experiment took place, this case study illustrates the feasibility of health insurance – at least for hospital-based inpatient care – at rural district level in sub-Saharan Africa. It provides evidence supporting Arhin's position not to dismiss rural health insurance in Africa as impractical or unfeasible (Arhin 1995a). But at the same time it clearly illustrates the managerial and social complexity of such financing mechanisms. The need to proceed with caution is thus apparent. In Bwamanda there was enough time and room for manoeuvre to do so. In many other places the (financial) situation may be much more acute and may require quicker – but less well prepared – decisions.

Experience in Bwamanda also highlights the fact that locally developed health insurance schemes, in addition to their financial and social objectives, may constitute an opportunity to improve the overall coherence of district health service systems. The Bwamanda scheme contributed to strengthening the local referral system; it made the different roles of health centre and hospital explicit; it triggered discussions within the management team on important issues like the adequacy of health services utilization, equity, social perception of community financing schemes, etc.

The district is the most appropriate level in the health system for top-down and bottom-up planning to meet. It is sufficiently small to allow management teams to be familiar with the specific features of the setting and to acquire a thorough knowledge of the community, while being sufficiently large to allow for economies of scale. There is a case for considering this balance as a major asset in the specific processes of the planning, design, implementation and evaluation of health insurance schemes. The district team's knowledge of the community – as long as the team is sufficiently competent and stable – is important and valuable because it permits adaptations of general guidelines to local constraints, and the smallness of the district facilitates people's understanding and endorsement of the potential benefits of health insurance schemes. This social proximity may facilitate accountability from district team to community; trigger the establishment of local mechanisms of social control over the insurance scheme; and perhaps promote the gradual development of a feeling of collective ownership of the scheme. At the same time the population of the district is large enough to enable substantial pooling of funds and to make risk-sharing arrangements possible.

The district level – rather than the provincial or central level – appears to be most promising in the health system for the implementation of health insurance schemes. There are still few documented case studies of health insurance schemes managed at the *local* level in sub-Saharan Africa, and thus hard evidence supporting this hypothesis is lacking. There is, however, evidence that health insurance schemes which are managed at the national level in sub-Saharan Africa remain inadequate (Vogel 1990b). Studies of the Burundi health card insurance scheme indicate that this national insurance scheme would benefit from more managerial autonomy at the peripheral levels of the health system (McPake *et al.* 1993; Baza *et al.* 1993; Ahrin 1994).

The role of district teams as key actors in the management of insurance systems does not mean that there would be no further role for the central level. Decentralization should not be reduced merely to privatization and limitations on the role of the state (Collins & Green 1994). In the present discussion on health insurance systems the role of the central level would not lie primarily in actually organizing these systems but rather in designing a framework for their organization, in providing district teams with the necessary assistance in design, training and information services (WHO 1996) and – last but not least – in compensating for the differences between districts in their ability to raise local revenue. Some degree of centralization thus remains necessary if these differences are to be compensated for through national financing reallocation mechanisms (Collins & Green 1994). In Zaire these corrective mechanisms have, unfortunately, not worked for many years. The consequence is that a relatively successful hospital insurance system within an

effectively functioning and externally supported district system co-exists with very poor health service systems in the neighbouring districts. The substantial proportion of Bwamanda hospital users coming from neighbouring districts (20% in 1995) illustrates Bwamanda's attractiveness in terms of quality of care offered; it also indicates the poor performance of the hospitals in the surrounding districts. Support to these districts – in terms of staff, finances and logistics – is crucial if a balanced development of *all* the health services in this part of Zaire is to be achieved.

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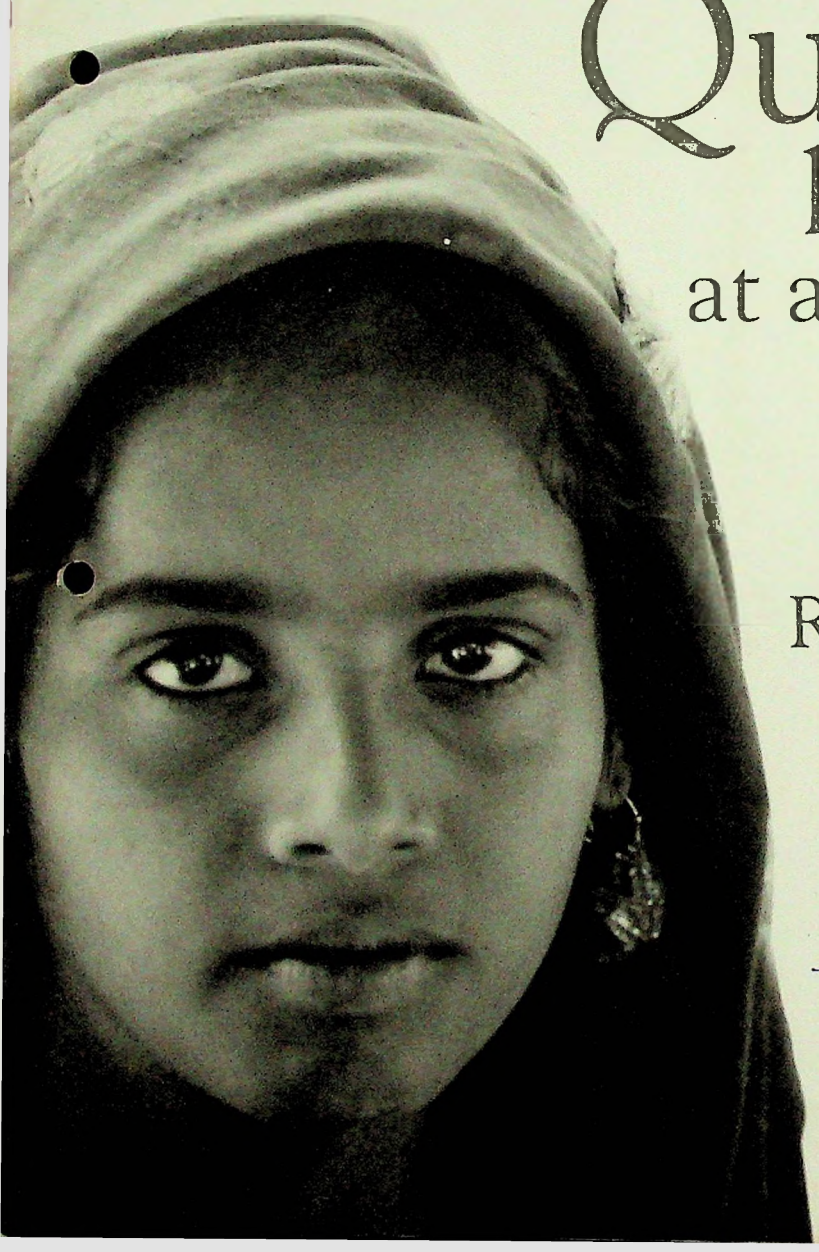


Quality healthcare at a nominal amount of just Rs.5 (11 cents).

Success story of the
Yeshasvini Health Scheme

In 5 years, every family in India will be protected by a health scheme.

Dr. Devi Shetty
Chairman, Narayana Hrudayalaya, Bangalore

We at Narayana Hrudayalaya Foundation, Bangalore and the Asia Heart Foundation, Kolkata have a dream. A dream of making sophisticated healthcare available to the masses, especially in a developing country like our own.

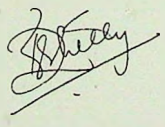
We run two hospitals in India, Narayana Hrudayalaya, a 780-bed hospital project in Bangalore and the Rabindranath Tagore International Institute of Cardiac Sciences, Kolkata dedicated to cardiac care.

Over 20,000 heart surgeries later, we realized that we were still part of a micro picture. The areas we could cover, or rather had to cover, were far bigger than we could ever hope to reach. Which is when we realized we needed an outreach program, and fast.

The first step was to launch the Telemedicine Program, a first-of-its-kind initiative in association with the Indian Space Research Organisation (ISRO). In the first leg of its inception, the program rolled out in the north-eastern hilly regions of Tripura, Siliguri, Bankura in West-Bengal, Tinsukia in Assam, and Chamrajnagara, the tribal belt of Karnataka. So far, 10,000 heart patients have been advised treatment, free of cost under the program.

With the problem of accessibility gone, we faced a new problem. In spite of having the best of doctors and facilities in place, the rural masses lacked the capacity to pay for speciality care. Which is when, we initiated the Yeshasvini Health Scheme, a healthcare scheme for the rural masses to access quality healthcare at a nominal amount of Rs.5 (11 cents) per month. The program went on to become a successful venture of the Co-operative Department, Government of Karnataka.

And this brochure takes you through that success story.



Dr. Devi Shetty

Sri. S. M. Krishna
Hon'ble Chief Minister, Government of Karnataka
"Every farmer must be covered by a health scheme."

Even as India propels into an era of prosperity and technological advancements like never before, we still lack an efficient healthcare delivery system for the masses. A scenario that is prevalent especially among the marginalized and the rural population of India.

The beginning of a movement called Yeshasvini

Healthcare experts, both in India and the world over, unanimously agree that the main causes of pain and suffering in villages are lack of quality hospitals, qualified doctors, and medical equipment. We too, for a long time believed in these facts until studies proved us wrong.

Sri. H. Vishwanath
Hon'ble Minister of Co-operation, Government of Karnataka
"This is a co-operative movement that has all the makings of a revolution in quality healthcare."

Sri. Kagodu Thimmappa
Hon'ble Minister of Health and Family Welfare, Government of Karnataka
"We have a dream of mass healthcare."

What did the study tell us?

In a startling discovery, through an informal survey, we learnt that occupancy of hospital beds in Karnataka on an average stood at a mere 35%. The utilization of operation theaters was even lower.

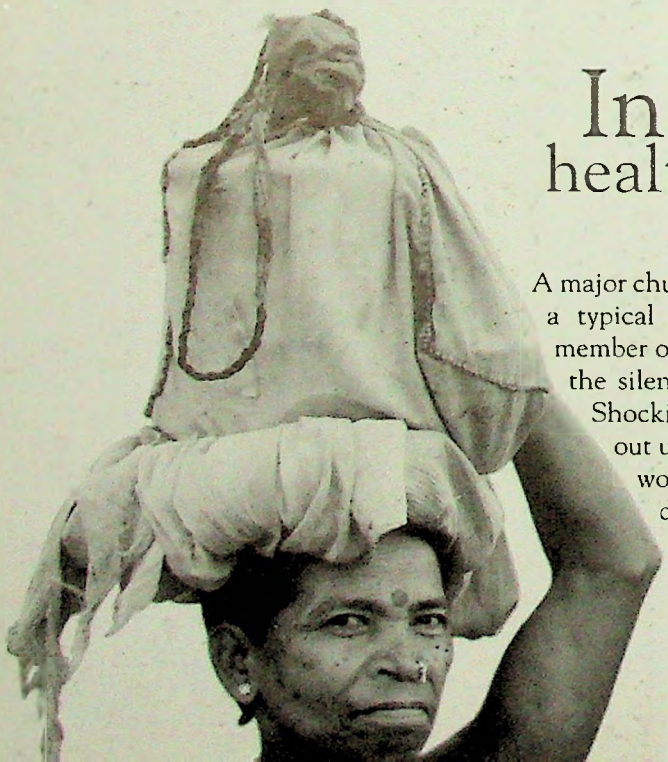
It was common for aged men to suffer from kidney failure for want of a simple prostrate operation, or from premature blindness which is easily rectifiable by a cataract extraction procedure. Thousands of middle aged women suffered from excessive bleeding because of a diseased uterus which could be removed by an inexpensive operation. Thousands of children died every year due to appendicitis, another easily curable condition.

Through the study we concluded that it was not the lack of infrastructure, but the lack of paying capacity of the working class and the poor, which was the root cause of the mammoth healthcare problem India faced.

