



Awareness of health insurance among inpatients of a regional tertiary care Hospital in north east of India

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Abstract

Over 40% of hospitalized Indians borrows heavily or sell assets to cover hospital expenses. It pushes 3-4% of population below the poverty line every year. Health insurance could be a way of removing the financial barriers and improving accessibility to quality medical care by the poor and also an effective social security mechanism. Only 10% of Indians have some form of insurance mostly inadequate. This study was therefore undertaken to ascertain the profile of the patients, their awareness about health insurance and percentage of people who avail the benefits of various health insurance schemes and to find the reasons as to why people do not enroll for any of the health insurance scheme to safeguard the unexpected expenditure arising due to ailments. It is a prospective, cross sectional study carried out in a regional tertiary care hospital situated in one of the states of North East India. A pilot study was conducted to standardize the questionnaire. In the final study 200 pro-forms were administered to patients in various specialties/ super-specialties of the hospital. 167 pro-forms were returned to the investigators and two were found incomplete and therefore not informative and rejected. Majority of the respondents belong to Meghalaya and 49.70% are Christians. 47.27% are males and 52.75% females. 25.45% females are aware as compared to 21.82% males. Respondents from Meghalaya state are more aware (29.70%) as compared to respondents from other states. 31-40years age group respondents were found more aware as compared to other age groups. Majority of aware respondents were found to be Christians. Ironically

Less educated were found more aware about health insurance as compared to graduates and post graduates. Among all aware respondents of different professions, majority (16.36%) are of unemployed group. In conclusion awareness among people about health insurance is even less than 50% which is very less to achieve any target to equalize the accessibility of patients to quality health irrespective of their economic services status.

Keywords: Health Insurance, health insurance awareness, health insurance barriers, tertiary care hospital.

Introduction

Access to health care services is a challenge to poor and underprivileged population of not only India but all over the world. Over 40% of hospitalized Indians borrow heavily or sell assets to cover hospital expenses. Worldwide about 150 million individuals are plunged into financial woes annually due to the debt incurred from spending on health⁽¹⁾ Insurance is transference of risk on payment of an agreed upon premium. In health insurance system group of individuals agree to pay certain sum for guarantee that they will be compensated for costs related to the use of special kinds of health care⁽²⁾. Health insurance could be a way of removing the financial barriers and improving accessibility to quality medical care by the poor and also an effective social security mechanism⁽³⁾. The year 1999 with the passing of Insurance Regulatory Development Authority Bill (IRDA) marked the beginning of new era for Indian health insurance with a couple of international players investing in the Indian health insurance market by teaming up with local companies⁽⁴⁾. In India health insurance schemes can be classified in to four categories, Social health insurance, Private health insurance, community health insurance and government initiated health insurance⁽²⁾.

Health expenditure in India is 4.7% of total GDP and as a proportion Indian government spends just 1.1% of GDP on health. Rest of the expenditure is a contribution of out of pocket expenditure, insurance coverage, donations and through social security schemes. Out of pocket spending by patients is high and constitutes 62.6% of the total expenditure on health. It pushes 3-4% of population below the poverty line every year.

To tackle these challenges in health sector, many state governments have launched public health insurance schemes in India for several years and Government of India has launched world's biggest insurance program, national health protection scheme" covering half billion population with a risk cover of INR 500,000⁽⁵⁾. Despite all this only 10% of Indians have some form of insurance

mostly inadequate⁽⁴⁾. People are not purchasing the health insurance because of low awareness, lack of finance and high premium charges in India⁽⁶⁾ A good understanding of the benefits of health insurance system by the stakeholders may be a precursor of successful implementation of the scheme. In North Eastern states many public health insurance schemes have been launched by the state governments. Megha health insurance scheme is a public health scheme launched by government of Meghalaya three years back. There are other similar schemes in some other north eastern states also, but it was felt by the investigators of the present study that many people visiting the hospital are not enrolled to any of the insurance schemes either public or private. Knowing that patients visiting the hospital would be the appropriate target to assess awareness about health insurance, this study was undertaken to ascertain the profile of the patients, their awareness about health insurance and percentage of people who avail the benefits of various health insurance schemes and to find the reasons as to why people do not enroll for any of the health insurance scheme to safeguard the unexpected expenditure arising due to ailments. The study was conducted in a regional tertiary care hospital of North Eastern India, where patients from all the north eastern states avail the services.

