Catastrophic Health Expenditure and Poor in India: New Evidence from a Nation-wide Survey

Household consumption expenditure comprises of both monetary and in-kind payment on all goods and services, and the money value of the consumption of home-made products. Health expenditure implies the out-of-pocket (OOP) health payments made by households for the health services received by household member. Health payments includes doctor's consultation fees, purchases of medication/traditional medication and hospital bills, but expenditure on ambulance/transportation and special nutrition are excluded. And any reimbursement (from insurance/employer/government, etc.) is deducted to find out the net out-of-pocket payments. In India like developing country, characterized by inadequate and inefficient public health provision, it is very relevant to know the share of health care spending on total household spending. Simultaneously, for the health sector planning and intervention by the government or any donor agency it is very important to have detailed information on OOP health payments (absolute) and as a percentage of household consumption by different socio-economic groups.

Data Source:

Study on Global Ageing and Adult Health (SAGE) is representative sample survey conducted during the period of 2007-08. In order to conducted collected data on food items (last 7 days), non-food items and health care and services (last 30 days), and expenses that may be more periodic or big purchases (last 12 months).

Methodology:

As per WHO, 2005 criterion, poverty line calculated on the basis of subsistence expenditure per (equivalent) capita, and households with consumption expenditure below the poverty line is regarded as poor. Non-subsistence spending which constitutes expenditure aggregate of household health and non-food items budget, the only source of finance without impoverishment of the household, has also been collected. *Catastrophic spending on health occurs when a household must reduce its basic expenses over a certain period of time in order to cope with health care expenses on one or more of its members.* Since the insurance coverage is very low in India, poor households tend to spend large share of their income on health care. This implies that poor households bear a heavy financial burden on account of illness (Selvaraju, 2000).

Health expenditure

Health expenditure includes government and private sector expenditure and household expenditure. In India, government provides major allocation of funds to provide health services to people. In addition, there is substantial investment by private sector also. On the other hand, households and individuals spend from their pockets for treatment which is called as out-of-pocket health expenditure.

Table 9.5.1 shows the state-level variation in mean monthly household consumption expenditure, percentage of poor households and effects of OOP health payments on household economic conditions. In India, the mean household expenditure was 6,671/- rupees. The mean OOP expenditure on health care was 847/- rupees. On an average, the OOP on health care was 13 percent of the total household expenditure and 19 percent of the non-subsistence spending. More than one-fifth (22 percent) of the households in India paid 40 percent or more than their capacity to pay or non-subsistence spending on health care; in other words these households incurred catastrophic expenditure on health. More than one-fourth (27 percent) of the households were poor. In addition, 7 percent of the non-poor households became impoverished due to spending on health care.

The mean household expenditure varies across the states, from the highest of 9,196/- rupees in Rajasthan to the lowest of 4,710/- rupees in Assam. Accordingly, the proportion of poor households was the highest in Assam (41 percent) and the lowest in Rajasthan (9 percent). Among all the states, households in Uttar Pradesh (1,031/- rupees) spent the highest amount on health. Even households in Rajasthan spent almost the same amount. Households in West Bengal spent the least (426/- rupees) on health. Out-of-pocket expenditure on health accounts for 9-15 percent of household expenditure in different states. Different states spend 15-23 percent of the non-subsistent expenditure on health. More than one-fourth of the households in Assam (29 percent) and Uttar Pradesh (28 percent) incurred catastrophic expenditure on health care; at the same time in Maharashtra, Rajasthan and West Bengal about one-sixth (16-18 percent) of the households incurred catastrophic expenditure on health. It is already mentioned that proportion of poor households in surveyed states range between 9 and 40 percent. Because of heavy spending on health in comparison to their capacity to pay, another 4-8 percent of non-poor households became impoverished due to health care expenditure.

Table 9.5.1 Health Payments (monthly)

Household consumption expenditure, health payments and impoverishment, states and India (pooled), 2007

State	Mean household expenditure (Rs.)	Percent poor	Percent impoverished	Percent incurring catastrophic health payments	OOP as percentage of household expenditure	OOP as percent of non-subsistence spending	Mean OOP health payments (Rs.)
Assam	4,710	41.2	8.1	29.4	13.0	23.2	611
Karnataka	6,686	19.1	5.7	21.0	14.4	22.0	962
Maharashtra	6,713	25.7	5.2	16.2	12.7	18.5	851
Rajasthan	9,196	9.3	3.5	18.1	11.0	15.9	1,015
Uttar Pradesh	7,063	30.5	8.4	27.7	14.6	22.2	1,031
West Bengal	4,989	32.3	7.3	18.3	8.5	14.7	426
India (Pooled)	6,671	26.7	6.6	21.8	12.7	19.4	847

