



**Full Length Research Article**

**SOCIO-ECONOMIC CORRELATES OF HEALTH INSURANCE COVERAGE IN INDIA**

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**ABSTRACT**

Present study explicitly talks about the health insurance coverage in India by socioeconomic characteristics of households. Further this study describes the type of health scheme or health insurance adopted by households in India. Data for the present study was drawn from the latest round of the Indian Demographic and Health Survey, known as the National Family Health Survey. Findings of the study revealed quite a low coverage of health insurance. Low coverage of any insurance scheme has been observed in Bihar, Uttar Pradesh, Madhya Pradesh and Chhattisgarh. Coverage of any health insurance scheme was more among households in urban areas and among those having high economic status. Employment state insurance scheme, community health insurance program and other health insurance through employer were adopted more by the poor households, while private health insurance schemes seem to be most operational and adopted by rich households. With the matter of low level of health insurance coverage in India this study highly recommend the policies and programmes that promote awareness and proper knowledge about insurance schemes and their benefits for Indian citizens. Additionally, share of public financing on health should also be increased to improve the public health facilities.

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**INTRODUCTION**

Access to necessary health care services is one of the principles of "Health for ALL" stated in Alma Ata declaration and crucial to improve health status of an individual, life expectancy and overall development of an individual and society. Since independence, India's landscape of health care system has been expanded and modernized substantially and achieved a lot in terms of health improvement. Public financing for health care has also been widely discussed in India. Reports from the National Commission on Macroeconomics and Health (NCMH, 2005) and twelfth five year plan (2012-17) have endorsed the need to raise the level of public spending on health from around one percent to 2-3 percent of gross domestic product (GDP). Despite the efforts, citizens of India still lacking access to necessary health facilities due to inefficient way of financing health care. Several studies (Peters *et al.*, 2002; Russel, 2004; Krishna, 2004; Vellakkal, 2009), conducted on developing world have documented the negative

consequences of out of pocket expenditure". On health, as well as on the economic condition of the population. World bank (2012) pointed out that, out of pocket spending is one of the cause of poverty in India, families meets almost 70 percent of their health expenses out of their pockets, which are responsible for financial burden on poor households. Health insurance is widely accepted as an important and proficient solution to ensure the universal health care utilization for India, where out of pocket expenditure on health pushes down the economic condition of the population (Vellakkal, 2009). Roots of health insurance program goes back to the early fifties when "Bhore Committee Report" made recommendations for the improvement of health care services in India. After that, Central government introduced Central Government Health Scheme (CGHC) for central government employees and their families and for Blue collar workers in private sector, Employees States Insurance Scheme (ESIS) were introduced as a subsidised health insurance program. Real Momentum gain during liberalization phase and marked the beginning of new era for health insurance in Indian context when insurance sector opened to private and foreign participant under the supervision on IRDA. Despite this feasible and efficient alternative to cut out the financial burden of households and for comprehensive health care, health

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insurance coverage remains poor in India. Given the above picture, this study explicitly talks about the health insurance coverage in India according to socioeconomic characteristics of households. Further this study describes the type of health scheme or health insurance adopted by households in India.

## METHODS AND MATERIALS

Data for the present study was drawn from the latest round of the Indian Demographic and Health Survey, known as the National Family Health Survey (NFHS-3). The survey was conducted in 2005-06 under the stewardship of the Ministry of Health and Family Welfare (MOHFW), Government of India and funded by the United States Agency for International Development (USAID), United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), the Bill and Melinda Gates Foundation, Department for International Development (DFID) and the Ministry of Health and Family Welfare (MOHFW). NFHS-3 was carried out in 29 states of India which comprises more than 99 percent of India's population with an aim to provide national level estimates of important indicators on maternal and child health, nutrition, family welfare and HIV. The basic characteristics households such as ownership of assets and consumer durables were also successfully collected in the survey.

For the analysis, household or families have been considered as sampling unit. A total of 109041 households has been analysed here to examine the coverage of health insurance in the country. In NFHS-3, respondents were asked whether any member of the household is covered by any health scheme or health insurance and if yes then, type of schemes which covered them. Other potential socio-economic variables such as regions of residence (North, Central, East, Northeast, West, South), place of residence (Rural, Urban), castes (Scheduled caste/tribes, Other Backward Classes, Others), religion

(Hindu, Muslims, Others) and economic status were also included in the analysis. Economic status of the household was calculated from the set of assets owned by household including ownership of consumer items and dwelling characteristics and coded into five categories i.e. poorest, poorer, middle, richer and richest. The study employed bivariate and multivariate statistical techniques to fulfill the proposed objective. Binary logistic regression analysis was utilized to show the adjusted effects of predictors on dependent variable. All the analysis was conducted using statistical software STATA 11.0 (Statacorp, 2009).

