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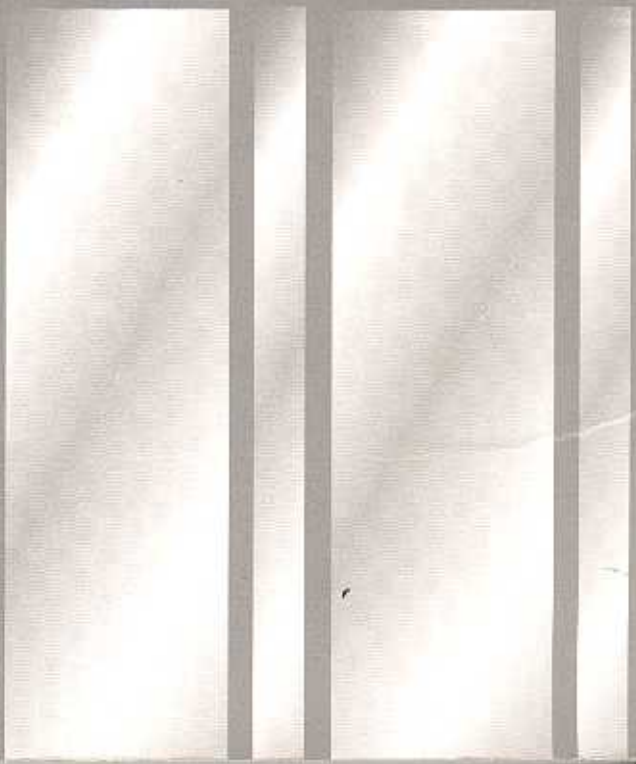

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CONTENTS

25113

Potential of the Health Insurance Market for the Informal Sector: A Pilot Study*

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This article investigates the community's preferences on various aspects of health insurance. The data has been collected from a sample of 300 households in Jaipur, Rajasthan. The study reveals a low level of awareness (15 per cent) about health insurance. Quality of care and cost are the two important factors identified by the community as the factors affecting their decision to subscribe to any new health insurance plan. An integrated provider and insurer system is preferred irrespective of public- or private-based management. Hospitalisation and maternity services are preferred among the given choices for benefits to be included under the plan. The results also suggest that there is high level of willingness to join a health insurance plan in future if designed carefully for the informal sector. Some policy implications have been suggested in this study for the setting up of health insurance schemes.

Introduction

Very few developing countries currently provide protection against health care costs for most of their population. Even worse, recent

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health sector reforms have led to increased user charges and an increased role for the private sector that have resulted in a greater financial burden on those who use health services. Moreover, a large proportion of the population in low-income countries remains without effective financial or physical access to quality local health services. This is especially true of those outside the formal sector of employment (Bennett et al. 1998). People in formal employment are generally more financially secure, and also more easily organised into health insurance schemes since their income is readily identified and can often be taxed at source. Appropriately designed and managed health insurance schemes for people outside formal employment will be a useful means of improving access to health care services and reducing the financial burden of treatment.

Recent household-level studies carried out in India both at national and regional levels have indicated that the proportion of patients that pay for services can be quite high, ranging from 64 to 90 per cent (Duggal and Amin 1989; George 1997; Sundar 1992). Most of the studies conducted in India, excepting that of the NSSO in 1992, estimated both indirect costs (transport, food, rituals and tips) and direct costs (consultation fee, hospitalisation, medicines and diagnostic tests) to the health seekers. Direct costs accounted for 69–93 per cent of the total costs (Duggal and Amin 1989; George 1997; Sodani 1997; Sodani and Gupta 1998; Sujata Rao et al. 1997; Sundar 1992 and 1994) and the cost of drugs and consultation fees constituted the major share. The financial burden of health care is, however, unduly heavy for the households belonging to the informal sector indicating a potential for voluntary comprehensive health insurance schemes for such sections of the society (Gumber and Kulkarni 2000). It is estimated that any form of health insurance covers only about 9 per cent of the Indian workforce and a majority of that covered belongs to the organised sector (Gumber 1998).

Unfortunately, only a few studies have investigated willingness to join health insurance and to pay for health insurance schemes in India. A study conducted in the Karnataka state of India examined the willingness to pay for a viable rural health insurance scheme through community participation. However, the probability of willingness to join was found to be greater than the probability of willingness to pay (Mathiyazhagan 1998). Another study conducted in the Gujarat state of India explored the availability of health

insurance coverage for the poor, especially women, their needs and expectations from a health insurance system and likely constraints in extending current health insurance benefits to workers in the informal sector (Gumber and Kulkarni 2000).

