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**Protecting against catastrophic health expenditure – the role of
community health insurance in India.**

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Introduction

The relationship between poverty and ill-health is indisputable. There is more recent evidence to show the effect of illness on poverty (Meessen 2003). It is becoming clear that illness leads to loss of income, as well as results in extra expenditure. This combination can push households into the poverty cycle. This is more so in environments where there is significant out-of-pocket expenditure on health care

India has adopted the tax-based model of financing health care. The government is both the financier and provider of health care. However, decades of under-funding have resulted in poor infrastructure, vacant posts and poor quality health care (Peters 2002). This makes the patients seek private health care for their needs, with its associated out-of-pocket payments. This has resulted in two problems. The first is that access to health care is reduced considerably. And those who do access health care are in danger of becoming impoverished. Studies show that about a quarter of Indians who are hospitalised are impoverished because of the medical costs (Peters 2002).

While high medical costs can be catastrophic for most people, it is worse for the poorer sections of society. We define catastrophic health expenditure (CHE) here as “*an adverse health shock that necessitates 10% of household income in medical expenses*” (Pradhan 2002). Health insurance is recommended as a measure to protect against CHE (Ke 2003). While theoretically this is plausible, there is little empirical evidence from low-income countries to support this hypothesis (Task Force on Health System Research 2004). This article documents the effects of health events on insured and non-insured households and explores whether community health insurance (CHI) has a protective effect against catastrophic health expenditure.

Context

This research was conducted at Theni district, where an NGO (DHAN) has been organising women into self help groups for micro finance activities. The women meet in small groups (maximum 20 members) once a month and put aside Rs 20 per woman. These groups have federated at the district level to form the KKVS. Currently there are 5391 women who are members of the KKVS federation. Since 2000, KKVS has organised the KKVS community health insurance scheme. Once a year, the women contribute Rs 100 (Rs 150 for a family) towards medical and life insurance. Any enrolled member (or dependent) who falls sick and requires hospitalisation is reimbursed 75% of the medical costs, upto a maximum limit of Rs 10,000. The entire scheme is managed by the women themselves.

Methods

All the KKVS members for 2004 were divided into an insured and a non-insured group. 500 families were randomly selected from the insured group and another 500 families were randomly selected from the non-insured group. Each of these families were then interviewed, using a researcher administered structured questionnaire. The topics explored were the socio-economic and demographic profiles of the families, their morbidity pattern in the past one year and the costs of treatment if the patient was admitted.

