The Journal of Community Health Management 2022;9(4):209–215

Content available at: https://www.ipinnovative.com/open-access-journals

The Journal of Community Health Management

Journal homepage: https://www.jchm.in/

Original Research Article

Health insurance: Uptake, perception and its determinants among health care seekers at a tertiary care hospital in Lucknow, India

Arunima Saini[1,*], **Monika Agarwal**[1], **Amit Kumar**[2]

[1] *Dept. of Community Medicine and Public Health, King George's Medical University, Lucknow, Uttar Pradesh, India*
[2] *Indian Institute of Management, Lucknow, Uttar Pradesh, India*

ARTICLE INFO

Article history:
Received 12-08-2022
Accepted 15-12-2022
Available online 30-12-2022

Keywords:
Health insurance
Health policy
Ayushman Bharat

ABSTRACT

Background: Health Insurance has come to the forefront of Public Health Policy with the launch of Ayushman Bharat. Government spending on health is dismal compared to other countries, even within the same income bracket, and health insurance is being proposed as the way out. Although health insurance is not a new concept, people are still unfamiliar with it. Hence, the present study was conducted to assess the utilization, awareness and perception regarding health insurance policies in patients attending OPD at a Tertiary Care Hospital.

Materials and Methods: It was a cross-sectional study carried out among the patients attending the outpatient department of a Tertiary Care Hospital, Lucknow from October 2020 to January 2021. Study participants were interviewed using a semi-structured questionnaire. The data obtained were analyzed using SPSS version 26.

Results: Though the majority (84.3%) of the participants had heard about the existence of health insurance policies, only one-third (33.6%) of the participants were covered under health insurance policy. Inadequate knowledge regarding benefits, low income, preference for other investments, and no felt need were some of the barriers to subscription.

Conclusions: Inadequate knowledge regarding health insurance among health care seekers is a major roadblock in the government's ambitious project of Ayushman Bharat and other health insurance schemes. Emphasis should be given to educating the people regarding their rights and the benefits of health insurance.

1. Introduction

"Health insurance" implies a system that covers the whole or part of a person's health risk incurring medical expenses.[1] Government health insurance schemes, such as the Central Government Health Scheme (CGHS) and the Employees State Insurance Scheme (ESIS), are available for people working in the public sector.[2] Private insurance companies provide medical care insurance through individual subscriptions.

Public health spending in India has been at a dismal low over the past few decades; it is about one percent (1.2%) of the country's GDP, with about 70% of health expenses met as out-of-pocket expenditure by the patients.[3] Over 63 million people in India face financial stressyearly due to healthcare spending alone.[4] In 2008, India launched the Rashtriya Swasthya Bima Yojana (RSBY) for below-the-poverty-line familiesto reduce catastrophic healthcare expenditures arising from health status involving hospitalization.[5] With the launch of Ayushman Bharat, health insurance has come to the forefront of government health policy in India.[6] With low government spending, health insurance is being proposed as a way out.

* *Corresponding author*.
E-mail address: dr.arunimasaini@gmail.com (A. Saini).

https://doi.org/10.18231/j.jchm.2022.039

Previous studies have shown that awareness about health insurance among the Indian population is low, and health insurance coverage is still inadequate. With increased awareness about various insurance schemes over the past few years, there is an anticipated change in public perception of India's health insurance. Hence, we conducted this study to assess the awareness, perception and utilization of health insurance policy among patients attending the outpatient department (OPD) of a tertiary care hospital in Lucknow.

2. Materials and Methods

A hospital-based descriptive cross-sectional study was conducted in the general OPD section at the tertiary care teaching hospital in Lucknow, Uttar Pradesh, from October 2020 to January 2021. Patients aged 18 years and above were registered at general OPD and willing to participate in the study. Non-responsive and seriously ill patients were excluded from the study.