Note: - Catastrophic health expenditure*: Catastrophic health expenditure occurs when a household's total out-of-pocket health payments equal or exceed 40 percent of household's capacity to pay or non-subsistence spending.*
Subsistence spending and poverty line*: The household subsistence spending is the minimum requirement to maintain basic life in a society. The poverty line is used in the analysis as subsistence spending. The poverty line was set at the household food expenditure whose food share of total household spending is at the median of the country.*

Table 9.5.2 shows mean monthly household consumption expenditure, percentage of poor households and effects of OOP health payments on household economic conditions on different types of households. The mean household expenditure did not vary substantially among the households with and without catastrophic health expenditure, even the proportion of poor households did not differ much; however, the mean health expenditure differs. The households spending catastrophic expenditure on health spent 43 percent of their household expenditure and 70 percent of non-subsistence expenditure on health. Due to heavy catastrophic health expenditure 23 percent of these households became impoverished.

Mean monthly consumption expenditure of the non-poor households is 8262/- rupees compared to 2307/- rupees for the poor households. Nine percent non-poor households have become poor (impoverished) due to average out-of- pocket expenditure of 1106/- rupees per month. Among both, poor and non-poor households, 21-24 percent incurred catastrophic health expenditure. OOP health payments constituted 13 percent of the monthly consumption expenditure of the non-poor households in comparison to only 6 percent share for the poor households.

A miniscule proportion of households have at least one member having health insurance. Households with any insured member spend 11,669/- rupees on monthly consumption compared to uninsured household with monthly consumption expenditure of 6355/- rupees. Impoverishment effect of catastrophic health expenditure was 7 percent among uninsured households with 823/- rupees monthly OOP health payments, and such affect was only 2 percent for insured households with a monthly health expenditure of 1216/- rupees. Share of OOP health

payments, which was net of insurance reimbursement, to the non-subsistence spending was 20 percent for the uninsured households and only 14 percent for the insured households. Only 15 percent households in urban areas belong to the poor category compared to 22 percent in rural areas. Impoverishment effect due to catastrophic health payments is twice (8 percent) in rural areas in comparison to the urban areas (4 percent).

Variation of mean monthly consumption expenditure by wealth quintile ranges from lowest (2,817/- rupees) to the highest (13,536/- rupees). The large (10 percent) proportion of the lowest quintile household has become impoverished due to catastrophic health payments. Mean monthly OOP health payments increases from the lowest wealth quintile (417/- rupees) to the highest wealth quintile (1497/- rupees) households.

Heath payments (monthly)

Health Payments across different population groups, India (pooled), 2007

Background characteristic	Mean household expenditure (Rs.)	Percent poor	Percent impoverished	Percent incurring catastrophic health payments	OOP as percentage of household expenditure	OOP as percent of non-subsistence spending	Mean OOP health payments (Rs.)
Catastrophic							
No	6,879	26.0	2.1		5.4	8.1	374
Yes	5,922	29.5	23.1		43.0	70.2	2,546
Poor							
No	8,262		9.1	21.0	13.4	18.6	1,106
Yes	2,307		0.0	24.1	5.8	15.5	134
Insurance							
No	6,355	28.1	6.9	22.3	13.0	20.2	823
Yes	11,669	5.6	1.8	13.0	10.4	13.5	1,216
Residence							
Urban	8,446	18.0	3.9	15.2	10.6	14.7	894
Rural	6,019	29.9	7.7	24.2	13.7	22.0	824
Wealth quintile							
Lowest	2,817	55.9	10.3	29.9	14.8	36.8	417
Second	4,340	33.6	8.6	25.0	13.5	26.6	585
Middle	6,833	19.4	7.3	21.5	10.1	15.3	687
Fourth	7,141	11.6	4.7	17.6	15.8	24.7	1,131
Highest	13,536	2.7	1.3	12.3	11.1	14.2	1,497
Fifty plus member							
No	6,721	26.0	6.5	21.2	12.9	24.6	869
Yes	5,617	42.0	10.2	32.7	6.6	7.8	371
Total	6671	26.7	6.6	21.8	12.7	19.4	846

Structure of out-of-pocket payment

Information regarding different headings of OOP health payments is the basic input of targeted policy intervention. Planner can find the mechanism of health expenditure vulnerability of population through the analysis of the structure of OOP health payments. In SAGE survey, questions on different forms of health expenditure like payment for doctor consultation,

medication, long-term care, etc. were asked to the respondent. Health expenditure on various services of health care such as medication, diagnostic, etc. has been recorded for the last 30 days, whereas specific health expenditures like long-term care, health aids, etc. has been recorded for the last 12 months.