Results

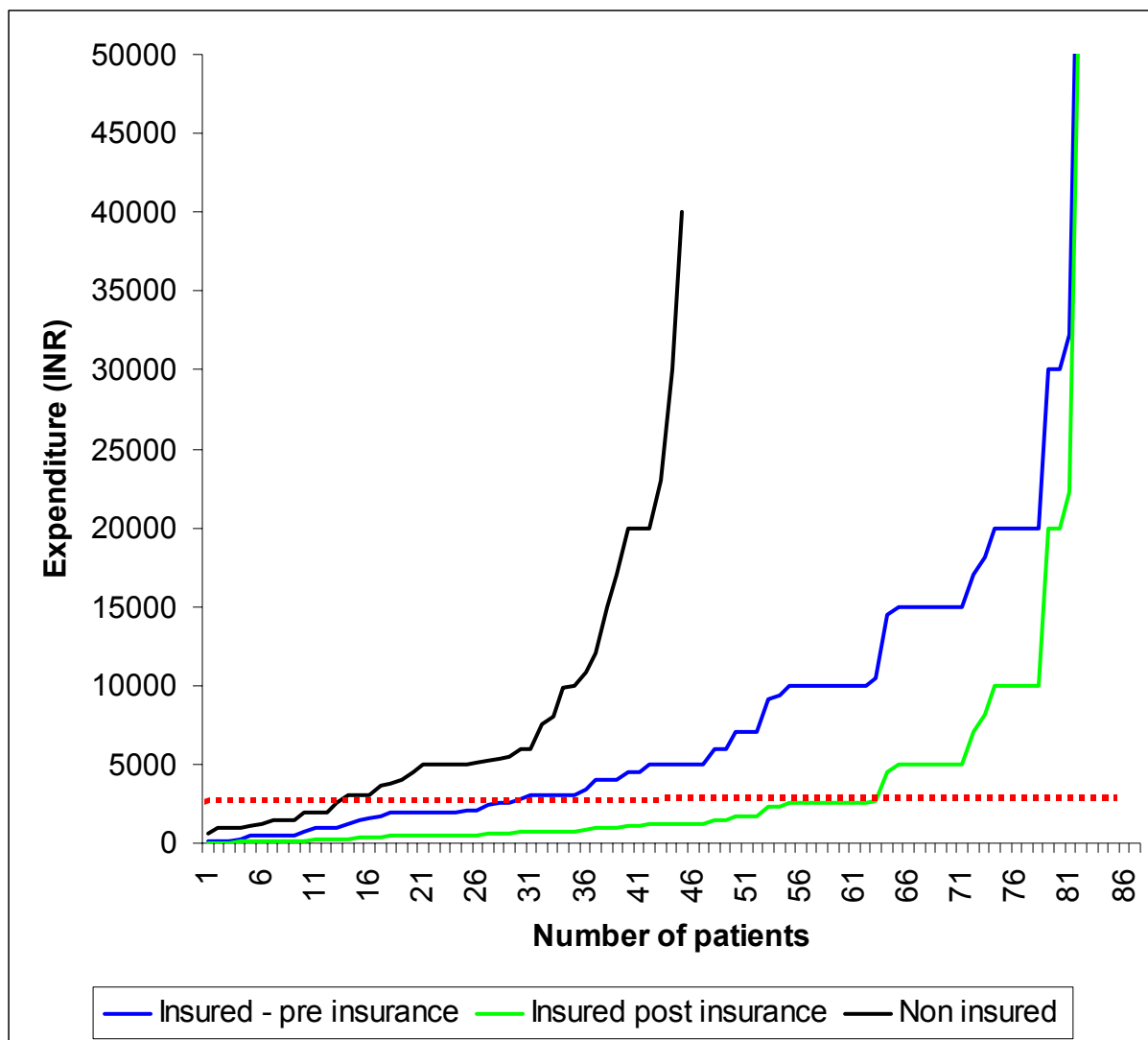
Of the 5391 women who are members of the KKVS federation, 2359 members have insured themselves and their dependents. Of the 1016 households sampled for the survey, 471 insured households and 334 non-insured households responded. The rest were not available to answer the questions (having migrated to other regions). 46% of the insured respondents were males, while 46% of the non-insured respondents were females. The median size of both insured and non insured household was 4. While the insured household was slightly older, the sex ratio in both the groups were similar (Table 1). While there were more literates among the insured, the economic profile was similar, with comparable percentages living in mud houses and working as agricultural labourers. The median household expenditure for the insured was Rs 26788 (US\$623) while the corresponding figure for the non-insured households was Rs 24683 (US\$574).

Table 1: Profile of the sampled households

	Insured	Non insured
Number of households sampled	514	502
Number of households responded	471	334
Median age of households	29 years	25 years
Percentage of males in the households	50.4%	51.1%
Percentage of illiterates in the households	34.7%	25.7%
Percentage of agricultural labourers	34%	36.1%
Percentage of households living in mud houses	39%	40%
Percentage of landless households	70.6%	75.7%
Annual expenditure of the households (US\$)	623	574

There were 91 admissions among the insured households and 47 among the non-insured. Half of them were males in both the groups. However, older age groups appear to be admitted among the insured (median age 37 years) as compared to the non-insured (median age 28 years). Among the insured admissions, only 35% lived in mud houses, as opposed to 55% in the non-insured admissions. The median medical costs for admissions were Rs 5000 in both the households. However, for the insured, because of the protective effect of the insurance, the median expenditure was only Rs 1250, a reduction of 75%. This difference is graphically depicted in Figure 1.