2.1. Sample size

The sample size was calculated to be345 using the W. Daniel formula,[7]taking a two-sided 95% confidence level, five percent of absolute error, and prevalence (34%) of individuals covered under any health insurance in the year 2016-17.[7]

2.2. Questionnaire design and validation

A pretested and validated (Cronbach's alpha: 0.78, suggesting acceptable interviewing tool)[8] semi-structured questionnaire was developed following the variables used in "Pre-launch Report of Insurance Campaign".[1] All the variables were entered in an Microsoft Excel sheet and coded numerically as 0, 1, 2 and so on as required.

The questionnaire consisted of two sections, biosocial characteristics of the participants and questions about awareness, perception, and possession of any health insurance scheme.

2.3. Ethical committee approval

Necessary permission was obtained from the relevant department and informed consent was obtained from each participant.

2.4. Sampling procedure

A convenient sampling technique was used to recruit study participants. Patients were interviewed at the registration counter after their registration. A total of 345 patients fulfilling the inclusion and exclusion criteria were personally interviewed.

2.5. Data processing and analysis

Data were processed and analyzed using SPSS 26. Descriptive statistics were represented as the frequency with percentages (categorical data). Findings were also presented through graphs. Association between categorical variables was tested using a Chi-Square test. Predictors for the outcome variables were analyzed using binary logistic regression.

3. Results

Out of the 345 participants, about one-third (116, 33.6%) were covered under at least one health insurance policy. Table 1 shows the socio-demographic characteristics of the study participants. The mean age (in years) ± SD (range) of the insured participants was 44 ± 14 (19 — 70), while for uninsured participants, it was 35 ± 12 (18-76). The majority of the insured participants were professionals (62.9%), while the majority of the uninsured participants were unemployed (44.1%). Total annual health expenditure for insured participants was up to 10% of their total yearly income (100.0%), while in more than one-third of uninsured participants, it was more than ten percent of their total annual income (39.3%). (Table 1)

Three-fourths of the uninsured participants (76.4%) were aware of health insurance. The commonest source of information was the newspaper among two-thirds (66.4%) of the insured participants, while among the uninsured participants, the newspaper was the source of information in only about one-third (39.7%). (Table 2)

Out of the participants who acquired health insurance, most of them were covered with private health insurance companies (46.6%), while the most commonly acquired government health insurance scheme was Ayushman Bharat (42.8%). The most frequent reason reported for not having health insurance was lack of knowledge about terms, conditions and benefits (64.2%). (Table 3)

Majority of the participants insured by private insurers had cashless benefits. And had a cover of more than five lakhs. Emergency services were covered for all the participants under government funded policies. About one-fourth (26.1%) of the participants bear catastrophic health expenditure of more than ten percent of their total monthly income. Other characteristics of the health insurance held are presented in the table. (Table 4)

Among the insured participants, about three percent (2.6%) were indecisive if the health insurance was essential, while about two-thirds (65.1%) of the uninsured participants felt health insurance essential. (Table 5)

Univariate analysis followed by multivariate binary logistic regression analysis was used for variables to compute the predictors of acquiring a health insurance policy. For obtaining a health insurance policy, the model predicts that respondents with advancing age were 1.004

Table 1: Distribution of study participants based on socio-demographic profile and by their health insurance status (N=345)