Objectives

1. Study the demographic characteristics of the selected patient sample.
2. Find the level of awareness among the selected patient sample regarding health insurance.

Methodology

It is a prospective, cross sectional study carried out in a regional tertiary care hospital situated in one of the states of North East India. Patients admitted in the Hospital are the study population. Patients from whole of North East states receive treatment from this hospital. Total number of beds in the hospital is 552. Out of which around 120

beds of Gynecology and Obstetrics, pediatrics and emergency services were excluded because the patients admitted in these areas are covered under various other Government schemes. Out of 432 beds, a representative respondent sample of 200 was drawn for the study by simple random sampling. A structured pro forma containing open and closed response was designed for data collection. The questionnaire was designed to include the demographic characteristics, awareness in various categories of the patient and the perception for enrolment of the respondents. A pilot study was conducted to standardize the questionnaire. In the final study 200 pro-forms were administered to patients in various specialties/ super-specialties of the hospital. 167 pro-forms were returned to the investigators and two were found incomplete and therefore not informative and rejected. The data was collected in December 2017 and January to March 2018.

Results

The respondents in our study included the patients from the states of North East India. Majority of the respondents (40.60%) belong to Meghalaya, where the hospital of our study is located. It is followed by 30.30% from Assam, 08.48% from Arunachal Pradesh, 07.88% from Mizoram, 02.43% from Tripura, 03.03% from Manipur and 07.28% from Nagaland. The socio-demographic characteristics of the respondents are summarized in table I. 52.73% of the respondents in our study are females and the rest 47.27% are Males. 31-40 years of age constituted the most common respondent group in our study, followed by 21.21% in 41-50 years of age group, 17.50% of 21-30 years age group, 13.13% of 51-60 years, 10.90% of 61-70 years, 06.60% of 10-20years, 03.64% of 71-80 years and 01.21% of 81-90 years

Table-I Socio-demographic characteristics of the respondents

Characteristics of the Respondents	Number	Percentage
State		
Meghalaya	67	40.60%
Assam	50	30.30%
Arunachal Pradesh	14	8.48%
Mizoram	13	7.88%
Tripura	04	2.43%
Manipur	05	3.03%
Nagaland	12	7.28%
Sex		
Males	78	47.27%
Females	87	52.73%
Age(in years)		
10-20	11	6.6%
21-30	29	17.5%
31-40	42	25.5%
41-50	35	21.21%
51-60	22	13.13%
61-70	18	10.09%
71-80	06	3.64%
81-90	02	1.21%
Religion		
Christians	82	49.70%
Hindus	60	36.36%
Muslims	21	12.73%
Others	02	1.21%
Education		
Up to 10 th standard	98	59.39%
Secondary level	27	16.37%
Higher secondary level	25	15.15%
Graduates	12	7.27%
Postgraduates	03	1.82%
Profession		
Farmers	27	16.36%
Business	24	14.55%
Housewife	56	33.94%
Student	15	9.09%
Laborer	13	7.88%
Employee	30	18.18%

Majority (49.70%) of our respondents are Christians, followed by Hindu (36.36%), Muslims (12.37%) and the rest 01.21% belong to other faiths. Majority of the respondents have education below 10th standard and constituted 59.39%, up to secondary level 16.37%, higher secondary level constituted 15.15%, graduates are 07.275% and post graduates 01.82%. Unemployed including housewives are 33.94%, 18.18% are either public or private sector salaried employees, and the rest 16.36%, 14.55%, 09.09% and 7.88% are respectively farmers, businessmen, students and laborers.

The results of our study depicted that majority (52.73%) of the respondents are not aware about any health insurance schemes and only 47.27% are aware about health insurance.

Table II, below depicts the gender based awareness of our respondents. Among males

46.15% are aware and 53.85% are not aware. 48.28% females are aware and 51.72% are not aware. Overall awareness is higher (25.45%) in females.