In fact, our findings correlated with the observations made by Dr. Amartya Sen, Nobel laureate, who opined that the cause of the Bengal famine was not the shortage of food, but the lack of paying capacity among the rural masses.

Hence, began one of the most ambitious, self-funding initiatives to bring quality healthcare within the reach of the masses - the Yeshasvini Health Scheme.

Sri. A. Ramaswamy, IAS
Principal Secretary, Department of Co-operation, Government of Karnataka
"Bureaucracy backed by political will, will move mountains."

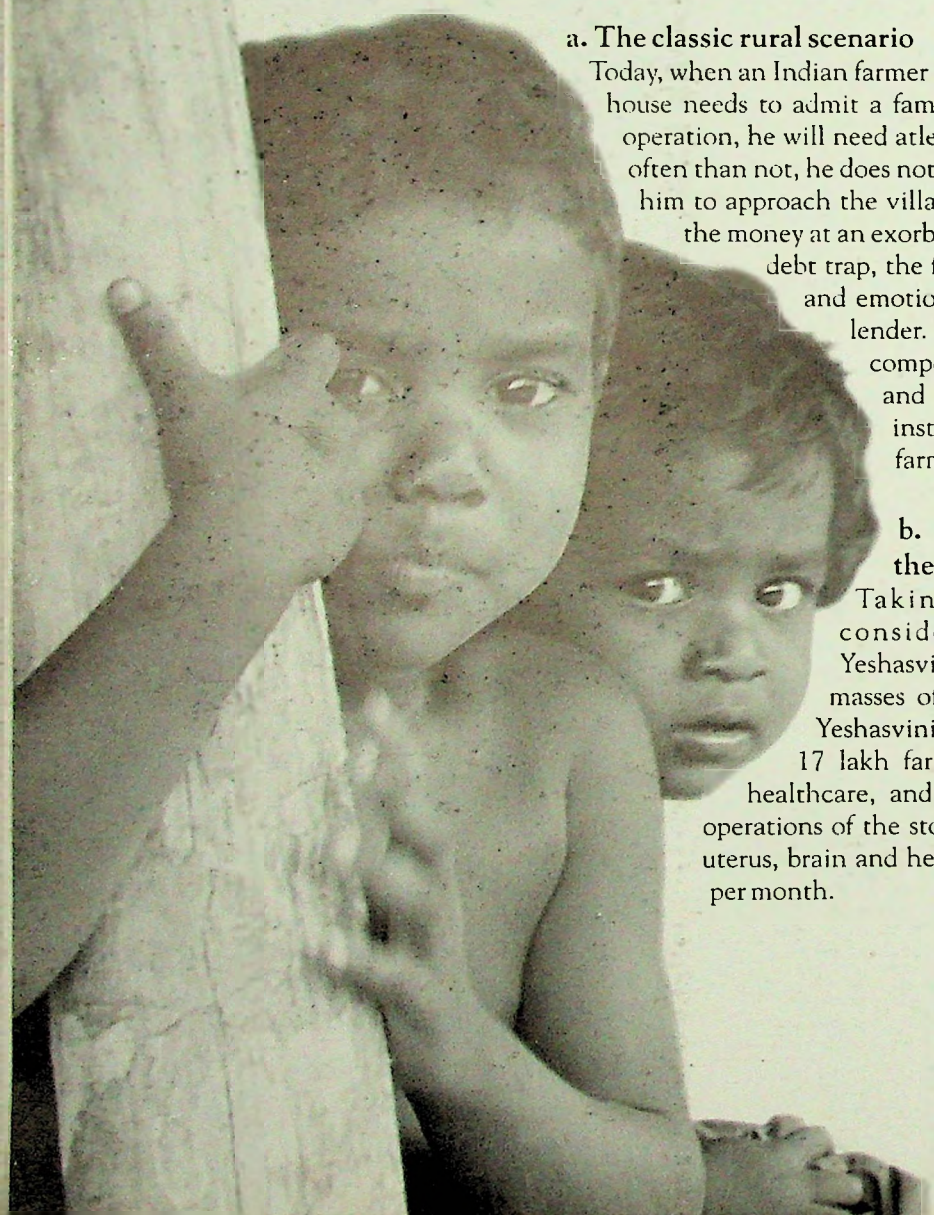


India health file

A major chunk of the budget allocated for healthcare in a typical Indian family goes to the earning/male member of the family. Children follow while women, the silent sufferers, occupy the bottom of the list. Shockingly, the most common operation carried out under the Yeshasvini Health Scheme was on women. Hysterectomy or the removal of diseased uterus in women accounted for 24% of all operations carried out.

Dr. Prathap C. Reddy
Chairman, Apollo Group of Hospitals
"Bringing healthcare of International standards within the reach of every individual."

Yeshasvini Health Scheme, a story of success



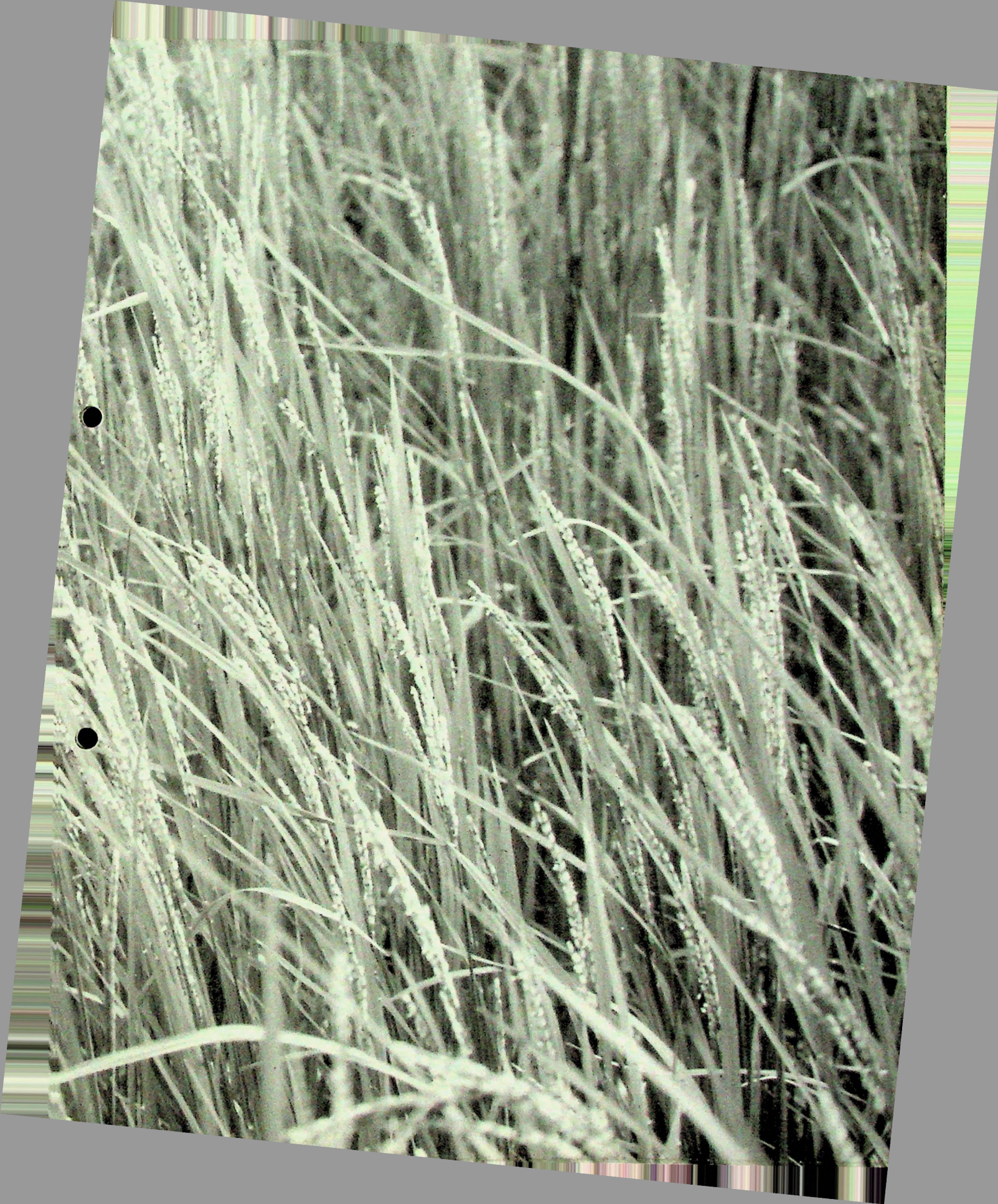
a. The classic rural scenario

Today, when an Indian farmer who owns two acres of land and a house needs to admit a family member to a hospital for an operation, he will need atleast Rs.5000 in cash which, more often than not, he does not have. The next logical step is for him to approach the village money lender who lends him the money at an exorbitant rate of interest. Once in the debt trap, the farmer undergoes severe physical and emotional harassment from the money lender. The situation could further get compounded by crop failures, famine and drought. The result is high instances of suicide amongst the farming population.

b. Yeshasvini Health Scheme - the plan

Taking these parameters into consideration, the self-funding Yeshasvini Health Scheme for the rural masses of Karnataka was launched. The Yeshasvini Health Scheme provided over 17 lakh farmers and their families quality healthcare, and that included costs of critical operations of the stomach, gall bladder, bones, eyes, uterus, brain and heart at a nominal Rs.5 (11 cents) per month.

Sri. H. Siddaiah, IAS
Registrar of Co-operative Societies,
Government of Karnataka
"We have one of the strongest co-operative networks in the world."



Dr. Alok Roy
Managing Director, Family Health Plan Ltd.
"Self-funding health schemes are the buzzword when it comes to revolutionizing delivery of quality healthcare to the masses."

c. Yeshasvini Health Scheme - the first steps

The Yeshasvini Health Scheme was open to people who were together for a purpose. Be it as a co-operative society, a grameen bank or quite simply for a reason other than health. This criterion was of paramount importance for the success of the scheme, because opening the scheme to everybody would have resulted in only people with diseases becoming members. This in turn would make a self-funding scheme unviable.

d. Yeshasvini Health Scheme - at work

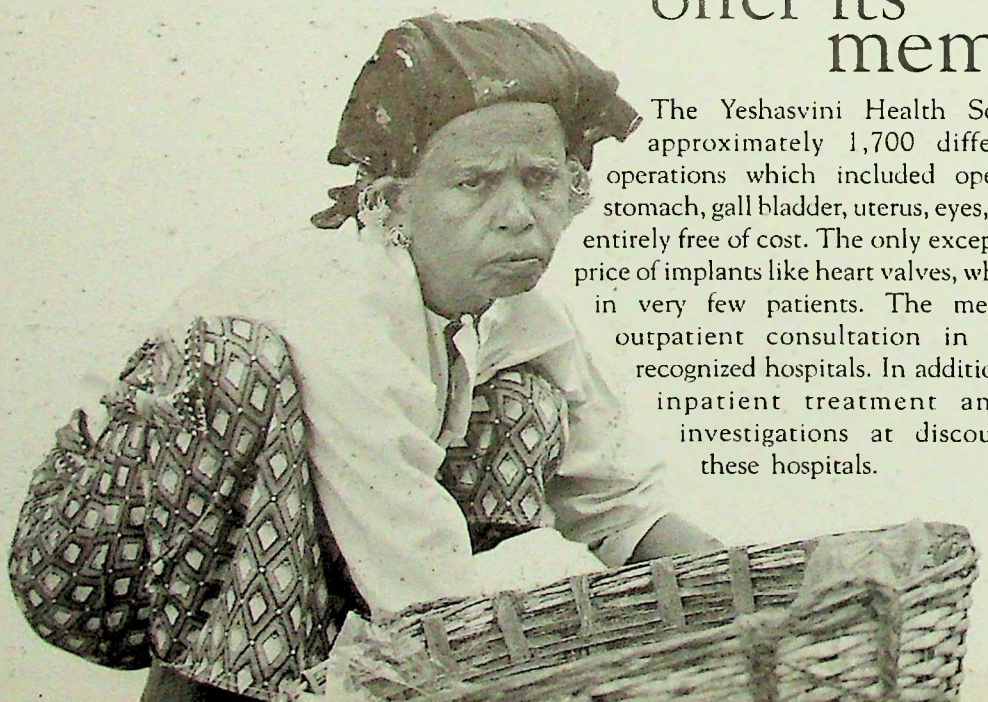
The Yeshasvini Health Scheme entirely depended on numbers to keep it afloat. Working around the axiom that it costs Rs.10,000 for a life saving operation, the Yeshasvini Health Scheme was open to a large number of people because, among 17 lakh members only a few thousand members are usually the ones with diseases. The other members are generally healthy members who pay for the treatment of the rest of the diseased members. (Moreover, the Yeshasvini Health Scheme enrolled members already diagnosed with diseases.)

