



## “A STUDY OF THE AWARENESS OF HEALTH INSURANCE AMONG INPATIENTS OF TERTIARY CARE TEACHING HOSPITAL”

### Healthcare

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### ABSTRACT

A questionnaire based study was carried out to know the awareness and perceptions of health insurance and its association with education, income and occupational status of the respondents. The sample size was arrived at based on the findings of a pilot study. The responses were analyzed using SPSS 11.5. Rs 50,000- Rs 100,000 is the most sought after coverage for a year, and the median premium was Rs 1,000 with an inter quartile range of Rs 500 to Rs 2000. Social health insurance and social groups are the most preferred type of insurance and insurers respectively. The study found a statistically significant association of awareness of health insurance with age, education, income, gender and occupation of the respondents. The awareness of health insurance is higher among those with higher education, income and employment. Higher age (>65 years), low income and education, and unemployment are associated with poor or no knowledge of health insurance. Awareness is higher among men than in women.

### KEYWORDS

Health insurance, Insurance Status, awareness, income and education

With increasing health awareness, life expectancy and lifestyle diseases, health insurance has become the need of the hour to meet high medical expenses. The public is now receptive to health insurance. Health insurance is one of the enabling factors of health services utilization. (Andersen JG 1973; Anderson R 2003)

In developed and developing countries alike, the rising cost of health care poses major challenges to the sustainability of out-of-pocket spending. Almost 80percent of total health care spending in India is financed out-of-pocket, emergency medical treatment or major hospitalization often means financial ruin for families, because the cost of such health care often far exceeds the average family's ability to pay or borrow.

Families in India devoted 58percent of their total annual household spending to health care when a family member was hospitalized and, as a result, as many as 25percent of families with a hospitalized member fell into bankruptcy after that hospitalization.

Health insurance can play an important role in addressing the societal burden of financial catastrophe that many face when obtaining health care in India. (Bhattacharjya, 2008)

Studies have reported that education, financial and occupational status has a significant association with the awareness and status of health insurance of an individual. Low education, low income, female, and age 75 or over had lower understanding of health insurance.

### Objectives

1. To study the awareness of health insurance among inpatients.
2. To study association of health insurance awareness with education, income and occupational status.

### Methodology

1. Pilot study was carried out using validated structured questionnaire to know the awareness and perception of health insurance among inpatients. Sample size of 384 was arrived at based on the results of pilot study. The study was carried out and the numbers of respondents were 400 inpatients.
2. The responses to the questionnaire were analyzed using SPSS version 11.5. Statistical tests of significance for comparison of proportions (Chi Square and Fisher Tests) were applied to know the association of awareness of health insurance with education, income and employment status of the respondents. p value less than 0.05 was considered as significant.

### Observations

202 (50.5percent) respondents were from rural areas while 198 (49.5percent) were from urban areas.

14 (3.5percent) respondents were less than 18 years of age,

75(18.8percent) in 19-24, 122 (30.5percent) in 25-44 years, 119 (29.8percent) in 45-64 and 70 (17.5percent) in more than 65 years age groups.

Of the respondents 169 (42.3percent) were women and 231 (57.8percent) were men.

Insert Table 1

121 (30.3percent) respondents had less than seven years of education, 91 (22.8percent) had eight to ten years and 78 (19.5percent) had 12 years of education. 81 (20.3percent) and 29 (7.3percent) respondents had completed graduation and post-graduation respectively.

21 (5.3percent) were government employees, 76 (19percent) were non-government employees and 108 (27percent) were self employed. Students comprised 53(13.3percent) of respondents and 142 (35.5percent) unemployed formed a maximum.

138 (34.5percent) of the respondents were below poverty line while and 262 (65.5percent) were above poverty line.

Only 33 (8.3percent) of the respondents replied that they income tax payees and 367 (91.8percent) replied that they were not income tax payees.

Insert Table 2

Of the 400 respondents, 288 respondents (72percent) replied that they were aware of health insurance and 112 respondents (28percent) replied that they were not aware of health insurance.