The overall objective of this article is to understand the community's perspective and expectations from a new health insurance scheme in urban areas of Rajasthan. The specific objectives of the study are: (*a*) to estimate the burden of health care expenditure on households; (*b*) to assess the awareness of households about existing health insurance schemes; (*c*) to understand the community's expectations from new health insurance schemes; (*d*) to understand the community's preferences on various aspects related to the delivery of health services through insurance; and (*e*) to suggest policy options for a feasible health insurance plan for the informal sector.

In the first section we discuss the data sources and various methodological concepts for conducting this type of study. Second, we discuss the study results on the profile of the surveyed population, the potential market in which the decision makers are operating, i.e., information about the money people are currently spending on health care. In addition, we investigate the awareness of health insurance among households, reasons for getting enrolled and not enrolled for health insurance, and understand the households' preferences on various aspects related to the delivery of health care services through insurance. The results are policy relevant and important for planning the design and implementation of health insurance for the informal sector in India.

Data and Methodology

Data Source

The data used in this analysis comes from the health policy study (Sodani 2001) conducted with the financial assistance of the Health Policy Development Network (HELPONET), India. This household survey collected information from 300 households (1,394 individuals) in nine localities dominated by the outside formal sections from November to December 2000. The total sample of 300 households

included a random sample of 270 households and a purposely selected sample of 30 households from whom at least one person was registered for the Mediclaim policy. These 30 households were selected from the list of subscribers obtained from the offices of United India Insurance and New India Assurance located in Jaipur. A two-stage stratified sampling procedure was used to select the sample of 270 households. In the first stage, nine localities were randomly selected and in the second stage, a fixed number of households (30) were randomly selected from each chosen locality.

The household survey included questions pertaining to a wide array of household- and individual-level characteristics. The household-level information included data on income and assets of the household. The section on family members comprised questions on individual family members in terms of age, sex, education level and illness during the last 12 weeks. The fourth section of the schedule included questions on perceived morbidity, whether the sick individual had undergone some treatment, sources of care, reasons for choosing the source, distance travelled to reach the source of care, and whether the individual was satisfied with the treatment. The next section of the survey had questions on the amount of money spent for each illness episode on various components of direct and indirect costs. After this, the survey focused on awareness of health insurance and expectations from the proposed health insurance schemes. In this section questions were framed to gauge the interviewees' willingness to join health insurance schemes, types of services preferred to be included in the insurance and the amount of premium they were ready to pay for this insurance.

Methodological Concepts

A good understanding of important methodological concepts is necessary to understand and interpret the results of such studies. Concepts which are of high importance for the researcher for conducting this type of study, are discussed in the following section.

Willingness to Pay (WTP) Willingness to pay is a concept being used increasingly to inform policy decisions in the health sector. How much people are willing and able to pay for a good or service can be assessed in two ways. One, by observing past health care utilisation,

expenditure and responsiveness to prices. A number of studies using survey data have modelled the demand (willingness to pay) for social services and health care using this technique (Gertler and van der Gaag 1998; Lavy and Quigley, 1993; Sodani 1997). Second, by asking people directly how much they would be willing and able to pay for a specified health care service or product. The first method obtains information about the money people are currently spending on health care. This informs decision makers about the *potential market* in which they are operating. However, observing how much people spent on a health service in the past to assess how much they will be willing to pay in the future may be inappropriate for a number of reasons (Russell et al. 1995):

- A market for the health service may not previously have existed because health care has been provided free or because a new service is being introduced to an area.
- The price paid by patients in the past may not reflect the maximum amount they are willing to pay, which may be greater.
- Willingness to pay for a service is related to particular situations and non-price factors, so that patients may be willing to pay a certain price to one provider but may not be willing to pay the same price to a different provider.

The second method, in theory, overcomes these three problems. It asks people directly the maximum amount of money that they would be willing and able to pay for a specified health service. It assumes from the beginning that people have had no previous experience of buying the health service which is going to be put on the market, and instead asks people their willingness to pay on the basis of their expectations:

> The method ... circumvents the absence of markets for public goods by presenting consumers with hypothetical markets in which they have the (hypothetical) opportunity to buy the good in question. Because the elicited willingness to pay values are contingent upon the particular hypothetical market described to the respondent, this approach came to be called the contingent valuation method (Mitchell and Carson 1986).

Since the health service and the circumstances under which it is bought are hypothetical, the respondent must develop an answer based on information provided by the interviewer. A WTP study therefore takes the form of a survey with several components: the household's characteristics, health care practices and expenditure, creation of a plausible hypothetical market and the respondent's willingness and ability to pay for the health service on offer.

Health care practices and expenditure questions establish the credibility of the subject matter and stimulate the respondents into considering what they are currently willing to pay for particular health services (WASH 1988). To some extent these questions will remind the respondents of previous valuations and choices that they have made, so their WTP values for any new service will be made in the context of knowing about alternative providers. Because the health service and the market situation presented are hypothetical, they should be described to respondents so that they can make an informed decision. In order to understand more about why people give particular figures for WTP, socio-economic information such as age, gender, income and attitudes to free health care, should be collected.