Today 85 hospitals are recognized for treatment at 27 districts in Karnataka ensuring farmers do not travel outside their districts for operations, except for heart and brain surgery, which are carried out at 8 hospitals, spread across the major cities of the state.

Sri. A. Shankar
Trustee, Narayana Hrudayalaya Foundation
"Every social problem has an economic reason which can be solved."

What does Yeshasvini Health Scheme offer its members?

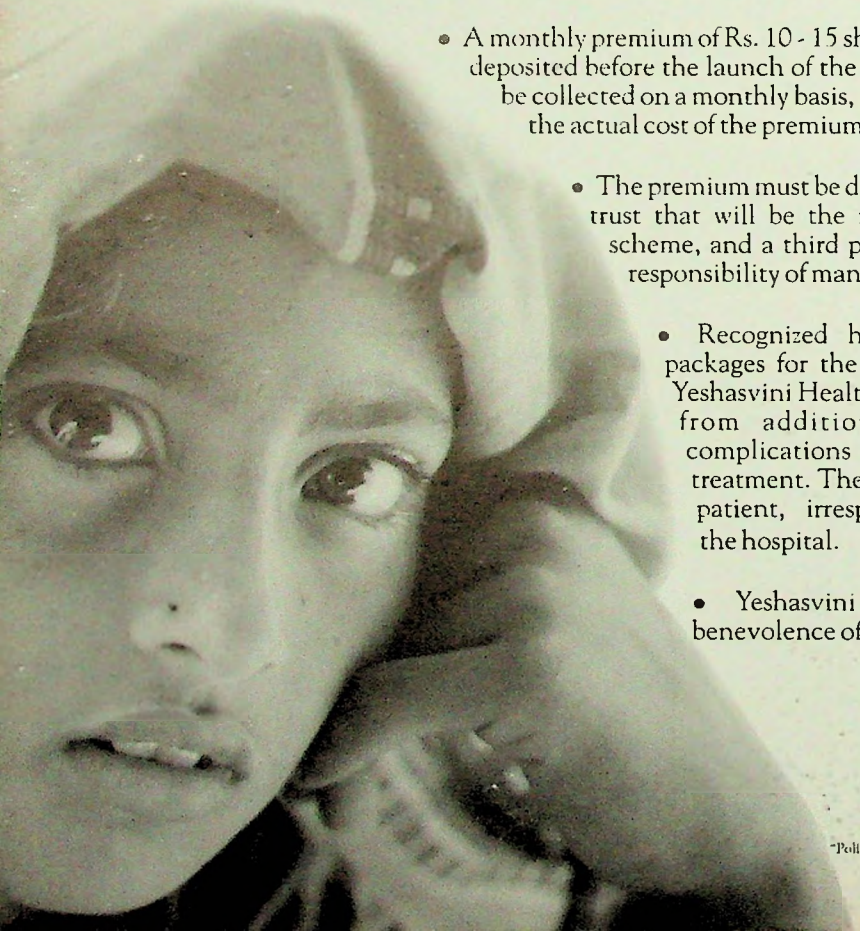
The Yeshasvini Health Scheme covered approximately 1,700 different types of operations which included operations of the stomach, gall bladder, uterus, eyes, heart and brain, entirely free of cost. The only exception being - the price of implants like heart valves, which are required in very few patients. The members get free outpatient consultation in all Yeshasvini recognized hospitals. In addition, they also get inpatient treatment and outpatient investigations at discounted rates in these hospitals.



Dr. K. Sudarshan
Vigilance Director, Karnataka Lokayukta
"Access to healthcare is the fundamental right of every citizen."

Absolute requirements for the success of a self-funding health scheme like the Yeshasvini Health Scheme

- A minimum of 10 lakh members.
- The members should have come together for some other reason than healthcare, like a co-operative society, a teachers association, a grameen bank or the like.
- A monthly premium of Rs. 10 - 15 should be collected for the whole year and deposited before the launch of the scheme. If the membership fees were to be collected on a monthly basis, the logistics would amount to more than the actual cost of the premium.
- The premium must be deposited in the account of the charitable trust that will be the regulatory body for implementing the scheme, and a third party administrator should be given the responsibility of managing the scheme, on a day-to-day basis.
- Recognized hospitals should offer comprehensive packages for the operation, which will be paid by the Yeshasvini Health Scheme. Patients should be exempted from additional charges if he/she develops complications that requires additional stay and treatment. The hospital should not directly charge the patient, irrespective of the duration of stay in the hospital.
- Yeshasvini is successful primarily because of benevolence of the recognized hospitals.



Dr. Alexander Kuruvilla
Medical Superintendent, Narayana Hrudayalaya
& Chief Co-ordinator, Yeshasvini Health Scheme
"Political will, supported by private entrepreneurship can solve most social problems."

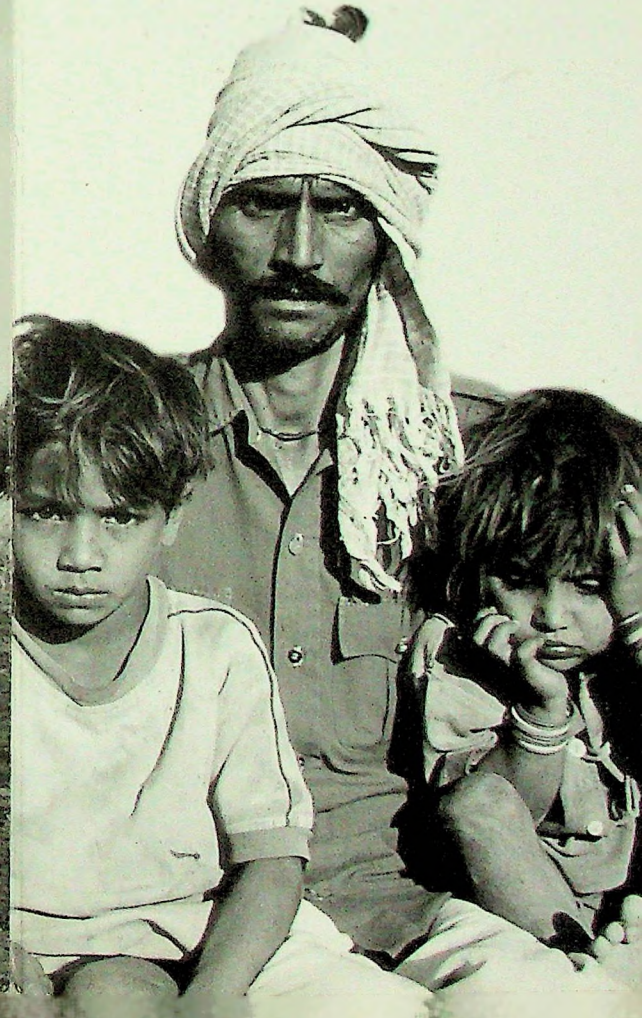
Name: Chikkaya
Age: 50 years
Place: Mandya District, Karnataka
Underwent successful surgery for a chronic debilitating backbone condition, in a nearby **Yeshasvini** Network Hospital. He says, "A small contribution of sixty-rupees has saved my precious life."

Name: Vijayamma
Age: 35 years
Place: Mandya District, Karnataka
Underwent spine operation under the scheme at Mysore. She says, "We work as daily laborers near Bernal and this scheme has helped us in time, like a friend."

Name: Prasanna
Age: 20 years.
Place: Tumkur District, Karnataka
He underwent open-heart surgery and valve replacement at Bangalore. He says, "Had this scheme been there before, my father would also have survived like me."

Name: Prema
Age: 40 years
Place: Mandya District, Karnataka
She got quick and responsive treatment at the right time for a broken leg. She says,"**Yeshasvini** program proved to be a gift. I feel God himself came down and treated me."

Name: Chikkamma
Age: 35 years
Place: Mandya Disrtict, Karnataka
A widow from Vivasoor near Mandya, she had bothering uterine problems, which was set right by hysterectomy under the **Yeshasvini** Health Scheme. Her daughter in an emotional tone said, "**Yeshasvini** has helped bring back my mother from the dead!"



The day
this man
has access
to healthcare,
we become
a developed Nation

The power of self-funding schemes

In a short span of time, the Yeshasvini Health Scheme has breathed a new lease of life in bringing quality healthcare within the reach of rural Karnataka. With its dynamic structure that generates funds to run itself, the Yeshasvini Health Scheme forms a working model for more such initiatives across the country.

In the first 7 months of its launch, 5,000 farmers underwent various types of operations and 23,500 farmers had out-patient medical consultation, entirely free for just Rs.5/- per month. That is the amazing power of a self-funding health scheme in action.

The Yeshasvini Health Scheme was conceptualized and launched by Narayana Hrudayalaya in association with various co-operative societies and the Government of Karnataka as a social welfare activity. The entire expense of conceptualizing and implementation was borne by Narayana Hrudayalaya as a charitable activity.

The Family Health Plan Ltd., is an IRDA recognized Third Party Administrator that does day-to-day management of the scheme under the supervision of the Yeshasvini Trust.

If any state government or organization wishes to launch a self-funding health scheme like the Yeshasvini Health Scheme, Narayana Hrudayalaya will carry out the entire process of launching the scheme, free of cost using its expertise and infrastructure.

For any further information or queries please feel free to contact Dr. Asha Naik, Co-ordinator, Yeshasvini Health Scheme, at Narayana Hrudayalaya on 80 - 783 5000 or mail us at hrudayalaya@sify.com

Narayana Hrudayalaya

258/A, Bommasandra Industrial Area, Anekal Taluk, Bangalore - 560 099. Tel: 080-783 5000 - 18. Fax: 080-783 2648. email: hrudayalaya@sify.com Web: www.hrudayalaya.com

Community Risk Transfer Through Microinsurance:

An Opportunity for South Asia?

An Effort to Turn Local Tsunami Recovery into Regional Disaster Risk Reduction for the Poor

southasiadisasters.net

Issues: 14 May 26, 2006

In this issue

Recipes for Risk Reduction– the Emergence of Microinsurance

Following the UN year of Microcredit in 2005, there is growing interest in microfinance solutions to help alleviate poverty in developing countries. In Asia, in particular, the demand for microfinance has encouraged an ever-increasing number of institutions to provide services, such as microcredit, savings and social funds for low-income households. Microfinance services are also now beginning to include the provision of microinsurance as financial protection for low-income households or businesses against specific losses including death and funeral expenses, health expenses, loss of small-scale assets damage to property or loss of livestock and crops. The emergence of microinsurance is an important development within the field of microfinance and challenges the previously wide-held belief of the "non-insurability" of the poor.

Microinsurance is also emerging as a potential instrument for transferring natural disaster risks by providing cover, or indemnification, against losses from a disaster event. Like other forms of microinsurance, the intent it to provide easily accessible insurance cover for small-scale assets at affordable premiums by keeping transaction and other costs low. By protecting the poor from disaster losses and providing incentives for risk reduction, microinsurance is increasingly recognised as an important part of disaster risk management.