293 (73.3percent) of 400 respondents answered the question '**what is your source of information about health insurance?**' Of them 110 (37.5percent) replied social support group as their source of information, 100 (34.percent) replied relative or friend, 31 (10.6percent) replied television. The combinations of various sources form a small proportion.

Insert Table 3

252 (63.3percent) of total respondents opined that health insurance was necessary, 22 (5.5percent) opined that health insurance was not necessary and 124 (31.2percent) replied that they could not say if health insurance was necessary or not. 0.5percent i.e. two respondents did not answer the question.

192 (48percent) of the respondents were insured and 208 (52percent) were noninsured. Further none of the noninsured replied to the question; 'Do you intend to buy health insurance in the future?'

Of the 400 respondents only 173 (43.3percent) replied that all family members insured.

Insert Table 4

92 (47.9percent) of the insured inpatients were buyers of their health insurance; the buyer was the spouse in 40 (20.8percent), parent in 36 (18.8percent), children in 23 (12percent) and others in one (0.5percent).

Insert Table 5

149 (37.5percent) of the respondents had other form of insurance and 248 (62.5percent) did not have any form of insurance. Of those with other types of insurance, life insurance was the maximum with 56 (37.3percent) followed by vehicle insurance with 55 (36.7percent) and both life and vehicle insurance with 37 (24.7percent). The combination of life, vehicle and property insurance formed two (1.3percent).

Insert Table 6

Of the 189 responses to type of health insurance 101 (53.4percent) had community or group health insurance, 61(32.3percent) had employer provided health insurance, 14 (7.4 percent) had private/ voluntary health insurance and 13 (6.9percent) had government or social health insurance.

Insert Table 7

Of the 212 responses, the commonest reasons for not buying health insurance is not being aware 103 (48.6percent) and do not need health insurance 80 (37.7percent) of responses. Cannot afford 13 (6.1percent), health insurance is not worth its cost five (2.4percent), not being eligible five (2.4percent) and cumbersome formalities four (1.9percent) were other reasons for not having health insurance.

Insert Table 8

Of 197 responses, the reasons for buying health insurance were; 149(75.6percent) covering medical expenses, 34 (17.3percent) covering expenses and provided by employer, 10 (5.1percent) provided by employer and one (1.5percent) recommended by contact.

Insert Table 9

215 (80.2percent) of 268 responses were meets medical expenses, 27 (10.1percent) meets medical expenses and provides cashless facility, 11 (4.1percent) were cashless facility, nine (3.4percent) were a combination of meets medical expenses, provides cashless facility and reduces out-of-pocket payment and six (2.2percent) were reduces out-of-pocket payment.

Insert Table 10

Of the 123 responses for the question '**Was your previous hospitalization fully covered by your health insurance?**' 83 (67.5percent) replied yes and 40 (32.5percent) replied no.

Of the 106 responses to '**Was your previous hospitalization coverage cashless?**' 94 (88.7percent) replied it was cashless and 12 (11.3percent) said it was reimbursed and not cashless.

There were only seven responses to the question '**Did you buy health insurance after the last hospitalization?**' Three (42.9percent) replied they had and four (57.1percent) had not.

Insert Table 11

Of 288 responses; 103 (35.8percent) preferred annual coverage of Rs 50,000 to Rs 100,000. 66 (22.9percent) preferred <Rs 50,000; 63 (21.9percent) preferred Rs 100,000 to 200,000; 48 (16.7percent) preferred Rs 200,000 to 500,000 and eight (2.8percent) preferred > Rs 500,000.

Insert Table 12

The responses to '**What would be the ideal premium for you?**' significantly deviate from normal distribution so, median and inter quartile range (IQR) are reported. Median is Rs 1000 and the inter quartile range is Rs 500 to Rs 2000.

Insert Table 13

Of 288 respondents 142 (49.3percent) preferred to buy their health insurance from social support group, 76 (26.4percent) from public companies, 69 (24percent) from private companies and 0.3 percent from stand alone insurance companies.

Of the 288 respondents; 119 (41.3percent) preferred health insurance from social support group, 79 (27.4percent) from employers, 45 (15.6percent) from insurance agents and seven (2.4percent) from company outlets. Five (1.7percent) preferred to buy health insurance

online.