In the last two decades economists have developed the WTP method in other sectors to put a (monetary) value on public goods such as cleaner air or recreational sites, which are not traded in private markets. There is a large body of work on contingent valuation methods relevant to industrialised countries, particularly by environmental economists (Brookshire et al. 1976; Brookshire and Crooker 1981; Brookshire and Schultz 1986; Mitchell and Carson 1986). To investigate the community's willingness to join and the extent to which they are willing to pay for the proposed health insurance scheme, the contingent valuation (CV) method (wherein values are inferred from individuals' stated responses to hypothetical situations) is used. According to proponents of the contingent valuation method, asking people directly has the potential to inform about the nature, depth and economic significance of these values (Mathiyazhagan 1998). In recent years, there has been an increased interest in the CV method of measuring willingness to pay for health care technologies (Donaldson 1990; Johannesson et al. 1991, 1993; Mathiyazhagan 2000). In the present study, apart from the household survey, some discussions were also conducted with the community people about their perception on expectations from new health insurance schemes.

For example, respondents are asked how much they would be willing to pay for different gradations of cleaner air, and the amount in dollars specified is taken to be a qualitative measure of the benefits of this cleaner air. Decision makers require data on the monetary value of benefits of environmental goods to help them decide which public faculties or environmental qualities to prioritise (or to protect in the face of pollution). The assumption is made that if a person consumes an environmental 'good' he or she receives a certain amount of satisfaction. The more people are satisfied by, or value, a public good like cleaner air, the more they will be willing to pay. The argument is taken one step further to say that the maximum a person is willing to pay represents the degree of benefit they yield. More recently the benefits of health care programmes have been measured using the WTP method in order to provide information for decision making and priority setting in the health care sector (Gafni 1991; Golan and Shechter 1993; Johannesson 1993; Johannesson et al. 1991; Morrison and Gyldmark 1992).

Studies based on the WTP method have been developed in some industrialised countries to quantify the value of health programmes—particularly in countries such as the United Kingdom and Sweden, where there is a large government-funded health sector. Other more market-oriented economies such as the United States have considered WTP in relation to the level of insurance premiums. With the rise of cost recovery in low income countries, WTP studies are now being used in social and economic contexts to obtain information about the demand for public services if user charges are introduced, the potential revenue that can be raised and the financial sustainability of the policy change. The water and sanitation sectors, for example, have developed and tested the method in Burkina Faso, Haiti, Nigeria, Pakistan and Tanzania (Altaf et al. 1992; Altaf and Hughes 1991).

Given this new context and purpose for using WTP studies, extra caution needs to be exercised both in design and in the interpretation of results. There is no consensus on the best question format to use, but a number of alternatives are discussed in the literature. Three of these have recently been used in the health sector: open-ended questions, closed questions, and bidding games. The WTP method relies on the respondents making rational and knowledgeable trade-offs and choices before quoting a price, and these decisions are based on the information they have about the health

service, which is provided by the interviewer. A respondent's WTP statements may not be reliable if he has insufficient information about the characteristics of the service being described, or if he does not understand the information.

Recall Period The length of a recall period is influenced not only by type of disease, its degree of severity and use of health services, but also by the socio-economic background of the area and persons involved. Hence, the decision of defining a recall period of appropriate length is trivial and can not be universalised (Gumber 1997). In this study a longer recall period of 12 weeks was considered: (*a*) to include both acute and chronic illnesses; (*b*) to include only treated cases that had some expenditure; (*c*) to get maximum number of cases for analysis from the selected sample households; and (*d*) because of limited resources to collect the data.

Proxy Respondents Information from households was collected by administering a structured schedule. Information on household-level characteristics was collected either from the head of the household or from a knowledgeable person of the family who was able to respond appropriately on each member of the household. For health care utilisation and expenditure information, the surveyor attempted to ask the patient himself/herself if he/she was available at home at the time of the interview, and able to respond in a desired fashion. In cases where the person was not available at home at the time of interview or was not able to respond (e.g., infants, children, expectant mothers, old or very sick persons), proxy respondents were identified from within the household to respond. The proxy reporting was resorted to mainly because of time and resource constraints. Because of proxy respondents some bias in reporting is bound to exist.

Self-perceived Morbidity Many of the health surveys conducted in India have adopted the self-perceived approach to collect data on morbidity due to various logistic reasons, the most important being cost. Belcher et al. (1976) estimated that the medical examination survey turned out to be eight times costlier than the self-perceived approach. The present study also adopted the self-perceived morbidity approach to collect data on illness. Various procedures were employed for improving the self-perceived morbidity reporting during household surveys which included the use of proxy respondents, use of local language (Rajasthani) while asking the questions, and

the use of better trained investigators having experience of conducting health surveys. The study included prevalence and incidence of illness during the reference period.