Factors		Insurance Held			
		Insured Participants (n=116)	**Uninsured Participants (n=229)**	**Total (N=345)**	**p-value**
Age (completed years)	≤ 30	38 [32.8]	97 [42.4]	135 [39.1]	0.074
	31 — 40	28 [24.1]	61 [26.6]	89 [25.8]	
	> 40	50 [43.1]	71 [31.0]	121 [35.1]	
Gender	Male	83 [71.6]	140 [61.1]	223 [64.6]	0.056
	Female	33 [28.4]	89 [38.9]	122 [35.4]	
Religion	Hindu	102 [87.9]	190 [83]	292 [84.6]	0.227
	Muslim	14 [12.1]	39 [17]	53 [15.4]	
Residence	Urban	99 [85.3]	154 [67.2]	253 [73.3]	**<0.000**
	Rural	17 [14.7]	75 [32.8]	92 [26.7]	
Type of family	Nuclear	55 [47.4]	108 [47.2]	163 [47.2]	0.965
	Joint	61 [52.6]	121 [52.8]	182 [52.8]	
Education	Upto primary school	2 [1.7]	23 [10.0]	25 [7.2]	**<0.000**
	Higher secondary	6 [5.2]	31 [13.5]	37 [10.7]	
	Senior secondary	13 [11.2]	43 [18.8]	56 [16.2]	
	Graduate and above	95 [81.9]	132 [57.6]	227 [65.8]	
Occupation*	Professional and organized sector	73 [62.9]	49 [21.4]	122 [35.4]	**<0.000**
	Unorganized sector	27 [23.3]	79 [34.5]	106 [30.7]	
	Unemployed	16 [13.8]	101 [44.1]	117 [33.9]	
Socio-economic status**	Class I/class II	107 [92.2]	163 [71.2]	270 [78.3]	**<0.000**
	Class III	7 [6.0]	36 [15.7]	43 [12.5]	
	Class IV/ class V	2 [1.7]	30 [13.1]	32 [9.3]	
Annual income (INR)	Up to 250000	11 [9.5]	83 [36.2]	94 [27.2]	**<0.000**
	250001 — 500000	30 [25.9]	76 [33.2]	106 [30.7]	
	500001 — 1000000	63 [54.3]	59 [25.8]	122 [35.4]	
	More than 1000000	12 [10.3]	11 [4.8]	23 [6.7]	
Total expenditure on health during the last financial year	Up to 10 percent of total annual income	116 [100.0]	139 [60.7]	255 [73.9]	**<0.001** $
	> 10 percent of total annual income	0 [0.0]	90 [39.3]	90 [26.1]	

[Column Percentage] *Ministry of labour and employment, Government of India, ** Modified BG Prasad Scale 2020, $Fisher's Exact test as the cell have observed value of less than 5

times more likely to acquire government health insurance policies. Similarly, male gender and individual having a larger family size were more likely to acquire government health insurance policies. Conversely, individuals who follow religion other than hindu and belonged to lower socio-economic status were less likely to opt for government health insurance policies. Occupation and felt need for acquire health insurance policies were found to have similar impact for acquiring government or private health insurance policies. (Table 6)

4. Discussion

4.1. Coverage of health insurance

Only one-third (32.8%) of the participants were covered under any health insurance scheme in the present study. At the same time, Prinja S et al. (2019) found relatively low health insurance coverage (10.0%) in Uttar Pradesh.[9] Whereas, Baisil S et al. in their study conducted in Karnataka, found a higher (57%) proportion of the participants were insured, which can be due to the different study settings and population with varied awareness and perception on health insurance.[4] In the present study,

Table 2: Distribution of the participants based on the awareness about health insurance and source of information (N=345)

Factors		Insurance Held		
		Insured Participants (n=116)	Uninsured Participants (n=229)	Total (N=345)
Aware about existence of insurance for health		116 [100.0]	175 [76.4]	291 [84.3]
Source of information*	Newspaper	77 [66.4]	91 [39.7]	168 [48.7]
	Television	64 [55.2]	80 [34.9]	144 [41.7]
	Radio	62 [53.4]	59 [25.8]	121 [35.1]
	Insurance agent	23 [19.8]	18 [7.9]	41 [11.9]
	Internet	19 [16.4]	15 [6.6]	34 [9.9]
	Friends/relatives	6 [5.2]	18 [7.9]	24 [7.0]
	Hospital	9 [7.8]	9 [3.9]	18 [5.2]
Health insurance policy named*	Ayushman Bharat	101 [87.1]	153 [66.8]	254 [73.6]
	State owned health insurance company	78 [67.2]	28 [12.2]	106 [30.7]
	Private health insurance company	67 [57.8]	2 [0.9]	47 [13.6]
	CGHS	11 [9.5]	0 [0.0]	11 [3.2]
	ESIC	8 [6.9]	0 [0.0]	8 [2.3]

*Multiple responses, CGHS: Central Government Health Scheme, ESIC: Employee state insurance corporation

Table 3: Health insurance coverage, type of health insurance policy held and the reasons for not having health insurance. (N=345)