However, questions remain over the affordability for the poor and the viability of such products from a commercial point of view. To address these key concerns there is need for more learning informed by practice and, thus, this latest *southasiadisasters.net* is an important contribution to the debate on microinsurance.

This issue of *southasiadisasters.net* examines the subject of microinsurance and discusses the opportunities and challenges that have been learned through recent experiences in implementing microinsurance schemes in Asia. The opening articles introduce the concept of risk transfer that underpins microinsurance and discuss its relevance to disaster mitigation. Case study examples illustrate different approaches to microinsurance, including a range of insurance services and products tailor-made for low-income communities, and highlight salient lessons learned for the evolving microinsurance agenda.

We sincerely hope that this issue of *southasiadisasters.net* will contribute towards further learning and practice in microinsurance and help promote the use of risk transfer as an important tool in the field of disaster risk reduction. Certainly, as disaster losses continue to grow and the poor are hit the hardest there is an urgent need for more innovative solutions–microinsurance could be one. ■

David Peppiatt
Head, ProVention Consortium Secretariat
May 2006

This issue has been prepared by AIDMI as a contribution to the Annual Meeting of the International Task Force on Commodity Risk Management in Pretoria, South Africa.

Conceptualising Risk Transfer

The provision of financial services like savings or credit for the poor is well recognised as an effective instrument to address poverty, especially the economic well being of the poor.

However, despite savings and credit services, the population of India and its neighbour countries face many risks or shocks in the form of natural disasters that make the poor **vulnerable**. Implicitly, attempts by poorer households to cope with severe hazards, often leads them into debt and ultimate impoverishment—a challenge that the World Bank refers to as the "poverty trap".

All photographs in this issue: AIDMI

Disasters destroy assets that have been accumulated by individuals and families. Without these assets, they are increasingly vulnerable to future disasters.

In order to address this issue, this newsletter will focus on the concept of risk transfer for achieving risk reduction. One microfinance tool which allows risk transfer is the relatively new instrument of microinsurance. Essentially, many individuals or groups are capable of sharing the cost of a risky event when applying microinsurance.

The rationale behind the concept of risk transfer lays in the fact that by forging relationships with other community members, low income households can achieve a greater reduction in vulnerability than through individual strategies. Thus, the risk is transferred from the individual level to the community or inter-community level with groups in different geographic locations which are not equally disaster-prone.

"Of the four billion people on earth today who live on less than two dollars a day, fewer than ten million have access to insurance."
– Munich Re Foundation

As we will learn, microinsurance products have the potential to offer more complete protection against many risks and therefore against significant loss. This service is provided at an affordable cost, the so called premium. ■

How can we Define Microinsurance?

The Consultative Group to Assist the Poor (CGAP) provides a helpful definition of this instrument of microfinance:

"Microinsurance is the protection of low-income people against specific perils in exchange for regular monetary payments (premiums) proportionate to the likelihood and cost of the risk involved. As with all insurance, risk pooling allows many individuals or groups to share the cost of a risky event. To serve poor people, microinsurance must respond to their priority needs for risk protection (depending on the market, they may seek health, car, or life insurance), be easy to understand, and affordable" (CGAP 2003).

This definition refers to another important feature: the insurance has to be understandable. This is an issue we will devote more attention to in terms of the discussion of the *Aftat Vimo* (AIDMI's disaster insurance) scheme since it implies that alongside the supply of products every interested institution, the training of potential "clients" becomes relevant.

After having provided a definition of microinsurance, it appears interesting to learn more about the criteria of insurability from the perspective of a potential provider. According to Brown and Churchill, the features to be taken into account are the following (Brown and Churchill 2003):

- A large number of similar units exposed to the risk.
- Limited policyholder control over the insured event.
- Insurable interest.
- Losses are determinable and measurable.
- Losses should not be catastrophic.
- Chance of loss is calculable.
- Premiums are economically affordable. ■

For CHC Lib - from Ameer Khan
Jan 6/6/06

Role Models in Microinsurance: Who Contributes in the Provision?

Following Cohen and McCord (2003), we can distinguish four institutional models for providing microinsurance which help us to understand how corporate insurers, government bodies as well as other institutions, such as microfinance institutions (MFIs) can play a role.

Organisations considering taking up microinsurance initiatives should take the positive and negative aspect of each into account in order to achieve the best fit with their circumstances.

a. ***Partner - agent model:*** Commercial or public insurers together with MFIs or non-governmental organisations (NGOs) collaboratively develop the product. The insurer absorbs the risk, and the MFI/NGO markets the product through its established distribution network. This lowers the cost of distribution and thus promotes affordability.

This model of collaboration has become the dominant approach to microinsurance in India and has encouraged many microfinance institutions to switch from a full-service model to the partner-agent model. Examples of this scheme are AIDMI's *Afat Vimo* as well as SEWA, a microinsurance pioneer, who offers its life, health and asset coverage in partnership with various insurers.

b. ***Community-based model:*** A group of people or local communities, MFIs, NGOs and/or cooperatives develop and distribute their own product, manage the risk pool and absorb the risk.

The Swayamkrushi Youth Charitable Organisation (YCO) in Andhra Pradesh

"We cannot stop natural calamities, but we can and must better equip individuals and communities to withstand them."
– UN Secretary Kofi Annan

is an example of a community-based model. It is primarily a savings and credit association with added insurance features. The cooperative's 8,100 members pay a yearly premium of Rs. 100 ($2.22) into a pool managed by the cooperative and receive cover for death and property loss. The life insurance benefit is Rs. 15,000 ($333) for a natural death, and Rs. 30,000 in the event of an accidental death.

c. ***In the in-house or full-service model,*** a MFI or NGO runs its own insurance scheme for its clients and any profit or loss is absorbed by the MFI. The system is not very common anymore but it still exists in some organisations such as SPANDANA, located in Guntur, Andhra Pradesh. This scheme started in urban areas and then moved to rural ones and has expanded enormously in recent years.

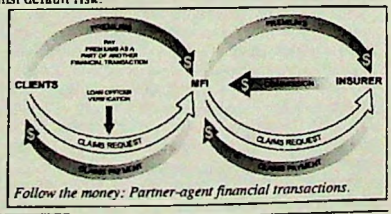
d. ***Provider model:*** Banks and other providers of microfinance can directly offer or require insurance contracts. These are usually coupled with credit, for example, to insure against default risk.

This model is used widely in the general insurance market but high transaction costs and low ability to pay premiums inhibit its extensive use in the field of disaster insurance for the poor.

If microfinance tools are considered appropriate in order to help the poor- then why are microinsurance products relatively new and why do many corporate insurers lack interest in this market?

An answer to this question will include several factors. Economic reasons relate to the insurability of the poor in developing countries. Other reasons have to do with the specific terms of disaster insurances.

Concerning the first point, namely the economic reasons, one can state that the insurance sector has not shown much interest in the provision of insurance schemes for the poor since they are usually not expected to be able to pay high risk premiums. This is understandable given the irregular and small income these people earn—especially those in the informal sector. Furthermore, the transaction cost of these insurance products very high relative to the premiums because proper infrastructure is lacking and potential insurers would face a high illiteracy rate. This implies that policyholders need training before signing an insurance contract. These problems are often addressed to as the concern of "capability" and the "willingness to pay" of the poor.



Follow the money: Partner-agent financial transactions.

A very central issue that deserves more explanation is the asymmetric distribution of information between insurer and insured which might lead to ***adverse selection*** as well as ***moral hazard***. Adverse selection implies that since the insurer is not able to screen the beneficiaries of his product in terms of their related risks, he might set the premium which should reflect the risk of the insured too high which leads the "good risks" to drop out of the market- finally leading to market failure. Moral Hazard on the other hand, refers to the fact that an insured person might change his behaviour after having signed the contract (i.e. by investing less effort in the harvest). Moral hazard is therefore commonly known as the problem of incentives.

There are some other important features to be kept in mind, namely the specific difficulties related to disasters.

Contrary to risks such as the death of a breadwinner or livestock, health expenses, funeral expenses and property damage from theft/fire which are mostly independent (i.e. they do not affect whole communities or risk pools at a time), disasters, on the other hand, are covariant risks which imply that they not only take the lives of people and livestock but cause also damages to property and crops. Brown and Churchill (2000) refer to the following characteristics which make disaster insurance different from others:

- Disaster risks are difficult to estimate.
- They can affect large portions of the population or the risk pool at the same time.
- Informal safety nets (family and friends) tend to break down.
- They cause multiple losses simultaneously to health, life and property.

The characteristics of poor people, especially in disaster-prone areas, make it difficult to imagine that private insurers could ever show interest in these individuals. Recent experience, however, indicates that it is possible to provide microinsurance schemes and at the same time working cost-efficiently. Details on successful products and lessons learnt are found below.

Glossary of Important Terms Related to Insurance

Adverse Selection:	Also called anti selection, the tendency of persons who present a worse than average risk to apply for, or continue, insurance. If not controlled by underwriting, results in higher-than-expected loss levels.
Covariant Risk:	A peril that affects a large number of the policyholders at the same, e.g., an earthquake; or several risks that consistently occur together (at the same time or under the same circumstances).
Moral Hazard:	A risk that occurs when insurance protection creates incentives for individuals to cause the insured event; or behaviour that increases the likelihood that the event will occur. Examples include bad habit such as smoking in the case of health insurance or life insurance.

Source: ILO

Do people affected not face other, more important problems related to their very basic needs such as shelter or food and how does the provision of microinsurance products fit in the standards of the International Community in terms of disaster mitigation?

Indeed, the above question is a very legitimate one and one may ask whether insurance products are of central importance or they rather represent secondary needs.

In providing an answer to this question, one has to consider that disaster mitigation is a long-term process and implicit in sustainable human development. The issue of risk reduction in the form of risk transfer becomes central as it helps to accelerate the recovery and secure the gains of disaster-affected people. In order to implement insurances as a useful tool in the field of disaster mitigation, any institution working in this specialised field of development work has to be aware of the fact that complementary actions such as disaster awareness, capacity building, and effective product design are of central importance.

Quoting UN Secretary General Kofi Annan in this context sheds light on the fact that the international community shares this perception: "We cannot stop natural calamities, but we can and must better equip individuals and communities to withstand them". We find further evidence in favour of the importance of Disaster Risk Reduction as one of the so called "UN Priorities for Action" (point 5) as a part of the "Hyogo Framework for Action 2005-2015" by the UN ISDR (International Strategy for Disaster Reduction). This framework is dedicated to Disaster Risk Reduction and states that disaster preparedness for effective response should be strengthened at all levels.

Microinsurance contributes to breaking the cycle of poverty and mitigating disasters. This is possible because it helps transfer life as well as non-life risks and fits the states priorities of the international community. ■

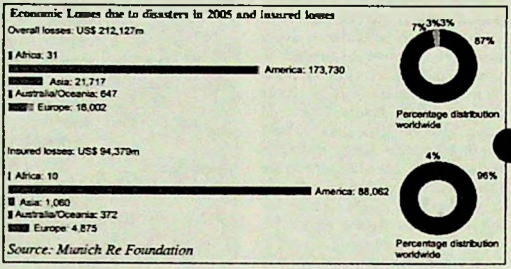
Insurance Models for Developing Countries from Developed Countries: A Case for Microinsurance

In rich countries, financial services on the whole work well. These services have evolved to fit the needs and circumstances of these environments. The vast majority of people have access to interest bearing savings accounts, mortgages at reasonable rates; they have a choice of consumer credits as well as insurances for almost every kind of risk at premiums that reflect the risk of losses.

A recent study of the World Bank (Hess et al., 2005) has addressed the question on whether agricultural insurances designed for developed countries can be applied in the same fashion in the context of developing countries. The results of this study are relevant since they hint at some environmental characteristics that must be taken into consideration whenever an institution is interested in providing insurance schemes.