Cost of Health Care The total cost of health care is the sum of direct and indirect costs incurred to recover from illness during the reference period. Direct cost includes expenses incurred on provider's fee, medicines, diagnostic tests, hospitalisation fee, and surgery expenses. Indirect cost is the associated expense with the treatment. It includes expenses incurred on transportation, food/stay arrangements during the course of treatment, tips given to get access to any person/facility at any level for getting better care. Also, expenses incurred for temple offerings, domiciliary *pooja* (*prasad, agarbatti*, etc.) and similar religious/cultural events carried out for the sole purpose of alleviating the suffering of the sick person were also included. Last but not least, opportunity costs, i.e., loss of earnings to the patient and the accompanying person were also calculated.

Results

Background Characteristics of the Surveyed Households

Socio-economic Characteristics of the Surveyed Households Table 1 shows that out of 300 surveyed households the majority belonged to the Hindu religion (95.3 per cent). As far as the social group is concerned the majority of the households were from other than the tribal community (86 per cent). The distribution of households according to the major source of income shows that the majority of the households were engaged in running a shop, skilled work and petty trade.

The distribution of households according to mean monthly income shows that about 37 per cent were earning an income in the range of Rs. 2,001 to 3,000, while 14 per cent were earning an income even up to Rs. 1,500 per month from all sources. It was also analysed that the monthly income was quite low for non-practising health insurance households (Rs. 3,658) compared to those enrolled in any type of health insurance scheme (Rs. 10,143).

Age–Sex Distribution of the Surveyed Population Table 2 shows that the total sample population was 1,394 comprising 56.7 per cent

Table 1
Socio-economic Characteristics of Surveyed Households

Socio-economic characteristics	*No. of households (300)*	*Percentage of households*
Religion		
Hindu	286	95.3
Muslim	6	2.0
Jain	5	1.7
Sikh	1	0.3
Christian	2	0.7
Social group		
Scheduled Tribe	42	14.0
Others	258	86.0
Major occupation		
Unskilled work	36	12.0
Skilled work	97	32.3
Petty trade	44	14.7
Shop	110	36.7
Professional work	13	4.3
Household monthly income (Rs.)		
Up to 1,500	42	14.0
1,501–2,000	68	22.7
2,001–3,000	111	37.0
Above 3,001	79	26.4

Table 2
Percentage Distribution of Surveyed Population by Age and Sex

	Male		*Female*		*Total*	
Age group	*F*	*%*	*F*	*%*	*F*	*%*
0–4	53	6.7	58	9.6	111	7.9
5–9	86	9.2	65	10.7	151	10.8
10–14	59	7.5	63	10.4	122	8.7
15–19	81	10.2	54	8.9	135	9.6
20–24	136	17.2	75	12.4	211	15.1
25–29	105	13.3	75	12.4	180	12.9
30–34	67	8.5	48	7.9	115	8.2
35–39	42	5.3	32	5.3	74	5.3
40–44	45	17.6	28	4.6	73	5.3
45–49	30	3.8	33	5.4	63	4.5
50–54	26	3.3	19	3.1	45	3.2

Table 2 continued

Table 2 continued

55–59	21	2.7	28	4.6	49	3.5
60–64	22	2.8	15	2.5	37	2.6
65–69	11	1.4	8	1.3	19	1.4
70–74	3	0.4	2	0.3	5	0.3
75 +	4	0.5	0	0.0	4	0.3
Total	791	100.0	603	100.0	1,394	100.0

males and 43.3 per cent females. The age distribution of the population shows that 27 per cent were below 15 years of age and 2 per cent were 65 years of age or older. The proportion below age 15 was slightly higher for females (31 per cent) than for males (23 per cent).

Morbidity Profile of the Surveyed Population The morbidity profile is based on the perceived morbidity and not the clinical morbidity. The data was collected from the households for 12 weeks' morbidity. The data included both the prevalence and incidence during the reference period of 12 weeks. Among the surveyed population (1,394), 395 (28.3 per cent) had suffered from at least one illness episode during the reference period. The respondents reported the symptoms of the illness based on their perception. As mentioned earlier, the study is based on the self-reporting of an illness and households were asked to describe the symptoms of the illness. Then, at the time of data analysis, the reported symptoms were classified into a combination of the system affected and the nature of the problem.

The distribution of reported illnesses according to their nature is presented in Table 3. Among the various types of reported illnesses, fever and infection seem to be the most common category of illness during the reference period in the surveyed households accounting for 56 per cent of the reported illnesses. It is followed by illnesses related to pains and aches (14 per cent), and problems related to the digestive system (10 per cent).