Variables		Frequency	Percentage
Covered under health insurance policy		116	33.6
Type of health insurance policy acquired (n=116)			
• Private health insurance company		54	46.6
• State-owned health insurance company		34	29.3
• Government health insurance scheme	Total	28	24.1
	Ayushman Bharat	12	42.8
	CGHS	8	28.5
	ESIC	8	28.9
Reason for not having health insurance* (N=229)			
• Lack of knowledge where to approach for acquiring health policy		147	64.2
• Low income, so not able to pay the premium		43	18.8
• Lack of felt need for health insurance		36	15.7
• Passed age limit		2	0.9
• Dissatisfied with previous health insurance		1	0.4

* Uninsured participants

more than half (53.4%) participants were covered under the private health insurance policies, similar findings were revealed by Kala P et al. where 56.8 percent of the participants were covered under the private health insurance policies.[10]

4.2. Awareness regarding health insurance and source of information.

The majority of the participants (84.3%) had heard about the existence of insurance for health, similar findings were observed by Kusuma Y et al. where 98.2 percent of the participants had heard about the same.[11] The major source of information was a newspaper (48.7%). Similar findings were revealed in a report published by Sinha A et al.[1] The most frequent reason reported for not having health insurance was lack of knowledge about the person or place to approach for acquiring health policy (64.2%), low income resulting in an inability to pay the premium (18.8%) and lack of felt need (15.7%). Madhukumar S et al.showed that the major barrier for the subscription of health policy was low income (43%) and no felt need (29%).[12] About one-fourth (26.1%) of the participants bear catastrophic health expenditure (more than 10 percent of the annual income), similar to the findings of Prinja S et al.[9] All the dependents were covered under health insurance in less than two-thirds (61.2%) of the participants, similar to the results showed by Garge S et al. where half of the respondents (47.1%), had all the family members covered under the health insurance.[13]

4.3. Benefits availed by the insured participants

More than three-fourths (79.3%) of the insured participants did not know the terms and conditions of the health polity

Table 4: Type of health insurance policy, duration, and benefits availed by the insured participants (N=116)

Variables		Government/ state owned (N=62)	Private (N=54)	p-value
Duration since the acquisition of health insurance policy	More than 10 years	18 [29.0]	5 [9.3]	**0.008**
	Up to 10 years	44 [71.0]	49 [90.9]	
Monetary contribution towards health insurance policy held	Employer and self both	39 [63.9]	26 [48.1]	**<0.000** $
	Employer	12 [19.7]	0 [0.0]	
	Self	10 [16.4]	28 [51.9]	
Knew terms and conditions of the health insurance policy acquired	Yes	48 [77.4]	44 [81.5]	0.590
	No	14 [22.6]	10 [18.5]	
Type of benefit	Reimbursement	40 [64.5]	20 [37.0]	**0.003**
	Cashless	22 [35.5]	34 [63.0]	
Benefits included under the health insurance policy held	In-patient Investigations and medicines	62 [100.0]	54 [100.0]	—
	Emergency and accident coverage	62 [100.0]	48 [88.9]	**0.007**
	Pre-existing disease coverage	35 [56.5]	37 [68.5]	0.182
	Pregnancy and childbirth	32 [51.6]	20 [37.0]	0.115
	OPD consultation	54 [87.1]	44 [81.5]	0.405
Health insurance cover maximum limit annually (INR)	< 5,00,000	48 [77.4]	26 [48.1]	**0.001**
	≥ 5,00,000	14 [22.6]	28 [51.9]	
Annual premium (INR)	≥ 20,000	0 [0.0]	10 [18.5]	**<0.001** $
	< 20,000	62 [100.0]	44 [81.5]	
Family covered under the health insurance held	All are covered	36 [58.1]	35 [64.8]	**0.039**
	Partially covered	26 [41.9]	19 [35.2]	
Claimed insurance during the last financial year	Never	41 [66.1]	36 [66.7]	0.059
	≤ two times	6 [9.7]	12 [22.2]	
	More than twice	15 [24.2]	6 [11.1]	
Time taken for the approval of claim (n=39)	Within 6 hours	3 [14.3]	6 [33.3]	0.177$
	>6 to 24 hours	13 [61.9]	6 [33.3]	
	>24 hours	5 [23.8]	6 [33.3]	
Beneficiary during repeated health insurance claim (n=29)	Same beneficiary and illness	11 [61.1]	3 [27.3]	**0.038** $
	Same beneficiary but different illness	5 [27.8]	2 [18.2]	
	Different beneficiary	2 [11.1]	6 [54.5]	