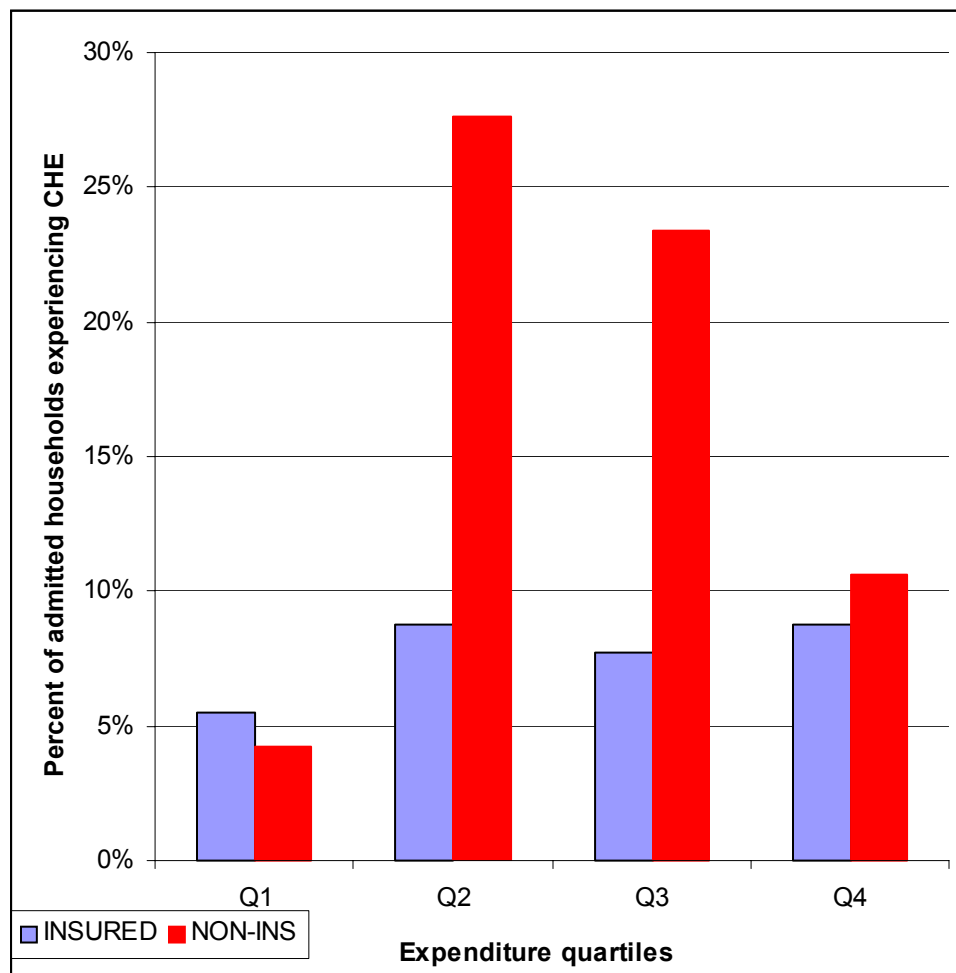
Figure 1: Out of pocket expenditure among insured and non-insured patients



31 of the non-insured families (66%) experienced catastrophic health expenditure, while only 28 of the insured families (32%) did so.

We analysed the incidence of CHE among the expenditure quartiles also. While CHE is distributed equally in all the quartiles for the insured households, it appears to be more among the middle two quartiles for the non-insured (Figure 2).

Figure 2: Distribution of CHE among the expenditure quintiles at KKVS.



Discussion

High health costs, in an environment where out-of-pocket spending is common and high, can be catastrophic for the households. This is the situation in many low-income countries. It has been documented in Cambodia (Van Damme 2003) and also in India (Sainath P 2004).

One of the functions of an insurance programme is to protect the household against catastrophic health expenditure (Kutzin 1998). Empirical evidence on the protective effect of CHIs is scanty. Ranson has demonstrated a reduction in CHE among insured members at SEWA (Ranson 2002).

This current study is one of the first that reviews the experience of both insured and non-insured households, vis-à-vis CHE. It appears that insured families spend less out-of-pocket as compared to non-insured families. There appears to be a lower incidence of CHE among insured (31%) as compared to non-insured (66%). This difference is statistically significant ($p > 0.001$). Some of the reasons for the incidence of CHE among insured are the high medical costs, a significantly high co-insurance of 25% and a cap on the maximum benefits. The insured patient has to spend out-of-pocket to meet the expenditure in excess of this cap. One obvious solution to reduce CHE

would be to raise the cap, however, this would raise the premiums and thus have a negative effect on enrolment and hence coverage of the scheme.

Yet another solution would be to control the costs of treatment. Currently, at KKVS, there is no control on the providers. Simple measures like introducing a case based payment itself could reduce the costs of treatment and make it more predictable. However, the CHI requires the skills for negotiating with the providers and purchasing appropriate care. Unfortunately, this is lacking in KKVS and reflects a situation that is common to most CHIs in India. If CHIs need to perform better and improve their efficiency, they need to introduce technical expertise in the management of the scheme.

To conclude, there is evidence that community health insurance reduces out-of-pocket expenditure on health care for those enrolled and protects some of the households from catastrophic health expenditure.

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