Duration of illness episode can be considered an indicator of the seriousness of the illness, i.e., the longer the duration, the greater the severity. However, a prompt curative intervention can moderate the period of illness. Table 4 shows the percentage distribution of sick individuals by the duration of illness episode including both acute and chronic illnesses. Table 4 shows that in the case of the majority of the sick persons (31.6 per cent), the duration of illness was more than 15 days, a long duration of illness in the surveyed area.

Table 3
Percentage Distribution of Sick Individuals by Reported Disease/Symptoms

	Sick individual	
Symptoms	*Number*	%
Infection and fever	221	55.9
Respiratory system	26	6.6
Digestive system	40	10.1
Pains and aches	54	13.7
Injuries, accident and violence	15	3.8
Dermatological	6	1.5
Cardiovascular and CNS	3	0.8
Reproductive system	18	4.6
Others	12	3.0
Total	395	100.0

Table 4
Percentage Distribution of Sick Persons by Duration of Illness Episode

Duration of illness episode (days)	*Frequency*	*Percentage*
1–3	90	22.8
4–6	85	21.5
7–10	77	19.5
11–15	18	4.6
> 15	125	31.6
Total	395	100.0

Table 5 shows that 73 per cent of the sick individuals had an acute illness (duration of illness less than four weeks) and the remaining 27 per cent suffered from a chronic illness (of more than four weeks' duration) during the reference period. The result also shows that there is not any significant difference in the proportion of sick persons by acute and chronic illnesses when analysed according to gender.

Table 5
Percentage Distribution of Sick Persons according to Nature of Illness and Sex

	Acute illnesses	*Chronic illness*	*Total*
All individuals	288	107	395
Sex			
% Male	60.0	57.9	59.5
% Female	40.0	42.1	40.5

Source of Care Used by the Sick Population

Various types of health care facilities available for treatment of illnesses were divided into five categories, i.e., public facility, private facility, traditional practitioners, chemists' shops, and family members/friends, for the purpose of analysis. Public facility included all the government-run health care institutions irrespective of the system of medicines. Private facility included all the allopathic private hospitals, dispensaries and clinics run by charitable institutions, non-governmental organisations, and individual practitioners. Besides, medical or paramedical personnel giving treatment and collecting fees are also included in this category. Traditional practitioners included folk healers, registered medical practitioners (non-allopathic), herbalists, *vaidyas, hakims, bhagats*, etc. Data from chemists' shops included the treatment taken directly by approaching a chemist without consulting any health care provider. Data from family members/friends included home remedies taken for health care as advised by family members, relatives and friends. Out of 395 sick individuals, 378 had undergone treatment to recover from the sickness, irrespective of the approach followed. The study revealed that of those who had availed of any type of treatment, most had approached providers in the private sector.

It was found that a private facility was chosen because of better perceived quality services and easy accessibility. Fifty per cent of those who utilised a private facility for seeking health care travelled a distance of less than 1 kilometre to reach the facility. At the same time,

Table 6
Percentage Distribution of Sick Individuals* by Source of Care Used

	Sick individual	
Source of care	*Number*	*%*
Public facility	131	34.6
Private facility	198	52.3
Traditional practitioner	28	7.4
Self/family	10	2.6
Chemist shop	11	2.9
Total	378	100.0

Note: *Sick individuals who have undergone some kind of treatment to recover from the illness.

among those who utilised a public facility, only 38 per cent reported that they travelled a distance of less than 1 kilometre to reach the facility. It clearly shows that geographically private facilities are more accessible to health seekers than public facilities in Jaipur. Moreover, we also asked the respondents about the satisfaction of the treatment services provided. It was found that among the private facility users, more persons (90 per cent) reported overall satisfaction with the treatment than the public facility users (81 per cent).

Financial Burden of Treatment on Household

The study revealed that on an average, people incurred an amount of Rs. 692 per illness episode (see Table 7), which is quite close to the earlier studies in the state of Rajasthan (Sodani 1997; Sodani and Gupta 1998).

Table 7
Health Care Expenditure per Illness Episode by Component

Components	*Mean amount (Rs.)*	*No. of persons who incurred some expenses*
Consultation fee	145	165
Medicine	614	348
Diagnostic test	537	43
Hospital fee	1,632	14
Surgery	3,405	5
Transport	81	135
Accompanying person	93	36
Tips	30	4
Rituals	210	13
Loss of earning to sick person	507	94
Loss of earning to accompanying person(s)	359	33
Total	692	395

A majority of the persons (88 per cent) incurred expenses on medicine, followed by consultation fees (41 per cent). One-third of the sick persons incurred expenses on travel and one-fourth on the opportunity cost of getting treatment, i.e., wage loss. The study found that there was a high financial burden on households for seeking health care. Sometimes the households had to borrow money to meet the treatment expenses.