Insert Table 14

Of 189 respondents; 127 (67.2percent) replied that they would recommend their health insurance to others, 53 (28percent) would strongly recommend and 2.3percent were not sure if they would recommend.

Insert Table 15

The study revealed a significant association of health insurance awareness with education, income and occupational status.

Table 16 shows a statistically significant association between health insurance status and educational status. (p<0.001)

There is a significant increase in the awareness of health insurance with increase in years of education.

Insert Table 16

**Discussion**

Awareness of health insurance among inpatients

The study found a statistically significant association of awareness of health insurance with age, education, income, gender and occupation of the respondents. The awareness of health insurance is higher among those with higher education, income and employment. Higher age (>65 years), low income and education, and unemployment are associated with poor or no knowledge of health insurance. Awareness is higher among men than in women.

Similar results were reported in other studies. '(McCall 1986; Rice 1991; Garnick1993)'

The source of health insurance information was social group in 37.5 percent of the respondents. Short et al. in their study reported that at least 90percent reported that they had received information from their group sponsor. '(Short 2002)'

Reshmi et al. reported that the highest proportion of respondents had family and friends (34.8percent) as their source of information. '(Reshmi 2007)'

**Conclusion**

72 percent of respondents were aware of health insurance; social support group is the single largest source of information among the respondents. 63.3 percent of the respondents were of the opinion that health insurance is necessary. 48 percent of the respondents had some form of health insurance; this percentage is high owing largely to community health insurance programmes implemented through social support or co-operative groups in rural areas. Community health insurance (53.4 percent) had the highest number of beneficiaries among the respondents. Lack of awareness (48.6 percent) is the commonest cause for not buying health insurance. Among those insured; coverage of medical expenses (75.6percent) is the commonest reason for buying health insurance. Those insured are not given details of their health insurance plan at the time of renewal nor are they told of inclusion and exclusion criteria. Rs 50,000- Rs 100,000 is the most sought after coverage for a year, and the median premium was Rs 1,000 with an inter quartile range of Rs 500 to Rs 2000. Social health insurance and social groups are the most preferred type of insurance and insurers respectively. Awareness of health insurance is better among those with higher education and income. Awareness is also higher among the employed, men and those in private wards. These differences are statistically significant.

**Table 1: Demographic profile of respondents**

Place	Frequency		Valid Percent	
	Rural	202		50.5
	Urban	198		49.5
Total	400	100		
Age	Frequency		Valid Percent	
	<18	14		3.5
	19-24	75		18.75
	25-44	122		30.5
	45-64	119		29.75
	>65	70		17.5
Total	400	100		

Gender		Frequency	Valid Percent
	Female	169	42.25
	Male	231	57.75
	Total	400	100

**Table 2: Socioeconomic profile of respondents**

Education		Frequency	Valid Percent
	<7 years	121	30.25
	8-10 years	91	22.75
	10+2	78	19.5
	Graduation	81	20.25
	Post graduation	29	7.25
	Total	400	100
Employment		Frequency	Valid Percent
	Government	21	5.25
	Nongovernment	76	19
	Self employed	108	27
	Student	53	13.25
	Unemployed	142	35.5
	Total	400	100
Income status		Frequency	Valid Percent
	BPL	138	34.5
	APL	262	65.5
	Total	400	100
Tax payee		Frequency	Valid Percent
	Yes	33	8.25
	No	367	91.75
	Total	400	100

**Table 3: Awareness of health insurance and source of information**

Aware of health insurance		Frequency	Valid Percent
	Yes	288	72
	No	112	28
	Total	400	100
Source of information		Frequency	Valid Percent
	Insurance agent	15	5.1
	Television	31	10.6
	Radio	1	0.3
	Newspaper	13	4.4
	Relative/friend	100	34.1
	Internet	1	0.3
	Social group	110	37.5
	Insurance agent and television	1	0.3
	Insurance agent and newspaper	4	1.4
	Insurance agent and social group	3	1.0
	Insurance agent, friend/contact	8	2.7
	Insurance agent, friend and social group	1	0.3
	Employer	5	1.7
	Total	293	100.0