The mentioned study presents the available insurance products covering agricultural risks in Canada, Spain and the United States of America. The products are covered either by the government (regional or national) alone or jointly alongside a corporate insurer and cover around 100 species of crops. These insurances work quite well at first sight and farmers in the mentioned developed countries are keen on signing the insurance contracts. When undertaking further analysis, however, the authors notice that the respective governments have to provide high monetary contributions to the various insurance schemes. The authors find that, considering these issues, agriculture insurance models for developed countries are not applicable for developing countries.

Each of the presented countries, the government plays either a minor or major role in providing the insurance products. This implies an income transfer in terms of national budget, the very basic fact of the amount of **available resources** becomes very relevant.



Implicitly, developed countries can afford to allocate much higher amounts of money in this form of agricultural subsidies with respect to developing ones[1]. A further consequence of the discrepancy in fiscal resources as well as the status of countries' development has been depicted in the opportunity costs of money spent in this particular field. Considering the scarce resources of developing countries, the opportunity costs of money allocated to agricultural subsidies are much higher since money could be spent in another manner that might result in higher growth rates and in better long-term welfare.

Another relevant point is the importance of the tertiary sector in the economies of developed and developing countries respectively is very different. In India, for instance, two thirds of the workforce has an occupation in agriculture compared to approximately 3% in the United States. Consequently, would the expenses of wide coverage be exuberant in a developing country with respect to a richer country that has successfully transformed its economy into a more service oriented one?

Apart from aspects related to the economic power of developed and developing countries, the study finds out that in developing countries the farms are much smaller compared to "industrialised" farms in rich countries which implies relatively high administrative costs.

Another important aspect is that developing countries have much less access to global reinsurance markets. Reinsurance contracts usually face transaction costs as well as due diligence since they must understand every aspect of the insurance product they are reinsuring. This implies underwriting, contract design, ratemaking, and moral hazard and adverse selection control mechanisms.

Taking these points into consideration, one has to conclude that as far as agricultural insurances are concerned, the schemes working "quite" well in developed countries cannot be applied in the same fashion for developing countries. As a consequence, we have to rely on products that take the special features of clients in developing countries into account. ■

1 For instance, agricultural insurances in the US: for every $ of insurance provided, the US taxpayer has to subsidise with US $5 (Yaron et al., 1997)

Learning from the Positive Experiences in the Field of Microfinance

International Workshop on Disaster Risk Mitigation: Potential of Microfinance for Tsunami Recovery, New Delhi, October 14th and 15th, 2005

2005 saw the launch of the United Nation's *Year of the Microcredit* as well as the creation of an International Day for Disaster Reduction that is celebrated annually on October, 12th. This day is designed to raise awareness of the need to put disaster risk reduction on policy agendas and encourage the development of innovative methods for reducing disaster vulnerability.

Taking this into account, the All India Disaster Mitigation Institute (AIDMI) seised the opportunity of these two coinciding events to instigate an international discussion on the potential use of microfinance for tsunami recovery.

The workshop was hosted by AIDMI with the United Nations International Strategy for Disaster Reduction (UNISDR) and the Indian National Institute of Disaster Management (NIDM) and was held at the India Habitat Centre in New Delhi.

It was well attended by an array of experts in microfinance provision and disaster risk reduction from across the world, as well as representatives of the Government of India including the Honourable Home Minister, Shivraj Patil, D.K. Shankaran and M.P. Sajnani from the Ministry of Home Affairs. Representatives from tsunami-affected states in South India were also in attendance.

The central outcomes of the workshops were the following:

- Due to the fact that experiences with microfinance tools have been very positive in terms of poverty and vulnerability reduction, there has been a clear **Recommendation for developing a strategy for applying microfinance for disaster recovery.**
- The participants have agreed that before microfinance can be successfully and broadly applied, **fundamental paradigm shifts** in outlook and approach are required. Policy and institutional level commitment is necessary in order to build disaster mitigation in the development process.

As Mr Sajnani, Advisor at the Ministry of Home Affairs put it: "*Where previously government authorities concentrated on disaster relief, a shift in orientation is taking place, from a relief-centric approach to a holistic multi-disciplinary approach. This new approach encompasses prevention, mitigation, preparedness, response, relief and rehabilitation.*"

Development of a microfinance recovery model:

- The international experiences shared in the workshop have shed light on the fact that there is **not a single model** for microfinance and its application. Credit-based models are considered most effective, and should be combined with complementary risk transfer such as savings and insurance.
- In expanding the use of microfinance for disaster recovery in all areas, it was concluded that **more work is required to reach the poorest of the poor.**
- At the same time as recognising the disaster-stricken as clients, it was agreed that indigenous coping strategies should be built into programme design through community consultation following a community-based, participatory approach. This will help increase the community's capacity to address risk in the future. ■

The workshop was lead by practitioners and policymakers, including (left to right): D.K. Shankaran, Ministry of Home Affairs; P.G. Dhar Chakrabarti, Executive Director, NDMA; Shivraj Patil, Honorable Union Home Minister; N.C. Vij, Vice Chair, NDMA; Praveen Pardeshi, Senior Advisor, UNISDR; and Mihir R. Bhatt, Honorary Director, All India Disaster Mitigation Institute.

To learn more about the workshop, please consult: www.unisdr.org

A Life and Non-life Insurance Product for the Poor: the *Afat Vimo* Scheme

In August 2004, the All India Disaster Mitigation Institute (AIDMI) launched the Regional Risk Transfer Initiative (RRTI) in association with the Provention Consortium. Other key partners are the Chamber of Commerce and Industry of Small Businesses, the International Federation for Red Cross and Red Crescent Societies, the World Bank, the Asian Development Bank and the Department for International Development.

The main objective of the RRTI is in the convergence of micromitigation, microcredit and microinsurance as a precondition for effective local, low-cost risk transfer. It therefore strives to promote more effective risk management for the poor. The RRTI has been central in terms of establishing the *Afat Vimo* scheme as disaster insurance for the poor.

Background of *Afat Vimo*

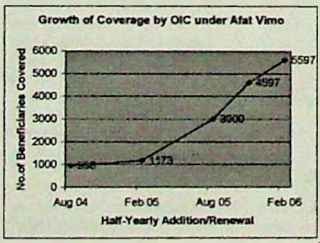
Following the 1998 Kandla cyclone, AIDMI established the Livelihood Relief Fund (LRF) with the main objective of building livelihood security and reducing economic risks through sustainable long-term recovery. Following the January 2001 earthquake in Gujarat, LRF expanded and played a major role during recovery from the February 2002 riots in Gujarat. In the wake of the 2004 tsunami, AIDMI responded again providing much needed livelihood relief.

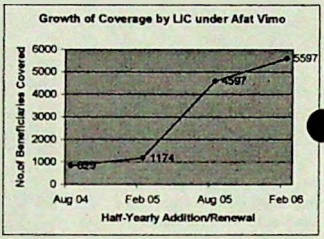
To coincide with the launch of the RRTI in September 2003, AIDMI held a focus group session on microinsurance for the poor which brought to life the idea of a "Demand for Insurance Survey". The survey was conducted in September 2003 within 14 earthquake-affected slum communities in Bhuj, Gujarat. This provided information on what percentage of the population already had insurance (only 2%) and how many respondents were interested in taking out a policy in the future (73%). The survey also revealed that capacity building was required since awareness and understanding of insurance and risk transfer was low.

Afat Vimo

Since the survey revealed need by beneficiaries for mechanisms to safeguard their newly replaced or created assets in the aftermath of disaster, the *Afat Vimo* scheme was born.

After negotiations with companies interested in supplying low-premium insurance policies to poor clients, good partnerships were forged with the Life Insurance Corporation of India (LIC) and the Oriental Insurance Company Ltd. (OIC). LIC committed to providing a life insurance policy under *Afat Vimo* and OIC agreed to establish non-life insurance policy coverage for *Afat Vimo* beneficiaries. The scheme was launched in August 2004, with the coverage of 829 LRF beneficiaries in Bhuj. It has extended its coverage to 5597 in February 2006. LRF beneficiaries are now covered in several districts in Gujarat, as well as in Tamil Nadu and Pondicherry in South India.





Description of the *Afat Vimo* Product

Afat Vimo provides life and non-life disaster insurance to low-income clients who are beneficiaries of AIDMI's livelihood relief through the LRF. It covers policyholders for losses incurred in the case of 19 eventualities, among them earthquake, cyclone, lightening, and landslide.

Like all AIDMI initiatives, *Afat Vimo* focuses on the poor among disast victims. Thus, the typical profile of *Afat Vimo* policyholders is as follows:

- Disaster affected.
- LRF beneficiary.
- Low-income household—average annual income Rs. 12000-Rs. 18000.
- Engaged in microenterprises in the unorganised sector.
- Average assets worth Rs. 9000.
- Average savings Rs. 200-Rs. 400.

The insurance scheme of *Afat Vimo* is unique since it combines life and non-

life coverage in one policy. The coverage is provided by different insurance companies but is brought together by AIDMI under *Afat Vimo*.

The total payable premium in Gujarat for instance, is Rs. 146 (tax incl.) per household per annum. The life insurance component in this example includes an assured sum of Rs. 20,000 at a premium of Rs. 86, whereas the non-life insurance costs Rs. 60 per annum and covers house and contents (Rs. 40,000), stock-in-trade (Rs. 10,000) and personal accident (Rs. 25,000).

A typical Livelihood Relief Fund beneficiary is able to return to work based on compensation from Afat Vimo scheme.

Complementary Services Provided by AIDMI

As stated above, the role of AIDMI in the *Afat Vimo* scheme is of both facilitator and intermediary. Unlike other organisations, however, their activity is not limited to the initial stages of insurance coverage, but AIDMI's community-based approach ensures that they are actively involved with the beneficiaries at every stage. They are committed to supporting communities in the long-run when relief institutions leave to provide assistance elsewhere. AIDMI has no exit strategy because they continue providing relief, rehabilitation and development assistance to vulnerable communities. This implies also the **capacity building** provided by AIDMI's Learning Resources team in cooperation with the LRF team in the form of training sessions with the community. These involve comprehensive explanations of how insurance works, why it is beneficial, how to be a good policyholder, the differences between microcredit and microinsurance, and the importance of the Indian Insurance Regulatory Development Authority. Training courses are essential for the effective operation of *Afat Vimo*; through these, beneficiaries come to understand what to do in the event of a disaster in terms of how to make claims as per the legal and procedural requirements of the insurers and AIDMI.

Apart from providing educational services, AIDMI also collects the premiums and helps the disaster-affected to start the claim process.

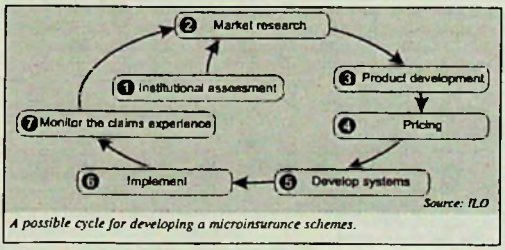
Lessons to be Learnt

As described above, the number of households covered by *Afat Vimo* has increased from an original membership of 829 in August 2004 to 5597 in February 2006. This has been a very successful development. Furthermore, the renewal rates for *Afat Vimo* have been encouraging with an average of 88% which is very positive for a scheme in its relative infancy. However, there are also a number of reasons why beneficiaries do not renew their policies.

The LRF team has observed that the following reasons are the most common explanations for non-renewal of policies:

- migration,
- inability to pay,
- no desire to renew because people do not see the benefit in insurance.

Regarding the scheme as a whole, one can state that it has proven to be possible to achieve relatively low insurance premiums as well as expanding the programme by spreading risks to other communities since not everyone will be affected by disaster. Apart from the success of the scheme, however, there are some challenges to cope with such as the limitations in the expansion of coverage since an augmentation of membership would invariably mean a substantial increase in operating costs—particularly if geographical coverage was to increase. ■



A possible cycle for developing a microinsurance schemes.