## RESULTS

Table 1 shows the percentage of households in which at least one member of the household was covered by any health scheme or health insurance. In India, only 5 percent households had at least one of its members covered by health scheme or health insurance. The proportion of households with one of its member covered under health insurance was lowest in Central region of India which comprises states of Uttar Pradesh, Madhya Pradesh and Chhattisgarh. On the other hand, coverage of health insurance was reported highest in western region (8 percent) followed by northern (6 percent) and southern (6 percent) region. More than 10 percent of households in urban area reported to have any health insurance scheme as compared to households in rural area. According to social castes and religion, households of other than scheduled caste or tribes and of other than Hindu or Muslim religion have been reported to have its member covered by any health insurance scheme. Coverage of health insurance was also affected by the economic status of the household. There were 16 percent households belong to richest wealth quintile had at least one of its member covered by any health scheme. Proportion of having at least one member of household covered by health insurance was not more than 3 percent in households belongs to poorest and middle wealth quintile.

**Table 1. Health insurance coverage by socioeconomic characteristics, India, NFHS, 2005-06**

Characteristics	HH covered by any health scheme/health insurance <sup>1</sup> (%)	Number
<b>Region of residence</b>		
North	6.4	13874
Central	2.4	24309
East	3.5	23542
Northeast	2.5	4295
West	8.3	16147
South	6.0	26874
<b>Place of residence</b>		
Rural	2.2	73462
Urban	10.4	35579
<b>Castes</b>		
Scheduled Castes/Tribes	3.1	30171
Other Backward Classes	3.8	43216
Others	7.7	35654
<b>Religion</b>		
Hindu	5.1	88968
Muslims	2.1	13647
Others	7.6	6427
<b>Wealth Index</b>		
Poorest	0.1	22497
poorer	0.7	21617
Middle	2.2	21652
Richer	5.1	21371
Richest	16.4	21905
<b>Richest Wealth Status</b>		
Total	4.9	109041

Note: <sup>1</sup> At least one usual household member is covered by any health scheme or health insurance.

**Table 2. Type of coverage of health scheme or health insurance among household according to socioeconomic characteristics, India NFHS, 2005-06**

Characteristics	Type of health insurance						
	ESIS	CGHS	CHIP	OHIE	MRE	OPCHI	Others
<b>Regions</b>							
North	34.7	23.9	2.3	5.2	10.1	22.5	2.9
Central	34.6	30.0	2.9	4.1	12.1	15.5	0.5
East	34.9	16.3	1.8	6.6	16.2	20.4	3.9
Northeast	10.4	9.4	0.9	14.0	21.5	34.6	11.2
West	17.6	23.8	2.2	5.7	9.6	39.7	1.9
South	21.9	14.1	12.8	6.4	11.0	27.5	8.6
<b>Place of residence</b>							
Rural	19.9	17.6	11.8	5.2	8.7	28.1	8.5
Urban	28.8	21.3	2.5	6.2	12.9	27.2	2.6
<b>Caste</b>							
Scheduled Castes/Tribes	34.6	23.9	4.7	5.1	12.6	17.6	3.4
Other Backward Classes	27.8	17.1	8.3	7.0	8.9	25.8	5.7
Others	22.2	20.6	3.9	5.6	12.9	31.9	4.1
<b>Religion</b>							
Hindu	26.4	20.5	5.5	5.9	11.6	27.2	4.2
Muslims	27.9	15.0	5.9	5.9	7.0	30.0	6.6
Others	22.2	20.6	4.3	6.1	14.7	28.2	5.5
<b>Wealth Index</b>							
Poorest	35.5	19.4	6.5	6.5	12.9	16.1	6.5
poorer	23.4	9.2	13.5	2.8	2.8	39.0	9.2
Middle	26.4	11.7	15.2	5.8	6.0	24.5	9.5
Richer	34.2	15.6	8.9	5.9	8.7	22.1	5.4
Richest	23.6	23.1	2.7	6.1	13.5	29.1	3.2
Total	26.1	20.2	5.4	5.9	11.6	27.5	4.4

Note: ESIS-Employee state insurance scheme, CGHS-Central Government health scheme, CHIP-Community health insurance programme, OHIE-Other health insurance through employer, MRE- Medical reimbursement through employer, OPCHI- Other privately purchased commercial health insurance.