Table II Gender based awareness

Gender	Awareness in the same gender		Overall awareness		P Value
	Aware	Not aware	Aware	Not aware	
Males	36 (46.15%)	42 (53.85%)	36 (21.82%)	42 (25.45%)	0.785177718
Females	42 (48.28%)	45 (51.72%)	42 (25.45%)	45 (27.27%)	
Total			78 (47.27%)	87 (52.73%)	

Awareness of respondents in different states of North East India is summarized in table III. Among the respondents of Meghalaya majority (73.13%) are aware about health insurance schemes, particularly the Megha Health Insurance Scheme (MHIS), which is a public health insurance scheme started by Govt. of Meghalaya three years back. At a premium of Rs.30 per annum a family of up to five members gets an insurance cover of Rs.2, 00,000 per house hold plus Rs.80,000 excess coverage for Senior citizens. The scheme includes all the residents of Meghalaya except the Govt. employees and their dependents. Second state of which the respondents have a higher (84.62%) awareness regarding health insurance scheme is Mizoram. In Mizoram also there is a public health care scheme called Mizoram State Health Care Scheme (MSHCS). Only 28.00% of the respondents of Assam are aware about health insurance schemes. Atal Amrit Abhiyan was started in 2016 in Assam as a reimbursement scheme. It is now converted to a public health insurance scheme in March 2018, so that patients can avail cashless facility in the empanelled hospitals. The less popularity of Atal Amrit Abhiyan may be because of its reimbursement mode earlier. Among respondents of Arunachal and Tripura, 21.43% and 25.00% respectively are aware. None of the respondents of Manipur and Nagaland are aware about any health

insurance schemes. Overall awareness among all the respondents is highest (29.70%) in the patient respondents of Meghalaya state, followed by Assam (08.48%), Mizoram (06.67%), Arunachal Pradesh (01.82%), Tripura (0.60%). The difference in awareness among the states is found significant statistically ($P < 0.05$).

Table IV below summarizes the awareness of different age groups of respondents in our study. 12.12% respondents in the age group 31-40 years are aware, which is highest among the respondents. It is followed by 9.70% in age group 41-50 years, 7.88% in 51-60 years, 4.85% in 21-30 years and 61-70 years, 3.69% in 71-80 years, 3.03% in 10-20 years, and the least 1.21% in 81-90 years of age group

Table-III Awareness of respondents of different States

State	Awareness in the same state		Overall awareness		P Value
	Aware	Not aware	Aware	Not aware	
Meghalaya	49 (73.13%)	18 (26.87%)	49 (29.70%)	18 (10.91%)	1.48566E-09
Assam	14 (28.00%)	36 (72.00%)	14 (08.48%)	36 (21.82%)	
Arunachal Pradesh	03 (21.43%)	11 (78.57%)	03 (1.82%)	11 (06.67%)	
Mizoram	11 (84.62%)	02 (15.38%)	11 (06.67%)	02 (1.21%)	
Tripura	01 (25.00%)	03 (75.00%)	01 (0.60%)	03 (1.82%)	
Manipur	00	05 (100%)	00	05 (3.03%)	
Nagaland	00	12 (100%)	00	12 (7.27%)	
Total			78 (47.27%)	87 (52.73%)	

Table V below shows that when we compare the awareness among respondents in the same religion 65.85% of Christians are aware, among Hindu 31.67% respondents are aware, among Muslims 23.81% are aware but among others none of the respondents are aware of health insurance. Overall awareness is statistically significant ($P < 0.05$) being highest (32.72%) in Christians, followed by Hindus (11.52%), Muslims (3.03%) and others (00%).

Table VI summarizes the awareness of respondents in relation to their education. As is evident from the table there is no directly proportion relation between education standard and the level of awareness in our respondents. Highest (30.91%) awareness is among least qualified (up to 10th standard) group in our study and ironically the least aware (0.60%) respondents are the highest qualified (post graduates) participants in our study. Education seems to be

not a determinant factor of awareness of the respondents in our study. Since education cannot have inverse relation with the awareness, it seems to be an independent factor as far awareness of health insurance schemes in North East region of India.