$Fisher Exact test as the cell have observed value of less than 5

Table 5: Distribution of the participants based on the health insurance held and perception about the importance of health insurance (N=345)

Factor		Insurance Held Insured Participants (n=116)	Insurance Held Uninsured Participants (n=229)	Total (N=345)	p-value
Perceived health insurance essential$	Essential	113 (43.1) [97.4]	149 (56.9) [65.1]	262 [75.9]	**<0.001***
	Neutral	3 (4.5) [2.6]	63 (95.5) [27.5]	66 [19.1]	
	Not essential	0 (0.0) [0.0]	17 (100.0) [7.4]	17 [4.9]	

* Statistically significant (p<0.05), $Fisher Exact test as the cell have observed value of less than 5

Table 6: Predictors of uptake of health insurance policy[#] (N=345)

Variables	Government/state owned				Private			
	COR	95% CI	AOR	95% CI	COR	95% CI	AOR	95% CI
Age	1.056*	1.034-1.079	**1.044***	1.018-1.072	0.998	0.973-1.023	0.973	0.943-1.003
Gender	0.806	0.447-1.452	**2.666***	1.169-6.082	0.449*	0.224-0.900	0.820	0.315-2.133
Religion	0.248*	0.074-0.831	**0.108***	0.027-0.432	1.246	0.591-2.629	1.398	0.482-4.059
Type of family	2.020*	1.110-3.677	**2.648**	1.171-5.991	0.446*	0.239-0.832	0.486	0.186-1.275
Education	1.686*	1.165-2.440	1.342	0.823-2.186	2.859*	1.599-5.114	1.534	0.747-3.149
Residence	0.599	0.311-1.154	1.031	0.463-2.295	0.121*	0.037-0.400	0.470	0.123-1.792
SES	0.516*	0.349-0.764	0.838	0.521-1.345	0.165*	0.084-0.323	**0.313***	0.149-0.655
Occupation	0.555*	0.427-0.721	**0.665***	0.469-0.942	0.349*	0.238-0.511	**0.477***	0.314-0.722
Family size	0.937	0.865-1.015	0.913	0.822-1.014	0.725*	0.725-0.851	0.900	0.754-1.074
Felt need	0.259*	0.161-0.417	**0.276***	0.166-0.458	0.169*	0.092-0.312	**0.211***	0.104-0.428

*Statistically significant (p-value<0.05), # Reference category is: Uninsured

they held. In contrast, Kala P et al. showed that about half (55.0%) of the participants did not know about the terms and condition of the health insurance policy they held.[10] In the present study, OPD consultations were covered under only one-third (36.2%) of the participants, similar to the findings of Baisil S et al. showed that only 34.9 percent of patients used it for outpatient care.[4] We found that 8.6 percent of the participants used it once a year during the past financial year and 6.9 percent have used it twice, while Baisil S et al. showed that about one-fourth (28%) of the patients used it once a year and a less than one-fourth (22%) utilised it twice in a year.[4]

4.4. Predictors of uptake of health insurance policy

The association of socio-demographic factors with possession of a health insurance policy found that the respondents employed under the unorganised sector and professionals were more likely to have health insurance policy than the unemployed. Also, individuals with middle and higher socio-economic status were more likely to have health insurance policies. These findings parallel with the results observed by Goud B et al.[14]

5. Conclusion

The present study revealed that various factors such as age, occupation, education, family size impact the acquisition of health insurance policies. People with higher socio-economic status, who can pay for the premium, were likely to acquire private health insurance policies. Whereas, individuals with advancing age, having more dependents to take care of, were more likely to acquire government health insurance policies. Inadequate knowledge regarding health insurance among health care seekers is a major roadblock in the government's ambitious project of Ayushman Bharat and other health insurance schemes. Rolling out such an insurance scheme is unlikely to yield intended benefits unless emphasis is given to educating the people regarding their rights and the benefits of such schemes.