Awareness of Health Insurance

Regarding the awareness of various types of insurance presently available, out of 300 households 93.3 per cent had heard about life insurance, 80.7 per cent about vehicle insurance, 44.3 per cent about property insurance and 48.7 per cent about fire/theft insurance. To assess the awareness of health insurance, the data was analysed according to the health insurance status of a household. The study revealed that out of 270 (non-health insurance households), only 41 (15 per cent) had heard about health insurance. Even among the Mediclaim households (health insurance households), the awareness level of other health insurance plans available in the market was low (Table 8).

Table 8
Health Insurance Awareness by Health Insurance Status of Households

Sources of information	*Non-insured*	*Mediclaim*
Aware about health insurance	41	30
Per cent reporting awareness from each of the following sources:		
Print media	48.8	60.0
Electronic media	51.2	43.3
Friends/relatives	48.8	20.0
Insurance agent/executive	34.1	56.7
Hospital/health care facility	1.0	70.0
Per cent reporting awareness about following health insurance policies:		
Jan Arogya	24.3	20.0
Mediclaim	75.6	100.0
Personal Accident Policy	75.6	70.0
Videsh Yatra Mitra	31.7	20.0
Asha Deep	74.2	26.7
Senior Citizen Unit Plan	4.9	16.7

Note: Percentages do not add up to 100 because each one was asked separately.

As for the sources of information about health insurance, the results (Table 8) reveal that among non-Mediclaim households the major sources of information were print media, electronic media and friends/relatives. However, in the case of Mediclaim households these were print media, electronic media, insurance executive/agents and hospitals. As for their awareness of different health insurance plans available in the market, it was found that a majority of non-

insured households were aware of the Mediclaim policy, personal accident policy and Asha Deep, while a majority of Mediclaim households were aware only of Mediclaim and the accident policy. The awareness level of even Mediclaim households was low.

Reasons for Insured and Non-insured Status

Respondents from Mediclaim beneficiary households (30) were asked why they/their family members had decided to get insured; a majority of them said it was for receiving better quality care (87 per cent) and the cheapest way to get care (80 per cent). Among the respondents from the other sample of households (270), those who were found to be aware of health insurance (41) were asked why they/their family members had not yet enrolled. The reasons that they gave (presented in Table 9) were as follows: 'it is too expensive' (49 per cent); 'why should we pay before falling sick?' (46 per cent); 'low coverage of services' (44 per cent); 'we can pay for each consultation' (22 per cent); and 'no trust in insurance' (22 per cent).

Table 9
Reasons for Insured and Non-insured Status of Households

Reasons	*No.*	*%*
Why did you opt for health insurance? (n = 30)		
Cheapest way to get care	24	80.0
Quality of care	26	86.7
Obligatory	22	73.3
Why are you not yet enrolled for health insurance? (n = 41)		
Too expensive	20	48.7
Why should we pay before falling sick	19	46.3
Low coverage of services	18	43.9
We can pay for each consultation	9	21.9
No trust in insurance	9	21.9

Note: Percentages do not add up to 100 because each one was asked separately.

Expectations from the New Health Insurance Scheme

We asked the respondents about their expectations from a new health insurance scheme in terms of influencing factors to subscribe, types of benefits covered, types of management preferred, types of cost coverage, and amount of premium they were willing to pay for

the preferred benefit. The premiums were calculated for three types of options given to the respondents for the preferred package of service. The results depict that cost and quality were the most influencing factors to subscribe to health insurance schemes as perceived by the respondents (Table 10).

Table 10
Influencing Factors to Subscribe to New Health Insurance Scheme

	Households	
Factors	*No*	*%*
Cheaper	290	96.6
Quality	275	91.6
Easy accessibility	235	78.3
Timely attention	221	73.7
Coverage of all illnesses	218	72.7

Note: Percentages do not add up to 100 because each one was asked separately.

When the respondents were asked about the type of management they would prefer for a new health insurance plan, out of 300 households more than 50 per cent preferred public sector management for the operation and implementation of the scheme. Moreover, irrespective of the preferred management, households preferred an integrated provider and insurer system (Table 11).