To learn more about the *Afat Vimo* Insurance scheme, view www.southasiadisasters.net and www.preventionconsortium.org

Product Innovations: The Index Insurance

Recently, the World Bank has provided the impetus and technical assistance for the implementation of innovative index-based crop insurance schemes in developing countries based on the experience of developed countries. The index-based crop insurance contracts are sold in standard units by rural development banks, farm cooperatives or microfinance organisations, and the "premium" varies from crop to crop. Payments to policyholders are based on a weather index that is highly correlated to farm yield or revenue outcomes.

Since payouts are not coupled with individual loss experience, farmers have an incentive to engage in loss-reduction measures, for example, switching to a more robust crop variant. A physical trigger also means that claims are not always fully correlated with actual losses, but this "basis risk" may be offset by the reduction of moral hazard and elimination of long and expensive claims settlement. Since the claim is a fixed amount of money per unit of protection, transactions are greatly simplified. The major advantages of index-based insurance are the reduction of moral hazard and transaction costs. Index-based mechanisms are also more transparent since they are based on a physical trigger, and the payout is fixed in advance. The major downside of index insurance is the basis risk: if the trigger is insufficiently correlated with the losses experienced then no payout may occur despite substantial losses.

In order to provide an analysis of these new products, we will apply a SWOT analysis to the Index Insurance that will tell us more about the "Strengths, Weaknesses, Opportunities and Threats" of the products. In this context, Strengths and Weaknesses refer to the internal perspective whereas Opportunity and Threat set up the external one. Strengths and Opportunities refer to the positive perspective while Weaknesses and Threats refer to the negative. ■

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For more information:

www.ilo.org/step
www.iiasa.ac.at
www.microfinancegateway.org/section/resourcecenters/microinsurance
www.proventionconsortium.org
www.southasiadisasters.net
www.unisdr.org/hfa
www.worldbank.org ■

Due Diligence Checklist for Identifying an Insurance Partner

Questions	What an MFI Should Look For
What is the reputation of the insurance provider?	It should be a strong institution that pays claims on time. Check with policyholders to see if they have had a positive experience.
How is the insurer currently financed?	The insurer should be financed from its earnings, and it should have a stable, conservative asset portfolio.
What is the claims experience of the insurer and its history of claims payouts?	They should pay most claims within a month and be willing to guarantee a fast turnaround (within two weeks guaranteed with an effort to pay within one week) on claims from MFI clients. The MFI should track this once a relationship is finalised.
How interested is the insurer in serving the low-income market?	They should not only express interest but also have examples of current work with this market or at least examples of efforts to work with this market.
Will the insurer adjust its products to suit the preferences of the poor?	They will likely need to reduce the coverage, reduce the price proportionately, and even adjust some procedures to facilitate the transactions between the MFI and the insurer.
Is the insurer willing to make a medium- or long-term commitment to the MFI?	This type of relationship will take time to mature. If the insurer is not willing to make a commitment for at least three years, it is not worth the MFI entering the arrangement. Note: the insurer is not tied to the original terms of the insurance for that period, just to continue to work with the MFI and its clients.
Is the insurer willing to pay a commission to the MFI for performing the agent role?	On short-term group life business, insurers typically pay an agent five to twenty percent of the premium. The MFI should get a substantial portion of that amount.
Are there issues related to regulatory compliance by the insurer?	An MFI should review the insurer's annual report and discuss its regulatory compliance with the insurance commission. Some insurance companies employ an ombudsman to interact with the public. If one is available, the MFI should discuss with her issues related to regulatory compliance and common customer complaints.
Will the insurer give the MFI responsibility for verifying claims?	It is not recommended for the insurer to verify claims. The two partners should have a written understanding regarding what proof the insurer requires. The agreed documentation should be accessible to the poor, yet conclusive.
Can the insurer minimise the number of exclusions without jeopardising the sustainability of the plan?	Generally, MFIs have difficulty informing clients about complex products. Insurance will be the same. Not only will MFIs have to explain the concept of insurance (risk pooling), but they will also have to help clients understand the product. The simpler the product, the easier it will be to sell and administer the product. ■

Dealing with Restrictive Legal Environments

From a legal point of view, insurance products cannot be offered in India by organisations that are not licensed by the Insurance Regulatory and Development Authority. The laws for registration as an insurance company are such that it is highly unlikely that any MFI could ever comply. One strategy for dealing with this is through terminology. By referring to an "insurance scheme" as a "welfare measure" in its annual reports, an MFI may fall under the radar of the law. In India, as long as the scheme is available only to members and complies with the legislation regulating NGOs, the state at present is not concerned with restricting their activities. ■

Source: ILO

Commodity Risk Management for Developing Countries

Introduction

Farmers face a spectrum of risks, and each of these risks-along with how farmers manage them-impact farm income, productivity and access to credit.

Among the risks farmers in developing countries have to deal with is the weather risk as well as the risk related to the price of commodities. A recent study of AIDMI conducted with farmers in the Indian state of Gujarat has shown that 40% of the interviewees do not know about the existence of crop insurances.

Farmers discuss possible hazards in a workshop in Delhi.

Furthermore, AIDMI gained evidence among those who know about the existence of these schemes, only 34% have signed in a contract. The conclusion for AIDMI in terms of the mentioned survey implies to increase the awareness of agriculture insurance is an effective method to reduce several risks and reduce their vulnerability and give them a more stable livelihood.

Whereas our article on index insurance schemes has provided an analysis of an appropriate method to mitigate weather risks, this contribution sheds light on the tools that can help farmers manage risks in the context of commodity prices better.

Impact of Price Volatility on Farmers

Price volatility significantly impacts the incomes of farmers as well as the macroeconomic health of their countries. According to the World Bank, from 1983-1998, the price of many commodities fluctuated from below 50 percent to above 150 percent of their average prices. Attempts by many countries to guarantee farmers minimum prices by separating domestic commodity prices from international prices have proven financially unsustainable. Instead, these countries have started to pursue the path of liberalisation which exposes farmers to price fluctuations over the course of a season creating uncertainty about the price they will receive for their product to be sold.

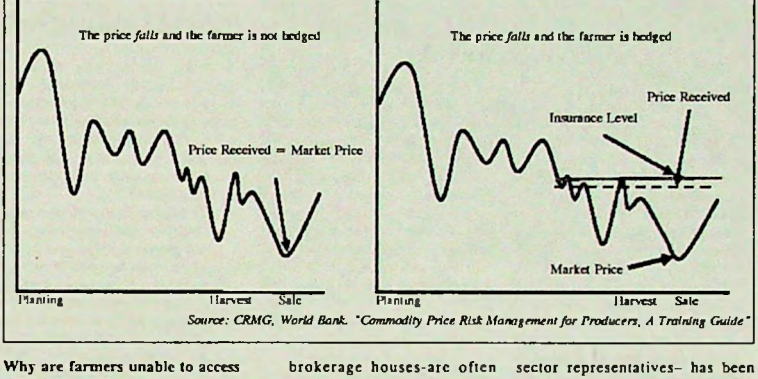
At the farm level, this uncertainty in commodity prices makes it difficult for producers to allocate resources efficiently, limits their access to credit for productivity enhancing inputs and leads them to adopt low-yield, low-risk production technologies, thereby lowering average incomes. At the macro level commodity price volatility affects government's fiscal revenues, trade balance, exchange rate, and creditworthiness.

While market based tools (futures and options) that insulate producers from the negative effects of short-term price volatility are widely used in high-income countries, the vast majority of agricultural producers in developing countries are, in general, unable to access these markets. In the absence of markets for price hedging instruments, farmers try to cope with price risks by:

a. self-insuring by asset accumulation
b. income diversification
c. informal insurance arrangements.

Diversification to other activities is difficult due to the lack of necessary skills of most farmers, information and capital to do something else. Many farmers adopt low-risk and low-yield crop to ensure a minimum income. However, these inefficient production patterns inhibit the creation of income growth and the accumulation of capital. Finally, informal insurance arrangements at the local community level often break down in the face of large systemic risks such as the collapse in commodity prices.

The use of market oriented price risk management strategies to mitigate this price risk would provide farmers with new alternatives and allow them greater certainty in planning their on-farm activities.



Source: CRMG, World Bank. "Commodity Price Risk Management for Producers, A Training Guide"

Why are farmers unable to access these financial instruments?

Some barriers have prevented smallholders from assessing these tools:

- the minimum contract size traded on organised exchanges far exceeds their annual production quantity
- lack of knowledge of such market-based price insurance instruments
- lack of understanding of how to use the tools available
- sellers of such instruments– generally international banks and brokerage houses–are often unwilling to engage with a new and unfamiliar customer base of small-scale producers, characterised by high transaction costs, diminished access to credit, and performance risk.

The World Bank as a facilitator

As learned above, market based tools are difficult or almost impossible for poor people to assess. The World Bank- with support from several donor governments, and in collaboration with international organisations and private sector representatives– has been working as a has been working as a facilitator, providing technical assistance and capacity building to allow producers in developing countries and local intermediary institutions with links to producers to access these instruments. To date seven transactions have been completed between developing country clients (in Uganda, Tanzania, and Nicaragua) and international providers (mainly major international banks in Europe and the US).

An AIDMI team member finds that falling commodity prices represent big risk to farmers.

These transactions provided price protection for tonnages ranging from as low as 50 tons to as much as 700 tons. Transactions provided price protection for sales that were made as short period as one month in advance up to seven months in advance. The range of premiums paid for price protection varied from around 3% of the value of the commodity to as much as 8% with most transactions involving premium payment of around 4-6%.

How do Price Risk Management Instruments Work?

A parallel can be drawn between hedging instruments for price risk and typical insurance products. Producers' organisations, local banks, or exporters can purchase derivatives that

Can South Asia Learn from other Developing Countries? The Example of Tanzania

Background

In 2001 and 2002 coffee price fell to forty-year lows. Tanzania liberalised the coffee sector in 1993 and as a result both private traders and cooperatives buy it at competitive prices at the community level. Coffee makes 20% of Tanzania's export earnings and the drop in price has affected 400,000 people. Indeed, liberalisation and implicitly the volatility in prices have made it difficult for farmers to optimise production technology, timing of sales, and use of assets that could eventually result in higher household incomes. Overall, the welfare of coffee farmers in Tanzania has diminished.

The Product

Being aware of the impossibility of stopping the long-term trend of declining prices cannot be stopped without significant structural changes in the world coffee market, one of the largest coffee cooperatives in the country has begun working with the World Bank in order to confront the negative effects of short-term price volatility. In doing so, they utilise price risk management instruments to hedge their price risk. This cooperative union has a large number of smallholder producer members whose average production is between 20-100 kg per farmer.

Like many other cooperatives in Tanzania, the cooperative union utilises a pricing system that consists of multiple payments to farmers throughout the year. Cooperative members receive a uniform minimum price for their coffee when they deliver it to the union, and then later in the season, depending on sales and market performance overall, farmers may receive subsequent payments for their product. The uniform minimum price, which is called the 1st payment, is established months in advance of the actual selling season and agreed at the annual general meeting of the producers. The guaranteed 1st payment is viewed as a service to the farmers and provides them with some form of price stability, but it can have disastrous financial impacts on the cooperative overall. If cooperatives guarantee a low 1st payment at the beginning of the season, they run the risk that market prices will rise and farmers will sell to traders instead of to the cooperative (local traders compete with the cooperatives by paying full market price for coffee, in cash, at the time of delivery of the product). If cooperatives guarantee a high 1st payment at the beginning of the season, they run the risk that market prices will fall, and they will make losses on the negative margin between purchase price to farmers and actual sales prices on the market. Since the 1st payment price is established well ahead of the selling season at a time when sales prices are not yet known, the cooperative union is essentially taking a long position on coffee, which is in effect from the time they set the 1st payment until the time they conclude all sales of coffee at the end of the season, a period which can stretch up to ten months.