**Table 4: Responses to necessity of health insurance and health insurance status**

Health insurance a necessity		Frequency	Valid Percent
	Yes	252	63.3
	No	22	5.5
	Can't say	124	31.2
	Total	398	100.0
Health insurance status		Frequency	Valid Percent
	Insured	192	48.0
	Uninsured	208	52.0
	Total	400	100.0
All family members insured		Frequency	Valid Percent
	Yes	173	43.5
	No	225	56.5
	Total	398	100.0

**Table 5: Buyer of respondent's health insurance**

Buyer		Frequency	Valid Percent
	Self	92	47.9

Other forms of insurance possessed by respondents		Frequency	Valid Percent
	Spouse	40	20.8
	Parent	36	18.8
	Children	23	12.0
	Other	1	0.5
	Total	192	100.0

**Table 6: Other forms of insurance possessed by respondents**

Other form of insurance		Frequency	Valid Percent
	Yes	149	37.5
	No	248	62.5
	Total	397	100.0
Type of insurance		Frequency	Valid Percent
	Life	56	37.3
	Vehicle	55	36.7
	Life and vehicle	37	24.7
	Life, property and vehicle	2	1.3
	Total	150	100.0

**Table 7: Type of respondent's health insurance**

Type of health insurance		Frequency	Valid Percent
	Government	13	6.9
	Employer sponsored	61	32.3
	Private/ voluntary	14	7.4
	Community or group	101	53.4
	Total	189	100

**Table 8: Reasons for not buying health insurance among noninsured respondents**

Reasons for not buying health insurance		Frequency	Valid Percent
	Not aware	103	48.6
	Do not need HI	80	37.7
	Not worth cost	5	2.4
	Cannot afford	13	6.1
	Other	2	0.9
	Not eligible	5	2.4
	Cumbersome formalities	4	1.9
	Total	212	100.0

**Table 9: Reasons for buying health insurance among insured respondents**

Reasons for buying health insurance		Frequency	Valid Percent
	Covering medical expenses	149	75.6
	Employer provided	10	5.1
	Recommended by contact	3	1.5
	Other	1	0.5
	Covering expenses and employer provided	34	17.3
	Total	197	100

**Table 10: Benefits of health insurance according to respondents**

Benefits of health insurance		Frequency	Valid Percent
	Meets medical expenses	215	80.2
	Cashless service	11	4.1
	Reduces Out-of-pocket payment	6	2.2
	Meets med exp and cashless	27	10.1
	Meets med exp, cashless, reduces OOP payment	9	3.4
	Total	268	100

**Table 11: Previous hospitalization, its coverage by health insurance and buying health insurance after previous hospitalization**

Previous hospitalization expenses coverage		Frequency	Valid Percent
	Yes	83	67.5
	No	40	32.5
	Total	123	100.0
Was previous hospitalization coverage cashless?		Frequency	Valid Percent
	Yes	94	88.7
	No	12	11.3
	Total	106	100.0

Health Insurance bought after last hospitalization	Frequency	Valid Percent
Yes	3	42.9
No	4	57.1
Total	7	100.0

**Table 12: Preferred health insurance coverage in Rupees**

Preferred coverage in Rupees	Frequency	Valid Percent
Rs <50,000	66	22.9
Rs 50,000-100,000	103	35.8
Rs 100,000-200,000	63	21.9
Rs 200,000-500,000	48	16.7
Rs >500,000	8	2.8
Total	288	100.0

**Table 13: Ideal annual premium in Rupees**

Ideal annual premium in Rupees	Frequency	Valid Percent
300	14	4.9
400	2	0.7
500	92	31.9
600	1	0.3
1000	75	26.0
1500	2	0.7
2000	51	17.7
2500	1	0.3
3000	11	3.8
4000	3	1.0
5000	23	8.0
6000	2	0.7
8000	1	0.3
10000	9	3.1
20000	1	0.3
Total	288	100.0