Table VII depicts the relationship of profession of respondents with their awareness of health insurance. 66.67% businessmen respondents are aware, 48.24% among unemployed (including housewives), 48.15% among Farmers, 53.85% among laborers, 33.33% among students and employees were found aware about health insurance in our study. Overall awareness is highest(10.91%) among unemployed respondents, followed by businessmen (10.91%), farmers (7.88%), Employees (6.06%), labourer (4.24%) and the least (3.03%) among student

Table IV Awareness of respondents in different age groups

Age group (in years)	Awareness in the same age group		Overall awareness		P Value
	Aware	Not aware	Aware	Not aware	
10-20	05 (45.45%)	06 (54.54%)	05 (3.03%)	06 (3.64%)	0.039016083
21-30	08 (27.59%)	21 (72.41%)	08 (04.85%)	21 (12.73%)	
31-40	20 (47.62%)	22 (52.38%)	20 (12.12)	22 (13.33%)	
41-50	16 (45.71%)	19 (54.29%)	16 (09.70%)	19 (11.52%)	

51-60	13 (59.09%)	09 (40.91%)	13 (7.88%)	09 (5.45%)
61-70	08 (44.44%)	10 (55.56%)	08 (4.85%)	10 (6.06%)
71-80	06 (100%)	00	06 (3.64%)	00
81-90	02 (100%)	00	02 (1.21%)	00
Total			78 (47.27%)	87 (52.73%)

Table V Showing the Awareness in different religions

Religion	Awareness in the same religion		Overall awareness		P Value
	Aware	Not aware	Aware	Not aware	
Christians	54 (65.85%)	28 (34.15%)	54 (32.72%)	28 (19.97%)	2.95283E-05
Hindus	19 (31.67%)	41 (68.33%)	19 (11.52%)	41 (24.85%)	
Muslims	05 (23.82%)	16 (76.19)	05 (03.03%)	16 (09.70%)	
Others	00	02 (100.00%)	00	02 (1.21%)	
Total			78 (47.27%)	87 (52.73%)	

Table VI Awareness and Education of the respondents

Education	Awareness in the same state		Overall awareness		P Value
	Aware	Not aware	Aware	Not aware	
Up to 10 th standard	51 (52.04%)	47 (47.96%)	51 (30.91%)	47 (28.48%)	0.501674763
Secondary level	13 (48.15%)	14 (51.86%)	13 (7.88%)	14 (8.48%)	
Higher secondary level	09 (36.00%)	16 (64.00%)	09 (5.45%)	16 (9.70%)	
Graduates	04 (33.33%)	08 (66.67%)	04 (02.42%)	08 (04.85%)	
Post graduates	01 (33.33%)	02 (66.67%)	01 (0.60%)	02 (1.21%)	
Total			78 (47.27%)	87 (52.73%)	

Table VII Profession of respondents and their awareness

Profession of the respondents	Awareness in the same state		Overall awareness		P Value
	Aware	Not aware	Aware	Not aware	
Farmers	13 (48.15 %%)	14 (51.85%)	13 (07.88%)	14 (08.48%)	0.193670909
Business	16 (66.67%)	08 (33.30%)	16 (09.70%)	08 (04.85%)	
Unemployed	27 (48.24%)	29 (51.79%)	27 (16.36%)	29 (17.58%)	
Students	05 (33.33%)	10 (66.67%)	05 (03.03%)	10 (06.06%)	
Laborers	07 (53.85%)	06 (46.15%)	07 (04.24%)	06 (3.64%)	
Employees	10 (33.33%)	20 (66.67%)	10 (06.06%)	20 (12.12%)	
Total			78 (47.27%)	87 (52.73%)	

Awareness and enrolment to health insurance

Despite awareness and availability of health insurance schemes particularly public health schemes in most of the North East states, many patients in our study did not enroll for health insurance. Table VIII below shows awareness of respondents in different states and the status of enrollment. 73.13% of the respondents of the Meghalaya are aware of health insurance, out of whom 91.86% are enrolled whereas 08.16% did not enroll mostly because they could not foresee

its benefits and a few replied that they could not afford the premium. Out of 28.00% of respondents from the state of Assam, who are aware, only 57.14% enrolled whereas the remaining 42.86% did not enroll. Similarly among the aware respondents of Arunachal Pradesh 75.00% enrolled and 25.00% did not. Among the 84.62% aware respondents of Mizoram, 63.64% enrolled whereas rest the 36.36% did not bother to enroll themselves for the health insurance schemes.