Table 9.6.1 shows the state variations for different headings of OOP health payments. Proportion of drug payment to the OOP health payment was high in all states, but varied from 72 percent in West Bengal to 37 percent in Karnataka. Share of out-patient health care payment was more than inpatient health care payment across all states, except in Rajasthan and Karnataka. An average household in Uttar Pradesh was spending 6 percent of OOP health payments on traditional medicine. The proportional share of diagnostic test payment was less than five percent in six states and in India (pooled). Long term care payment constituted 11 percent of OOP payments in Karnataka and Rajasthan whereas share of inpatient payment was 13 percent and 10 percent respectively, which implies that inpatient hospitalization caused high long-term care payment.

Structure of out-of-pocket payments

Percent distribution of out-of-pocket payment by different items of health care, states and India (Pooled), 2007

State	Inpatient	Outpatient	Traditional	Diagnostic	Drugs	Ambulance	Health aids	Long term care	Others	Total
Assam	8.1	10.9	1.7	3.3	68.3	0.4	0.7	6.0	1.1	100
Karnataka	13.1	12.8	0.8	4.4	37.1	0.5	6.6	10.9	14.1	100
Maharashtra	8.9	21.8	1.5	3.5	51.7	0.0	5.3	4.0	3.7	100
Rajasthan	10.2	6.0	1.7	3.9	63.8	0.0	1.5	11.2	1.9	100
Uttar Pradesh	9.1	10.5	5.9	4.6	58.4	0.1	2.5	6.0	2.9	100
West Bengal	8.0	12.3	1.4	2.1	72.6	0.2	1.3	0.4	2.1	100
India (Pooled)	9.4	12.9	2.8	3.7	58.3	0.2	3.1	5.7	4.1	100

Table 9.6.2, shows the distribution of structure of OOP payments by characteristics of households. Household incurring catastrophic health payments spent 16 percent for inpatient care, 7 percent on diagnosis and long term care whereas the households which were not incurring catastrophic expenditure spent 7 percent on inpatient care, 2 percent on diagnosis and 5 percent on long term care. Poor households spent a large proportion on out-patient health acre payment (12 percent) and on drugs (66 percent), whereas non-poor households spent more on out-patient care (13 percent) and on drugs (56 percent). Out-patient health acre payment was constituting 15 percent in urban areas compared to 12 percent in rural areas. Rural households spent 60 percent

of OOP payments on drugs compared to 54 percent in urban areas. The percentage share of inpatient and out-patient care increases whereas the payment on drug decreased with increasing wealth quintile.

Structure of out-of-pocket payments

Percent distribution of Out-of-pocket payment by different items of health care across different population groups, India, 2007

Background characteristic	Inpatient	Out-patient	Traditional	Diagnosis	Drugs	Ambulance	Health aids	Long term care	Others	Total
Catastrophic										
No	6.9	13.5	2.7	2.4	60.2	0.2	4.1	5.3	5.0	100
Yes	16.3	11.3	3.1	7.3	53.1	0.1	0.6	6.8	1.7	100
Poor										
No	10.2	13.2	2.4	4.2	56.2	0.2	3.1	6.4	4.3	100
Yes	6.5	11.7	4.5	1.8	65.9	0.0	3.1	3.2	3.4	100
Insurance										
No	9.2	12.9	2.9	3.6	59.0	0.2	3.1	5.5	4.0	100
Yes	13.1	13.2	2.2	5.3	48.2	0.4	4.3	7.9	5.7	100
Residence										
Urban	8.0	15.3	2.6	4.3	53.6	0.3	4.9	5.5	6.0	100
Rural	10.0	12.0	2.9	3.5	60.0	0.1	2.5	5.8	3.4	100
Wealth quintile										
Lowest	8.2	12.0	3.3	2.5	66.0	0.0	1.5	3.5	3.3	100
Second	7.8	11.1	3.8	2.9	61.7	0.1	3.3	5.9	3.6	100
Middle	9.7	13.1	1.9	3.3	58.8	0.4	2.4	5.3	5.3	100
Fourth	10.6	14.7	2.4	4.5	51.7	0.2	4.7	6.7	4.9	100
Highest	11.2	14.0	2.3	5.4	52.4	0.3	3.8	7.1	4.1	100
Fifty plus member in the family (age 50and above)										
No	9.4	13.0	2.9	3.8	58.1	0.2	3.1	5.7	4.2	100
Yes	10.6	10.9	2.1	2.0	62.1	0.2	4.9	5.3	2.0	100
Total	9.4	12.9	2.8	3.7	58.3	0.2	3.1	5.7	4.1	100