**Table 14: Company and place preferred to buy health insurance from**

Insurance company preferred	Frequency	Valid Percent
Public company	76	26.4
Private company	69	24.0
Stand alone company	1	0.3
Social support group	142	49.3
Total	288	100.0

  

Buy health insurance from	Frequency	Valid Percent
Agent	45	15.6
Online	5	1.7
Company outlet	7	2.4
Hospital group	33	11.5
Employers	79	27.4
Social support group	119	41.3
Total	288	100.0

**Table 15: Recommendability of respondent's current health insurance**

Current health insurance is	Frequency	Valid Percent
Strongly recommended	53	28.0
Recommended	127	67.2
Not sure	9	4.8
Total	189	100.0

**Table 16: Association of health insurance awareness and educational status of respondents**

Education		Awareness		Total
		Yes	No	
<7 years	Count	52	69	121
	% within education	43.0%	57.0%	100.0%
8-10 years	Count	66	25	91
	% within education	72.5%	27.5%	100.0%
10+2	education Count	65	13	78
	% within education	83.3%	16.7%	100.0%
Graduation	Count	79	2	81
	% within education	97.5%	2.5%	100.0%

Post graduation	Count	26	3	29
	% within education	89.7%	10.3%	100.0%
Total	Count	288	112	400
	% within education	72.0%	28.0%	100.0%

**Chi Square Test p<0.001**

**References**

- Andersen JG, Demographic Factors Affecting Health Services Utilization: A Causal Model. Medical Care 1973;11(2): 104-120
- Andersen R, Rice TH, Kominski GF. Changing the US health care system: Key issues in health services policy and management. 3rd edition. California: John Wilkey and Sons. 2007.
- Bhandari S, Mills R. Dynamics of Economic Well-Being: Health Insurance 1996-1999. Household Economic Studies, 2003, U.S. Census Bureau.
- Bhattacharjya AS, Sapra PK. Health Insurance in China and India: Segmented roles for public and private financing. Health Affairs 2008; 27(4): 1005-1015
- Blumberg LJ. The Effect of Private Health Insurance Coverage on Health Services Utilisation in New Zealand. Wellington, 2006, Fulbright New Zealand.
- Cohen SB. Attitudes toward Health Insurance and Their Persistence over Time, Adults 2003–2004. Statistical Brief #161. February 2007. Agency for Healthcare Research and Quality, Rockville, MD.
- Cunningham, P.J., Denk, C., and Sinclair, M.: Do Consumers Know How Their Health Plan Works? Health Affairs 2001; 21(2): 159–166.
- Garnick DW, Hendricks AM, Thorpe KE, Newhouse JP, Donelan K, Blendon RJ. How Well Do Americans Understand Their Health Coverage? Health Affairs 1993; Fall: 204-212.
- Greenwald LM, McCormack LA, Uhrig JD, West N. Measures and Predictors of Medicare Knowledge: A Review of the Literature. Health Care Financing Review 2006; 27(4): 1-12.
- Hibbard JH, Jewitt, JJ, Englemann S, Tusler M. Can Medicare Beneficiaries Make Informed Choices? Health Affairs 1998, 17(8): 181-193.
- McCall N, Rice T, and Sangl J.: Consumer Knowledge of Medicare and Supplemental Health Insurance Benefits. Health Services Research 1986; 20(6): 633–657.
- McCormack LA, Uhrig JD. How Does Beneficiary Knowledge of the Medicare Program Vary by Type of Insurance? Med Care 2003; 41: 972–978.
- Reshmi B, Nair NS, Sabu KM, Unnikrishnan B. Awareness of health insurance in a South Indian population- A community based study; Health and Population- Perspectives and Issues 2007;30(3), 177-188.
- Rice T, McCall N, Boismier JM. The Effectiveness of Consumer Choice in the Medicare Supplemental Health Insurance Market: Health Services Research 1991; 26(2): 223-246.
- Short PF, McCormack L, Hibbard J, Shaul JA, Harris-Kojetin LH, Fox MH, Damiano P, Uhrig JD, Cleary PD. Similarities and Differences in Choosing Health Plans. Medical Care 2002; 40: 289–302.