Table VIII Awareness of respondents of different states and the corresponding percentage of enrolled respondents

State	Aware	Aware and enrolled	Aware but not enrolled	P Value
Meghalaya	49 (73.13%)	45 (91.86%)	04 (08.16%)	0.170138081
Assam	14 (28.00%)	08 (57.14 % %)	06 (42.86%)	
Arunachal Pradesh	03 (21.43%)	02 (75.00%)	01 (25.00%)	
Mizoram	11 (84.62%)	07 (63.64%)	04 (36.36%)	
Tripura	01 (25.00%)	01 (100.00%)	00	
Total		63 (80.77%)	15 (19.23%)	

Discussion

This study was conducted in a 552 bedded regional tertiary care multi-specialty hospital in North East India. The respondents in our study are the patients admitted in the hospital. Majority of the respondents (40.60%) are residents of Meghalaya. It is because the hospital itself is located in the capital of the state. Overall awareness of 47.27% among the respondents about health insurance is a worrisome figure because despite public health schemes launches by most of the states in North East, the awareness is not even 50%. Furthermore our study reflected that among the aware population 19.23% did not enroll themselves despite being aware of the health insurance schemes. The reason for not enrolling by 72.14% of the respondents was that they did not foresee any need to enroll themselves and the rest 27.59% respondents responded for not

enrolling that they could not afford the premium of the health insurance scheme. This shows inadequate understanding of the respondents about the health insurance schemes. The ugly state of affairs might be as a result of lack of accountability and unclear sense of responsibility, poor management of availability, management and running of schemes by non professionals, inadequate public awareness campaigns and poor financing by the government. In another hospital based similar awareness study in a tertiary care hospital in Karnataka showed that 38.00% of the patient respondents are aware about the health insurance⁽⁷⁾, which is even lesser than our study results.

Swarna Madhu Kumar in her community based awareness study reported 35.30% respondents as being aware about health insurance⁽⁸⁾. B. Reshmi et al however in a community based awareness

study found 64.00% of the respondents are aware about the health insurance⁽⁹⁾. In our study females are more aware (48.28%) as compared to males (46.15%). The results are reverse to those found by Jangati Yellaiah in a community based study in Andra Pradesh⁽¹⁰⁾ and Indumathi K et al in rural population of Bangalore⁽¹¹⁾. Matrilineal societies in North East may be one of the factors responsible for more awareness among females as compared to males. In our study Christians (32.72%) are more aware than any other religious group of respondents. An ironical relationship between education and awareness of the respondents was observed in our study. Interestingly below 10th level educated respondents had an edge over above 10th level educated respondents to their corresponding level of awareness. Majority of the aware respondents are residents of Meghalaya. It is probably because present study Hospital is empanelled with the Megha health insurance scheme launched by the Government of Meghalaya three years back. Out of the aware respondents in our study, 80.77% are enrolled with health insurance and the rest 19.23% did not take any kind of health insurance, despite being aware about the health insurance. In one of the studies 64.10% of the respondents, who were aware had taken health insurance, whereas the rest 35.90% of the aware respondents had not enrolled for any health insurance⁽⁸⁾. In response to a question, why they did not enroll for health insurance, 72.41% of the aware respondents replied that they felt no need as they couldn't foresee its importance and 27.59% responded that they couldn't afford the premium of the insurance policy. Success of public health insurance schemes therefore doesn't depend only on government investments but also on wide spread awareness campaigns to educate the beneficiaries about the importance of such schemes.

Conclusion

Although many health insurance options are available to the public, but very less people are enrolled, due to lack of awareness about the health

insurance schemes to avail the benefits at the time of need. Lack of awareness may be due many reasons including lack of accountability and unclear sense of responsibility, poor management of availability, management and running of schemes by non professionals, inadequate public awareness campaigns and poor financing by the government. Whatever the reasons may be the ultimate result is poor coverage of health insurance due to lack of awareness. Success of National health protection schemes unveiled by government of India this year to cover 10 crore vulnerable and under privileged families will depend upon how aggressively the awareness campaigns are launched to educate people about importance of health insurance to save the poor families from unexpected huge out of pocket expenditures on health.

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