Table 11
Type of Management Preferred for New Health Insurance Scheme

Preference for management structure	*Households*	
Preferred type of management (n = 300)	No.	%
Public sector	163	54.3
Private sector	118	39.3
Bank/Financial institutions	15	5.0
Municipal corporation (elected bodies at local level)	2	0.7
NGOs/Voluntary organisations	2	0.7
Preferred public sector management (n = 163)		
Integrated provider and insurer	108	66.3
Separate provider and insurer	55	34.7
Preferred private sector management (n = 118)		
Integrated provider and insurer	107	91.0
Separate provider and insurer	11	9.0

Willingness to Join Health Insurance and Preference for Service

A good understanding of the viability of health insurance requires detailed information that can come from an investigation of the willingness to join a health insurance scheme and preference for services to be covered in the insurance plan. Willingness to join any health insurance scheme/plan is discrete—willing or not willing. Therefore, a suitable estimator was used to explain the qualitative response. The contingent valuation approach or the hypothetical valuation method was used to reveal households' willingness to join and pay a health insurance premium. This technique involves a process of offering a set of hypothetical situations to the respondents and determining how they would react to such situations. It means that the estimates are not based on observed or actual behaviour; but, instead, on inferring what an individual's behaviour would be from the answers he or she provides in survey framework. Although this kind of method may not always provide accurate estimates, it does provide an order-of-magnitude estimate, which could be valuable for planning purposes.

Households' preference for the medical benefits plan was measured in terms of types of illness; and hence data was collected on medical services to be covered by the proposed health insurance. The respondents were offered a set of five hypothetical categories of medical services: (*a*) hospitalisation, (*b*) general outdoor patient department (OPD) services, (*c*) chronic ailments, (*d*) special consultations, and (*e*) maternity care, and asked to rate for inclusion in the insurance plan. The results are presented in Table 12.

Table 12
Insurance Package Preferred without and with Prioritising for New Health Insurance Scheme

	Percentage of households that preferred the service to be included in the insurance plan (n = 300)	
Benefits	*Response before priority*	*Response after priority*
Hospitalisation	76	33
General OPD	95	14
Chronic ailments	99	12
Special consultation	84	16
Maternity care	90	25

The survey results on households' willingness to join the proposed health insurance scheme show that most of the households were willing to join a comprehensive health plan, which includes all five types of medical benefits. This meant that they considered the whole package as necessary to the entire household. Further, the respondents were asked to prioritise the available hypothetical medical services to be included in the insurance plan. The respondents rated the five services based on their own perceived need for that service for the family members. The data was analysed for the top priority given by the respondents. This shows a high willingness to join for the particular scheme for a particular service. As expected, a majority of the households (53 per cent) preferred hospitalisation to be included in the insurance plan. About 25 per cent opted for maternity care. This shows that there exists a strong potential for a viable health insurance market for these two services for which households are incurring a lot of financial burden.

Willing to Pay for Proposed Health Insurance Schemes

Studies on household health care expenditure in developing countries and especially in India (Duggal and Amin 1989; George 1997; Sodani 1997; Sodani and Gupta 1998; Sujata Rao et al. 1997; Sundar 1992, 1994). Gumber and Kulkarni, 2000) suggest that the major items of direct expenses are consultation fees, hospital charges, medicine and diagnostic services; and indirect expenses are travel cost incurred on the person seeking health care and the accompanying person and wage loss to the person seeking health care and the accompanying person. Households were told that different types of medical benefits had different costs. This was explained by using a hypothetical method. The survey included direct questions on each household's willingness to pay for health insurance for various options. Respondents were asked to state the maximum amount of money they could pay per person for subscribing to a proposed health insurance plan. The willingness to pay statements by the respondents were based on the information about the health services, how much they are currently spending to get that service, perceived morbidity profile of the family members, and so on. Respondents were asked to state the maximum amount of premium they could pay annually for three different options: (*a*) only direct cost items are included in the proposed insurance plan; (*b*) direct cost items plus transport expenses

are included; and (*c*) direct cost items plus transport plus opportunity costs are included in the proposed insurance plan. Table 13 describes clearly the options described by the investigating team to the respondents according to the service(s) to be included as well as cost items to be covered under the proposed health insurance plan.

Table 13
Definition of Various Options According to Coverage of Services and Cost Items

Options	*Services to be covered*	*Cost of items to be covered*
Before priority		
Option 1	Hospitalisation, general OPD services, chronic ailments, special consultations and maternity care	Consultation fee, hospital charges, expenses on medicines and diagnostic services
Option 2	Hospitalisation, general OPD services, chronic ailments, special consultations and maternity care	Consultation fee, hospital charges, expenses on medicines and diagnostic services; and transport expenses
Option 3	Hospitalisation, general OPD services, chronic ailments, special consultations and maternity care	Consultation fee, hospital charges, expenses on medicines and diagnostic services; transport expenses and wage loss
After prioritising: Hospitalisation		
Option 1	Hospitalisation	Consultation fee, hospital charges, expenses on medicines and diagnostic services
Option 2	Hospitalisation	Consultation fee, hospital charges, expenses on medicines and diagnostic services; and transport expenses
Option 3	Hospitalisation	Consultation fee, hospital charges, expenses on medicines and diagnostic services; transport expenses and wage loss
After prioritising: General OPD services		
Option 1	General OPD services	Consultation fee, hospital registration fee, expenses on medicines and diagnostic services
Option 2	General OPD services	Consultation fee, hospital registration fee, expenses on medicines and diagnostic services; and transport expenses