Complications of the Programme

However, in order to assure long-term sustainability of the cooperative, it has been necessary to develop a number of strategies as for instance finding a way to protect overall profitability from the often disastrous affects of setting 1st payment price high at the beginning of the season and having to sell low when prices fell later in the season.

For the cooperative, although conclusive impacts of the risk management strategy are not yet entirely known since the season is just now ending, there were a number of positive affects:

1. The union improved its relationship with its local bank, which included a loan for premiums to cover the cost of hedging instruments in the total loan package given at the beginning of the year.
2. ***The union improved its overall financial state, including its debt position, and management of the union had a clear view of overall financial status throughout the season, without having to worry about the impact of prices falling below a certain level on the global market. They were able to communicate results with confidence to the local bank and government ministers who were monitoring progress.***
3. Improved financial transparency helped the union make better and more strategic selling decisions.
4. The union was able to pay farmers a 2nd and 3rd payment since there were periods of relatively higher market prices during some months of the selling season. In the past, any positive returns from high priced sales would have been held by the union until the end of the season to protect against future losses. With hedging, the price floor created by the option allowed the union to disperse revenue at the time it was earned.

Concluding Remarks

Each of the impacts listed above bodes well for the union's ability to continue to strengthen its relationship with its lenders and improve its access to credit. In a very short period of time, the union has moved from being a very high-risk enterprise to a much more stable operation. Price risk management has contributed to that growing stability and the union's managers have indicated that they are very pleased to have knowledge and access to such tools.

are traded on international exchange (or based off these exchanges); in most cases a simple put option, on behalf of their producers. When combined with physical sales these financial instruments, it will guarantee a minimum price level based on an international price (not a local price) for a given commodity for a number of months. In order to purchase this financial product producers must pay a market related fee or a premium. In the case of put options, when price rises during the option contract period, the producer receives no payout from the contract but can still sell his physical product for the market price in order to benefit from the rising prices. However, when price falls during this period, the producer receives a payout equal to the difference between the price the producer chose to insure with the price risk management contract and the international market price on the last date of the option coverage.

Because of the size of these contracts it is necessary to aggregate producer demand for these products. A diversity of different types of organisations could serve this role as an intermediary. A domestic bank or other financial institution could integrate these products into its services.

Mutual learning between farmers and insurance companies about the risks and commodity prices at a workshop conducted by AIDMI.

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The ProVention Consortium

The ProVention Consortium is a global coalition of governments, international organisations, academic institutions, the private sector, and civil society organisations. The Consortium is based on the premise that we all must take responsibility for making the new millennium a safer one and that it is the inter-sectoral links-among the scientific community, policymakers, and the private and public sectors-that will facilitate the promotion of risk assessment, risk reduction, and risk education activities in developing countries. The Consortium's objectives are straightforward and attainable:

- To promote a culture of safety through education and training among leaders and citizens of developing countries.
- To support public policy that can reduce the risk of natural and technological disasters in developing countries.
- To support pilot projects and to disseminate information about "best practices" proven to mitigate the scope and frequency of disasters.
- To develop governments' ability to minimise disasters and to respond effectively when they occur.
- To forge links between public and private sectors, between the scientific community and policymakers, between donors and victims, so that all stakeholders work together to strengthen the economy, reduce pain and suffering, and promote the common good.

The ProVention Consortium functions as a network to share knowledge and to connect and leverage resources to reduce disaster risk. It focuses on synergy and coordination so that efforts, and benefits, are shared. Partners include the Governments of Japan and Norway, Organisation of American States, International Federation of the Red Cross, UN Development-, Environmental-, Food Programmes, World Meteorological Organisation, African Development Bank, Asian Development Bank, Wharton School of the University of Pennsylvania or private groups such as Munich Reinsurance. ■

SWOT Analysis of Index Insurance Products

Strengths

- **Lower moral hazard since the indemnity does not depend on the individual producer's realised yield.**
- **Less adverse selection since the indemnity is based on widely available information, so there are few informational asymmetries to be exploited.**
- **Lower administrative costs as underwriting and inspections of individual farms is not required.**
- **Standardised and transparent structure due to uniform structure of contracts.**

Weaknesses

- **Without sufficient correlation between the index and actual losses, index insurance is not an effective risk management tool.** This is mitigated by self-insurance of smaller basis risk by farmer; supplemental products underwritten by private insurers; blending index insurance and rural finance; and offering coverage only for extreme events.
- **Precise actuarial modelling is required;** Insurers must understand the statistical properties of the underlying index.
- **Education:** Required by users to assess whether index insurance will provide effective risk management.
- **Market size:** the market is still in its infancy in developing countries and has some start-up costs.
- **Microclimates;** Make rainfall or area-yield index based contracts difficult for more frequent and localised events.
- **Forecasts;** Asymmetric information about the likelihood of an event in the near future will create the potential for intertemporal adverse selection.
- Not appropriate in highly spatially heterogeneous production areas or with commodities grown in microclimates. In this case, index insurances will only work if it is highly localised, and/or if it can be written so that it protects only against the most extreme loss events.

Opportunities

- **New innovations in technology,** including the low-cost weather stations that can be placed in many locations where weather variables can be measured, and also the types of measurable variables. Measurement redundancy and automated instrument calibration further increase of the credibility of an index.
- **Availability and negotiability;** Standardised and transparent, could be traded in secondary markets.
- **Reinsurance function;** Index insurance can be used to more easily transfer the risk of widespread correlated agricultural production losses.
- **Versatility;** Can be easily bundled with other financial services, facilitating basis risk management.

Threats

- **Weather cycles;** Actuarial soundness of the premium could be undermined by weather cycles that change the probability of the insured events, for example, El Niño events.
- When designing a contract, significant care must be taken to assure that the insured has no better information about the likelihood and magnitude of loss than does the insurer. ■

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Application to OXFAM for the training of Basic Health Workers and for Health Insurance Scheme of Dhamara Bhimanapally

Background information

LOCATION: It is a Village belong to Devarakonda Taluk of Nalgonda District in Andhra Pradesh. It also belongs to Nalgonda Diocese.

POPULATION: Dhamara Bhimanapally has 3 villages with the population of 3,500. The names of the villages are Dhamara Bhimanapally, Karmaguda, and Lambadi Tanda.

SOCIO ECONOMIC CONDITION: The population consists of Hindus,, Christians and Tribals. The Hindu population has Reddys, Harijans (Malas & Madigas), Carpenters, Fishermen, and Smiths, Komaties.

THE MAIN OCCUPATION OF THE PEOPLE: In Karmaguda is agriculture and other two villages are agricultural and other types of Labourers. About 6 to 7 months a year the people are occupied, the rest of the year the work depends upon the cultivation and rains. Average income of the labourer family is 90 - 100 if both husband and wife get a job, and the average size of the family is about 6 members.

The main crop is Jawar and Cash Crop is Tobacco, Chillies and Caster seed. The crop is depend upon the rain. There is not possibility of digging wells due to rocky land also (PH) contents and fluride is very high. Hence it is not good for cultivation. The people are very poor. The average land holding is about 5-10 acres but due to draught the cultivation is not possible, hence most of the people are in debt even if they have land.

HEALTH CONDITION: The high contained of fluride in the water is a big public health problem. Most of the children suffer from Calcium deficiency and deformity of bones. Women after 2-3 pregnancy suffer from Ostiomalsia, which is a big public health problem, even men also suffer from the same. Other diseases are nutritional deficiency diseases such as :-

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Anaemia,

Protein Malnutrition,
Vitamin 'A' Difficiency,
Vitamin 'B' Difficiency,
Dirrhoea,
Fever,
Typhoid,
Gastic Ulcers,
T.B. almost one in every family,
Seabies, eye infection and other common and seasonal diseases.

There is no medical facilities in these villages excent a small dispensary run by the Sisters. The nearest health centre 16 K.M. in Marriguda. The nearest Hospital is in Nalgonda which is 50 K.M. also Devarakonda which is 50 K.M. These villages are 4 - 5 K.M. away from the main road. There is no bus service from the villages to the main road. The patient has to be carried or taken in bullock cart to reach the main road. There is no regular bus services, except three or four times a day.

PROJECT PROPOSAL:

Though the sisters are having the dispensary, so far curatives services have been given to the people.

The Parish has started a youth moment and this association has been registered as 'Lal Bahadur Labour Cooperative Society'. The main aim of this association is to up lift their economic condition by improving their agricultural and health condition.

I.S.I. mobile training team has offered to help in different aspect of training. In the month of January, we are planning to have a training programme for basic health workers and agriculture extention work by I.S.I. team. The reason for training, the Basick Health Workers is to have a better health care since there is only one sister in the dispensary. In order

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to reduce the cost of medical care and to have better health. We are planning to have a health insurance programme. The youth of the association are very much interested and have taken lead to start this scheme. The insurance fees is Rs.2/- per month per family (the aims and policy is enclosed). At present about 300 families have been enrolled and more will will be encouraged.

In order to start the health insurance scheme as an initial expense is needed for one yearr as a subsidy.

Hence we request a grant of Rs.15,000/- Rs.10,000/- for the medicines and Rs.5,000/- for training and salary of basic health workers. The peoples' contribution will be almost rs.6,000/- to Rs.7,000/-.

This first year will on experimental basis. In the second year we are planning to reduce the cost and if any help is needed we will request later. We are also planning to get some help from the Goverrment by second year.

LAL BAHADUR HEALTH INSURANCE SCHEME

AIMS AND OBJECTIVES

1. To make health care possible by the people.
2. To provide low cost medical care.
3. To foster unity and self help.
4. To make each one responsible for their own health, thus build up a healthy community.

POLICY

1. A policy should be drawn up by the Committee and it should be made clear to every member before starting the Scheme.
2. This policy can be revised as and when needed with the consent of the geenral body.

Membership Fee (M.F)

3. The present membership fee is Rs.2/- per family per month. This can be revised as and when needed with the concent of the General Body.
4. The M.F. should be paid between 5th to 10th of every month. It can also be paid once a year Rs.24/- or Rs.6/- every three months. But the date should be same.

   The fees can be paid by cash or kind (market rate) or by both.
5. Pass-Book should be mairtained for each family.
6. The pass book should contain the following details.
   (a) The name of the family members (Husband, Wife and Children who are not married) should be entered.

   If it is a joint family with unmarried brothers, sisters and parents of the head of the family, it should be registered as separate family.

   (b) The fees should be entered clearly and correctly in the pass book.
   (c) In the same way the date of the visit, name of the medicine given by the health workers or in the dispensary and the total cost should be entered.

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7. Maximum benefit fora family per year will be upto a value of Rs.100/- of medicals. Once they exceed this amount they should pay the full cost.

8. Selection of members:
Before registering the family, all the members of the family should have a physical examination and the children below 5 years should have small pox, BCG, DPT, Polio Cholera and Typhoid Vaccination. All the members should have small pox, Cholera, Typhoid Vaccination every year. If they fail to have the vaccination and get any of these disease all the expenses should be met by the family.

9. Any one who get sick should come for the treatment immediately to avoid unnecessary expense.

10. During the physical examination if any one found with serious disease, such as, heart disease, paralysis, deformity, fracture, diabities, serious TB cases, can become a member, but that particular patient should be treated by a specialist and the expenses should be met by the family. (as a health Insurance member recommendation letter can be obtained from the President of the Lal Bahadur Co-operative Society or Sister-in-charge, St. Philomena's Hospital.

11. The following diseases can be treated under the Scheme:
1) Common Diarrhoia
2) Cold, Cough, Fever
3) Ordinary aches and pains.
4) Anaemia and malnutrition
5) Common Stomach problem
6) Early stages of TB and chronic cases if it is not too severe (provided they continue the treatment for tow years regularly).