Source of health care financing

Households depend on many sources to finance their health expenditure. From policy point of view, sources of financing give the way to achieve equity in health care financing. In SAGE

survey, questions related to sources of health care financing were asked for the households. Table 9.7.1 shows that current income is the major source of finance across all states, followed by savings (bank account). In states like Rajasthan and Maharashtra, majority of the households (89 percent and 86 percent respectively) used current income as the source of health financing. Forty percent of households in Uttar Pradesh and 29 percent in Assam used savings to finance their health payments, and 63 percent and 55 percent households in these two states also use current income to finance the health expenses. Borrowing from relatives was the third major source of health care financing across all states, which varied from lowest 13 percent in West Bengal to the highest 31 percent in Karnataka. It is important to note that 8 percent households in India sold household assets such as furniture, cattle, jewellery etc. to finance the health care. Only 1.4 percent of households met their health expenditure from insurance.

Sources of health care financing

Percentage of households by sources of health care financing, states and India (Pooled), 2007

State	Savings	Sold items	Borrowed from relatives	Borrowed from others	Health insurance	Current income	Other
Assam	29.4	13.5	15.6	5.0	0.4	55.4	10.6
Karnataka	23.8	13.8	30.9	16.1	4.4	67.4	32.5
Maharashtra	13.7	8.2	18.5	9.2	1.5	85.7	4.5
Rajasthan	11.9	5.4	19.8	2.4	2.3	88.9	1.5
Uttar Pradesh	39.8	6.3	20.3	4.5	0.5	62.6	7.3
West Bengal	24.0	6.2	13.1	1.6	0.5	79.1	8.8
India (Pooled)	25.8	7.8	19.4	6.1	1.4	73.4	9.7

Note: *- Row total will not be equal to 100 due to multiple responses.*
Sold items includes land, furniture, livestock, jewellery etc

Table 9.7.2 gives the distribution of source of health finance by characteristics of the households. As the share of OOP health payment to the non-subsistence spending increases, more proportion of households used savings to finance health care. Thirty five percent of households, with inpatient hospitalization of at least one member, borrowed from relatives compared with only 16 percent households without inpatient hospitalization. Eighty-three percent and 31 percent of insured households used current income and savings respectively to finance health payments. Eighty five percent of the urban households and 69 percent of the rural households finance the health care spending from their current income. There was no significant difference for sources of health care financing by each successive wealth quintiles. But, there was large difference between lowest and highest wealth quintile households for sources of health care financing.

Sources of health care financing

Percentage of households by sources of health care financing used, India (Pooled), 2007

Background characteristic	Savings	Sold items	Borrow from relatives	Borrow from others	Health insurance	Current income	Other
OOP as percentage of non-subsistence spending							
Less than 10 percent	21.5	4.2	9.2	4.9	1.9	79	8.7
10-20 percent	24.7	6.2	14.7	5.6	1.1	76.3	9.1
20-40 percent	26.7	8.8	19.2	7	0.9	73.3	9.8
More than 40 percent	31	12.5	35.5	7.1	1.4	64.3	11.1
Hospitalization							
No	25.3	6.1	15.5	4.6	1.1	73.2	9.3
Yes	27.6	14.6	35	12	2.3	74.1	11.1
Insurance							
No	25.4	7.7	19.6	5.7	0.6	72.7	9.4
Yes	30.6	9.4	16.8	11.5	12	82.5	13
Residence							
Rural	27.7	8.6	20.2	6.3	1.1	69	10.9
Urban	20.6	5.6	17.3	5.6	2.2	85.4	6.2
Expenditure Quintile							
Lowest	23.5	6.1	18.4	2.8	0.2	67.5	8.7
Second	23.8	6.8	18.7	4.1	0.6	69.5	10.8
Middle	23.8	7.5	20.6	4.8	0.9	73	10.5
Fourth	26.2	9.3	20.1	7.7	1.5	73.9	11.4
Highest	30.4	8.6	19	9.8	3.2	80.6	7
Fifty plus member(50 and above years)							
No	25.1	7.5	19.6	6.1	1.4	73.7	9.1
Yes	27.2	8.3	19	6	1.3	72.8	10.9
Total	25.8	7.8	19.4	6.1	1.4	73.4	9.7