Table 13 continued

Table 13 continued

Option 3	General OPD services	Consultation fee, hospital registration fee, expenses on medicines and diagnostic services; transport expenses and wage loss
After prioritising: Chronic ailments		
Option 1	Chronic ailments	Consultation fee, hospital charges, expenses on medicines and diagnostic services
Option 2	Chronic ailments	Consultation fee, hospital charges, expenses on medicines and diagnostic services; and transport expenses
Option 3	Chronic ailments	Consultation fee, hospital charges, expenses on medicines and diagnostic services; transport expenses and wage loss
After prioritising: Special consultations		
Option 1	Special consultations	Consultation fee, hospital charges, expenses on medicines and diagnostic services
Option 2	Special consultations	Consultation fee, hospital charges, expenses on medicines and diagnostic services; and transport expenses
Option 3	Special consultations	Consultation fee, hospital charges, expenses on medicines and diagnostic services; transport expenses and wage loss
After prioritising: Maternity care		
Option 1	Maternity care	Consultation fee, hospital charges, expenses on medicines and diagnostic services
Option 2	Maternity care	Consultation fee, hospital charges, expenses on medicines and diagnostic services; and transport expenses
Option 3	Maternity care	Consultation fee, hospital charges, expenses on medicines and diagnostic services; transport expenses and wage loss

Table 14 shows the survey results of households' willingness to pay for health insurance. The result depicts that households were willing to pay a maximum amount of, on an average, Rs. 253 per person per year for the comprehensive health insurance plan, which includes hospitalisation, general OPD services, chronic ailments, special consultations and maternity care. The households' response to the preferred premium of Rs. 253 was based on the assumption that direct costs which included expenditure on consultation fee, hospital charges, medicines and diagnostic services are to be covered under the health insurance plan. Further to this, the households were willing to pay an amount higher by 17.4 per cent on the inclusion of transport expenses in the insurance plan. The opportunity cost of getting health care is also high for informal sector people as seen from the results. Table 14 shows that the households were willing to pay an additional amount by 23 per cent over option 2 to protect the financial burden caused by wage loss.

Before and after asking for prioritisation of service to be included in the insurance plan, the preferred premiums for each type of service are presented in Table 14. The analysis shows that there is a rise in people's willingness to pay for the preferred premium by 16 to 24 per cent from option 1 to 2. It clearly indicates that the households were willing to pay the additional amount to protect them from the financial burden of the travel cost for seeking health care. Moreover, there was a rise in the willingness to pay for the preferred premium by 21 to 32 per cent if wage loss was also included apart from the travel cost. The analysis shows that the households were willing to pay around 42 to 60 per cent additional money for protecting themselves against the financial burden of indirect expenses for seeking health care (travel and wage loss). This shows that the households were not only willing to protect themselves from the high financial burden of direct expenses but also from the indirect expenses which included the opportunity cost of getting health care.

Conclusions

This study addresses the community's expectations from a new health insurance plan for the informal sector population. The community's expectations were assessed on various issues. These issues are very

Table 14
Preferred Premium for Preferred Service in the New Health Insurance Scheme by Various Options (in Rs.)

	Before prioritisation	*After prioritisation of service to be included in the insurance plan by the respondent*				
	Given package of services (n = 300)	Hospitalisation (n = 100)	General OPD (n = 43)	Chronic Ailments (n = 35)	Special consultation (n = 48)	Maternity care (n = 74)
Option 1	253	68	113	152	150	107
Option 2	297	84	137	182	174	133
Option 3	360	107	181	237	223	167
Per cent change from						
Option 1 to 2	17.4	23.5	21.2	19.7	16.0	24.3
Option 2 to 3	21.2	27.4	32.1	30.2	28.2	25.6
Option 1 to 3	42.3	57.3	60.2	55.9	48.7	56.1

important in the current context when we are thinking of expanding health insurance in the country, especially for the outside formal sector. As we have seen, there is a high financial burden on the households in seeking health care; there is an urgent need to mobilise the health industry in such a way that quality services are provided by an efficient and effective health care delivery system. The results show that people have a relatively good awareness of life insurance compared with health insurance. It suggests that there is an urgent need to make the people aware of the concept of health insurance and how it is useful for them. The increased awareness level of the community will be able to create a favourable environment for the insurance sector. The study also revealed that there is a high willingness to join the health insurance plan. The community preferred an integrated system of provider and insurer; and hospitalisation and maternity care as a first choice for the services to be included in the insurance scheme. This study calls for an innovative and feasible health insurance scheme at a low cost for providing quality services to the informal sector community.

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