If they don't take the treatment regularly then they will be out from the Insurance benefit (i.e) should pay for the treatment.

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DECCAN HERALD

Spectrum

Tuesday, January 11, 2005

Page 2: The recent tree-felling in Belgaum proves that it is going the Coorg way and that we are not learning from our mistakes.

Take charge of your health, insure it

Biocon Foundation and Narayana Hrudayalaya have initiated a health insurance scheme targeted at rural populations, starting with Karnataka. Priyanka Haldipur gives an insight into the project.

While on the glam side, botox is making its advent in the Indian market and hookah bars are becoming the latest craze with the crowds here, a bite of the reality pie might expose one to less talked about bitter truths. With every passing day, more and more Indians in rural areas are falling prey to diseases.

Some major, some insignificant. The lack of capital leaves them with no other choice but to ignore the ailment, until it worsens and pushes them into the jaws of death.

Talk has been building up in every nook and corner to address this issue and work towards ridding the rural society of it. However, when it comes to action, the stage has so far been bereft of activity.

So far... because Arogya Raksha Yojana, the recently-introduced health insurance scheme for the rural masses, an initiative of Biocon Foundation and Narayana Hrudayalaya in collaboration with ICICI Lombard General Insurance Company Private Limited, shows immense promise of changing things for the better.

"Health insurance is normally aimed at affluent urban people. Ignoring rural people who form such a big part of the Indian population, will cause huge problems in the long run," says Kiran Mazumdar-Shaw, CEO, Biocon Foundation. "The objective of Arogya Raksha Yojana is to provide quality health care at a reasonable cost to those very masses and route out indebtedness to money-lenders," she adds.

The first Arogya Raksha Yojana centre with a clinic, office and BioCare Pharmacy was inaugurated by Prof Muhammad Yunus, Managing Director, Grameen Bank, Bangladesh at Huskur Village, Anekal taluk, Karnataka, on December 19, 2004.

"Currently, a pilot study is being conducted in Anekal taluk where all its four hoblis (cluster of villages) - Sarjapur, Attebele, Kasaba and Jigini, consisting of 250 villages and 6,00,000 people will get to be a part of the scheme.

Based on its success there, the implementation will spread to states other than Karnataka," says Dr Devi Shetty, Narayana Hrudayalaya.

On why ICICI chose to associate itself with this project, Smitha Aggarwal, Head - Rural and Agriculture Business Group, ICICI Lombard General Insurance Company says, "We have always been committed towards providing insurance to rural. Health risks are the highest risks they face, and we want to give them all the risk protection they deserve, through this project."

The Arogya Raksha Yojana derives inspiration from management guru C K Prahlad's business model that propagates bottom up planning, where the huge market of the poor that exists in India needs to be tended to.

What the scheme entails

Free out-patient consultation can be availed as part of Arogya Raksha Yojana. Generic medicines at special rates from network hospital pharmacies and BioCare pharmacies; diagnostic tests at discounted rates; hospitalisation (without surgery) and free surgical interventions with 100 per cent cashless facility for surgical treatment and medical admissions up to the covered amount, are also included.

Surgical cover

Over 1,600 listed surgeries such as hernia, appendicitis, hysterectomy and cataract diac bypass are covered. The scheme covers both pre and post operative surgical treatments. However, it does not include prosthesis and implants including valves, grafts mesh, stents, nails, screws; joint replacement surgeries; transplants; burn cases; malignancies - chemotherapy; cosmetic surgery; medico-legal cases; angioplasty; auto-immune diseases; vaccination; dental surgeries; skin grafting for wound; spectacles, hearing aids; dialysis; ambulance services; food and other non medical expenses, vitamins and tonic, and any other expenditure unrelated to the illness/hospitalisation.

Medical cover

Hospitalisation (without surgery) is covered along with three days of hospitalisation which includes charges towards room, professional fees and routine investigations. Certain conditions apply, such as treatment can be availed only in the general wards at network hospitals. Individual members can avail one admission per year (maximum- three hospital days). Members who have enrolled under the 'family pack' are eligible for a maximum of 50 pc of the total number of enrolled members. The cover excludes medicines and medical consumables, oxygen and ventilator charges.

Out-patient services

This includes free out-patient consultation, free registration only at network hospitals, investigations and diagnostic tests, low cost, high quality generic medicines provided at special prices.

Eligibility

The applicant should be a resident of Anekal taluk, between 0 and 70 years of age on the date of enrollment. Proof of residence for family (ration card / voters ID / driving license/ passport / PAN card /bank account) should be produced.

The fee

The 'Individual Scheme' comes up to Rs 180 per member per year. As part of the 'family scheme,' it works up to Rs 180 per member per year for two members, Rs 150 per member per year for three members, and Rs 120 per member per year for four or more members.

Network hospitals

Some of the network hospitals include Narayana Hrudayalaya (Bommasandra Industrial Area), CSI Hospital (Hazarat Kambal Posh Road), Chinmaya Mission Hospital (CMH Road), Devi Eye Hospital, ACTS Health Centre, Sri Vinayaka Hospital (Chandapura), N R Hospital (Bangalore-Hosur Highway) and FOSA Hospital (Bannerghatta Circle).

"There is a catch-22 situation at work. You need patients in order to maintain hi-tech medical equipment. But the equipment happens to be so expensive, that the patients can't afford it. Hence a low-cost health insurance scheme such as our's meet their need," says Devi Shetty.

Kiran further states, "the price of medicines is considerably decreased as we ourselves handle the marketing and distribution of drugs. The network hospitals and BioCare pharmacies lead to economies of scale."

The organisers of this scheme truly believe that prevention is better than cure, and have hence arranged for volunteers to educate the people in the villages through presentations and visual aids, about preventing the various diseases they are susceptible to. Reducing infant and maternal mortality is another one of their prime aims.

"The biggest challenge is to break psychological barriers and prove that there are no vested interests on our part. We want one and all to realise that this will become a huge change maker in our country." Kiran smiles. Judging by the passion and determination behind it, this vision called Arogya Raksha Yojana deserves all the success due to it, and more.

Contact 080-28082153 for more details.

Aruna Chandaraju tells us that the concept of health

tourism has arrived in Karnataka and may well take wings, though it is a fairly new sector in tourism worldwide.

DH graphic by Hemant Kumar

Health tourism is now the focus in many countries including Singapore, Thailand, Malaysia, Cuba, Costa Rica, Jordan and South Africa. Asian countries together attracted six lakh medical tourists in 2003 and this will grow by 30 per cent in 2004. The Confederation of Indian Industry (CII) sees a huge potential in this area – in three-four years they expect that India will draw about one lakh tourists who will bring in about two billion USD of revenue. And Karnataka dreams of getting 10 per cent slice of this huge pie.

These health tourists include those coming in for either hardcore modern medical care (bypasses, kidney replacements) or alternative-medicine needs like Ayurveda, holistic health, naturopathy, etc.

Currently in Karnataka, there are an estimated 7,000 to 8,000 of health tourists per year. Note the word 'estimated.' There are no survey-based results as yet, simply because it is a new segment.

However, the Confederation of Indian Industry plans to begin active data-tracking soon explains Vishal Bali, VP, Wockhardt Hospital and CII Chairman for Health Tourism in Karnataka (he is also member of the national committee): "In Karnataka we are beginning to build up a database." There are strong reasons why the Karnataka Tourism authorities and the local chapter of the CII – who are working in concert on this issue – see a big growth in health-tourists inflow into the State.

Bangalore is home to high tech modern tertiary care hospitals with high-grade facilities in cardiology, orthopedics, neurosurgery and oncology besides excellent centres for ayurveda, naturopathy, homeopathy, holistic health, homeopathy, among others ; the City and outskirts have among the highest number of full-fledged spas/wellness centres for rejuvenation-seekers for any major Indian metro ; There are good facilities in both modern medicine and rejuvenation are spread across the State; Many Western patients, even with NHS coverage may find the waiting period too long in their country and find that bookings and treatments happen here faster ; Bangalore's much-celebrated climate and fairly temperate weather in the rest of the State too make it comfortable to tourists.

To cite a few examples: Wockhardt Hospital receives patients from UK and USA for heart surgeries and angioplasties, Narayana Hrudyalaya's paediatric heart surgeries on babies from neighbouring countries have been well-publicised, Manipal Hospital draws in NRIs for its services in advanced medical areas, etc. These and other major hospitals in Bangalore are noted for their state-of-the-art facilities and high-quality after-care.

In fact, the swanky Sathya Sai Hospital at Whitefield may treat mostly Indian residents, and totally free at that, but is visited by top-ranking medical teams, including Nobel laureates, from other countries to study its unique working pattern.

The costs, of course, are another big draw. "Treatment here is broadly speaking, about one-tenth the cost it would be in the West or the Gulf or Singapore. More specifically it ranges from one-sixth to one-fifteenth of the cost," explains Mahendra Jain, Tourism Commissioner, Government of Karnataka.

Does this estimate include the travel and accommodation costs? Apparently it does and the fact that international air travel has become cheaper in recent times has added to the economic advantage for health tourists. And hotels often tie up with these airlines to offer attractive packages too, Jain explains. Luckily Karnataka has many tourist destinations including the world-famous Hampi for example, which tourists who come in for medicine needs also visit. As Bali says, "it is a question of a proper synergy between the health and tourism sector– one propels the other."

The action is not confined to Bangalore. To mention a few other places which are attracting health tourists: the AJ Shetty Memorial Hospital in Mangalore draws a lot of the NRIs with origins in the Gulf ; the swanky Indus Valley Ayurvedic Centre (IVAC) in Mysore and the less upmarket but popular – especially with budget and domestic tourists – ayurveda and naturopathy hospitals in Dharmasthala, Mandya or the Kairali centres in Gokarna and Karwar also get their share of visitors.

IVAC receives around 350 travellers coming from overseas for health reasons and from India, around 85-90 guests annually.

The alternate-medicine centres especially in and around Bangalore are drawing in hordes of tourists, both international and domestic compared to other metros in the country. All offer excellent facilities, authentic treatments and well-trained staff.

As far as other advantages are concerned; *Soukya* has superbly landscaped gardens and a wide range of treatments including unique ones like hot-stone therapy, the interiors of *Golden Palms* spa are both luxurious and impeccably maintained and there's a cosmetic-surgery unit too, *Ayurvedagram* boasts a backing of decades of research of the parent company KAPL, *Angasana Oasis* Spa and Resort has a tie-up with the prestigious *Banyan Tree*, Jindal's Health Centre is known for genuine naturopathy and good environment and so on.

In a very customer-friendly approach, all these also offer custom-designed programmes to suit individual requirements. Dr Isaac Mathai, renowned holistic healer, says "India, especially Bangalore has the potential to project itself as world-class healthcare destination."

His *Soukya* attracts discerning guests from over the world and India for its holistic-health approach. Another good example of a successful synergy between health and tourism is illustrated by the *Culture Veda* packages of IVAC put together since most of the guests like to combine *Ayurveda* with some sightseeing," explains Vinita Rashinkar, Manager (Wellness).

"Most guests are keen on eco-tourism and love to visit the wildlife sanctuaries of Kabini and Nagarhole and Coorg (especially Dubare Elephant camp). They also love Bylakuppe. The usual favourite is, of course, Hampi and Badami which no guest misses. Mysore of course is also full of tourist attractions and they make the best of this as well, she adds."

The tourism authorities too do their bit by giving brochures/tourism material to hospitals/wellness centres to pass on to guests on request.

Of course, there is no thrusting a tourism brochure on the patient or his anxious relatives when they enter the country or hospital. But the tourist brochures and other materials are provided when requested.

Realising how indelicate this would be the tourism authorities work a little more discreetly. Jain explains that they supply brochures and related tourism material to the hospitals and rejuvenation centres who in turn offer it to rejuvenation/modern-medicine seekers who make enquiries.

Once their plans are clear the travel agents, tour operators, and government tourism authorities do the needful.