Health insurance coverage

Health insurance coverage in India is far from satisfactory, having the existence of large proportion of people living below the poverty line and under great health risks. The purpose of this section is to understand the extent of coverage by health insurance along with the characteristics of insurance plans. The two major insurance schemes are mandatory and voluntary insurance. Mandatory health insurance would include any system or organization that covers a person's health costs on the condition that the person is formally registered or enrolled in the programme. The insurance voluntarily subscribed by an individual is known as voluntary insurance. *The mandatory insurance scheme in India consists of coverage of Employee State Insurance Scheme (ESIS), Central Government Health Scheme (CGHS), and medical reimbursement by employers (both government and private).* Voluntary *insurance consists of coverage by other personal insurances such as Mediclaim, etc*. According to National Family Health Survey (2005-06), only five percent of households have at least one member covered by a health scheme or health insurance. Private providers of health insurance have only recently emerged as big players after the liberalization of the economy. Table 9.8.1 shows that only 2.2 percent population was covered under any health insurance policy in India. Mandatory insurance

and voluntary coverage was only one percent each. Health insurance coverage was the highest in Karnataka (10 percent) followed by West Bengal (3 percent) and virtually no coverage under health insurance in Assam and Uttar Pradesh.

Health insurance coverage

Percent distribution of households by health insurance coverage, states and India (Pooled), 2007

State	Mandatory insurance[1]	Voluntary insurance[2]	Both Mandatory & Voluntary	None	Total
Assam	0.1	0.2	0.0	99.7	
Karnataka	2.8	6.1	0.9	90.2	100
Maharashtra	0.7	0.7	0.1	98.5	100
Rajasthan	1.3	0.1	0.0	98.6	100
Uttar Pradesh	0.3	0.2	0.0	99.4	100
West Bengal	1.8	1.1	0.0	97.0	100
India (Pooled)	1.0	1.1	0.1	97.8	100

Note : -[1]Mandatory includes: ESIS, CGHS, RHS, DMS, ECHS or others
[2] Voluntary includes: CHIS, BPL and SEWA Schemes, Commercial Health Schemes, etc.

Percentage distribution of insurance coverage by household characteristics is presented in Table 9.8.2. More urban households (4.5 percent) were covered under health insurance compared with rural counterpart (1.4 percent).Three percent of the households headed by old women were covered under health insurance compared with 2.5 percent of the households headed by old man. More than five percent highest wealth quintile households were covered under health insurance whereas virtually no households of lowest, second and middle wealth quintile were covered under any health insurance. Percentage distribution of mandatory and voluntary health insurance was almost the same in all wealth quintiles. Not surprisingly, insurance prevalence is practically absent among poor households in India.

Health insurance coverage

Percent distribution of households by health insurance coverage, according to selected background characteristics, states and India (Pooled), 2007

Background characteristic	Mandatory insurance[1]	Voluntary insurance[2]	Both mandatory & voluntary	None	Total
Residence					
Urban	2.2	2.3	0.1	95.5	100

Rural	0.6	0.7	0.1	98.6	100
Total	1.0	1.1	0.1	97.8	100
Household head type					
Young women	0.2	0.5	0.0	99.3	100
Old women	1.4	1.6	0.0	97.0	100
Young men	0.9	0.9	0.1	98.2	100
Old men	1.1	1.2	0.2	97.5	100
Total	1.0	1.1	0.1	97.8	100
Wealth quintile					
Lowest	0.2	0.2	0.0	99.7	100
Second	0.2	0.3	0.0	99.4	100
Middle	0.3	0.6	0.1	98.9	100
Fourth	1.4	1.4	0.1	97.1	100
Highest	2.6	2.5	0.3	94.6	100
Total	1.0	1.1	0.1	97.8	100

Note : - *[1]Mandatory includes: ESIS, CGHS, RHS, DMS, ECHS or others*
[2]Voluntary includes: CHIS, BPL and SEWA Schemes, Commercial Health Schemes, etc.
Household head has been classified as: - (age <50 young) and (age ≥50 old).