6. Strengths and Limitations

Participants were selected randomly. The participants underwent an informative session wherein they were briefed about the problem statement and how they could make a recuperative contribution by answering honestly to the questions. However, there were a few limitations of the study: we did not include gynaecology and obstetrics patients, as they presented in a dedicated OPD for such patients. Also, the study was conducted at a single centre, and education and other socio-demographic factors vary hugely across various geographical regions of the country and the globe.

7. Source of Funding

None.

8. Conflict of Interest

None.

References

1. Sinha A, Jaiswal R, Pal BD, Shukla K, Sundar R, Natesh G, et al.. Pre-launch Report of Insurance Awareness Campaign. New Delhi: National Council of Applied Economic Research; 2011. Available from: https://www.policyholder.gov.in/uploads/CEDocuments/Insurance%20Awareness%20Survey%20Report.pdf.
2. Available from: http://www.niti.gov.in/sites/default/files/2021-12/Health%20Insurance%20for%20India%E2%80%99s%20Missing%20Middle_08-12-2021.pdf.
3. Public expenditure on health at a dismal low; 2015. Available from: https://indianexpress.com/article/explained/public-expenditure-on-health-at-a-dismal-low/.
4. Baisil S, Sathyanath S, Kundapur R. Types of health insurance and its utilisation in a primary, secondary and tertiary care setting in coastal Karnataka. *Int J Community Med Public Health*. 2017;4(5):1758–61.
5. Dror DM, Vellakkal S. Is RSBY India's platform to implementing universal hospital insurance? *Indian J Med Res*. 2012;135(1):56–63.
6. Angell BJ, Prinja S, Gupt A, Jha V, Jan S. The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and the path to universal health coverage in India: Overcoming the challenges of stewardship and governance. *PLoS Med*. 2019;16(3):e1002759.
7. Nation Health Profile 2018. 13th Issue', Ministry of Health and Family Welfare. Available from: https://cdn.downtoearth.org.in/pdf/NHP-2018.pdf.
8. Tavakol M, Dennick R. Making sense of Cronbach's alpha. *Int J Med Educ*. 2011;2:53–5.
9. Prinja S, Bahuguna P, Gupta I, Chowdhury S, Trivedi M. Role of insurance in determining utilization of healthcare and financial risk protection in India. *PLoS One*. 2019;14(2):e0211793.
10. Kala S, Jain P. Awareness of Health Insurance among people with special reference to Rajasthan (India). *Int J Business Quant Eco Appl Manag Res*. 2019;1(12):21–31.
11. Kusuma YS, Pal M, Babu BV. Health insurance: Awareness, utilisation, and its determinants among the urban poor in Delhi, India. *J Epidemiol Glob Health*. 2018;8(1-2):69–76.
12. Madhukumar S, Supeepa D, Gaikwad V. Awareness and perception regarding health insurance in Bangalore rural population. *Int J Med Public Health*. 2012;2(2):18–22.
13. Garge D, Tare S, Das S. A study on consumer's understanding of health insurance benefits. *J Dent Res Rev*. 2020;7(5):62–4.
14. Goud BR, Mangeshkar AJ, Soreng S. Prevalence and Factors Affecting the Utilisation of Health Insurance among Families of Rural Karnataka, India. *Int J Curr Res Acad Rev*. 2014;2(8):132–7.

Author biography

Arunima Saini, Senior Resident https://orcid.org/0000-0003-0861-9660

Monika Agarwal, Professor and Head https://orcid.org/0000-0001-5827-5056

Amit Kumar, IPS, Fellow https://orcid.org/0000-0002-5543-5525

Cite this article: Saini A, Agarwal M, Kumar A. Health insurance: Uptake, perception and its determinants among health care seekers at a tertiary care hospital in Lucknow, India. *J Community Health Manag* 2022;9(4):209-215.