**Table 3. Odds ratio showing the coverage of any health insurance scheme by socio-economic characteristics, India**

Characteristics	<i>p-value</i>	Odds ratio	Confidence Interval	
			Lower	Upper
<b>Regions</b>				
<b>North®</b>				
Central	0.00	0.79*	0.71	0.88
East	0.00	1.20*	1.08	1.33
Northeast	0.00	0.69*	0.56	0.84
West	0.00	1.35*	1.23	1.48
South	0.00	1.37*	1.25	1.50
<b>Place of residence</b>				
<b>Urban®</b>				
Rural	0.00	0.69*	0.65	0.74
<b>Castes</b>				
<b>Scheduled Castes/Tribes®</b>				
Other Backward Classes	0.00	0.72*	0.66	0.78
Others	0.26	0.95	0.88	1.03
<b>Religion</b>				
<b>Hindu®</b>				
Muslims	0.00	0.40*	0.35	0.45
Others	0.09	0.92	0.83	1.01
<b>Wealth Index</b>				
<b>Poorest®</b>				
Poorer	0.00	4.62*	3.13	6.81
Middle	0.00	1.82*	1.29	2.34
Richer	0.00	2.46*	1.93	5.12
Richest	0.00	10.06*	7.46	44.96

®: Reference Category; \* 1%, \*\*5% level of significance.

Percentage of households by type of health scheme or health insurance and socio-economic characteristics has been shown in table 2. Among households in which at least one household member has been covered by any health insurance scheme, 28 percent of them have been covered through privately purchased commercial health insurance. About one fourth of households mentioned about the employee state insurance scheme which is meant for workers from organised sectors.

Further, the results state that uptake of public health schemes run by central government such as Central government health scheme (CGHS) and community health insurance programme (CHIP) was low in the country as only 20 percent and only 5 percent households reported to have any member insured by these schemes. Coverage of other micro health insurance schemes has also been reported low. By regions of residence, it was observed that the adoption of Employment state insurance scheme (ESIS) was higher in northern (35 percent),

central (35 percent) and eastern (35 percent) regions and the adoption of other privately purchased commercial health insurance (OPCHI) was higher in north-eastern (35 percent) and western (40 percent) regions. As compared with other regions of India, Central Government health scheme (CGHS) was more popular in central region (30 percent). Also, in comparison with rural area, the adoption of any health insurance scheme was higher among urban residents. Further, the acceptance of government health insurance scheme such as ESIS, CGHS was more among scheduled castes/tribes. Privately purchased insurance scheme was adopted more among those belong to richest wealth quintile, while adoption of government insurance scheme was more among those belong to poor economic status. The extent of coverage of any health insurance scheme has been shown here through binomial logistic regression analysis (table 3). As shown in the table, as compare to northern region of the country, households members in western (OR-1.35, CI: 1.23-1.48) and southern (OR-1.37, CI: 1.25-1.50) region were more likely to cover with any health insurance schemes. Rural households' members were 31 percent less likely to adopt any health insurance scheme to reduce their out of pocket spending on health. Coverage of health insurance scheme is 10 times more among household members belong to richest wealth quintile as compared to household having poor health status.

## DISCUSSION

In terms of health indicators and health achievements, India is far away from other developing countries like China, Vietnam and Sri Lanka (Satia, et al., 1999). Share of public financing on health care has also remained a major concern in this country. According to World Health Organization (WHO), more than 80 percent of health expenditure in India is private. Most studies on health care in India also show that two thirds of the households rely on private medical sector and seek health care services from private hospitals, doctors or clinics, which increase the out of pocket spending on health care. Findings of the study revealed quite a low coverage of health insurance. However, variations have been observed by socioeconomic characteristics. Low coverage of any insurance scheme has been observed in Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh (demographically and economically backward states of the country).

Coverage of any health insurance scheme was more among households in urban areas and had superior economic status. Overall, private health insurance schemes seem to be most operational and adopted by rich households. However, employment state insurance scheme (ESIS), community health insurance program (CHIP) and other health insurance through employer (OHIE) were more adopted by the poor households. With the matter of low level of health insurance coverage in India this study highly recommend the policies and programs that promote awareness and proper knowledge about insurance schemes and their benefits for Indian citizens. Additionally, share of public financing on health should also be increased to improve the public health facilities.

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