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Pattern of Health Expenditure and Utilization of Health Care Services in Kerala- A Perspective Analysis

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Abstract

Health care expenditure cuts poor households' budget in two ways. Not only they have to spend a large amount of money and resources on medical care but they are also unable to earn during illness. Apart from the direct cost of treatment like cost on medicines, diagnostic tests and consultation fees etc, the patient has also to bear a high burden by way of a series of other costs termed as indirect cost such as expenses on transport, room rent, food etc during stay in the hospital, opportunity cost of lost wages of the sick as well as of the bystander and other forms of expenditure which are all associated with an illness episode. Very often, the poor have to borrow funds at a high interest rate to meet the high medical expenditure which carries them into indebtedness, further aggravating the intensity of health burden. Ill health and poor access to health services are increasingly seen as major dimensions of poverty. Poor people are caught in a vicious circle; poverty breeds ill health, ill health results in improvishment and indebtedness. Though health has been considered a fundamental human right since the Alma Ata Declaration (1978), expenditure on health is often unexpected and can be catastrophic in nature. There is no doubt that health insurance will be one of the high priority areas as far as workers, health care providers and insurance companies are concerned. Thus, health insurance could be a way of overcoming financial handicaps, improving access to quality medical care and providing financial protection against high medical expenses.

Introduction

Kerala is an exception compared to other Indian states with regard to the higher health standard**.** The level of literacy and widely accepted health indicators like crude death rate, infant mortality rate and life expectancy at birth in Kerala are far higher than national average and comparable even to those in the developed countries. This outstanding progress of health status is achieved through widespread prevalence of the variety of medical practices implemented in public, private and cooperative sectors coupled with people's health awareness. Kerala's achievement in health indicators in spite of its economic backwardness has prompted many analysts to categorize a unique "Kerala Model of Health" worth emulating by other developing parts of the world.

Though Kerala has registered significant improvement in key health care indicators, it still exhibits a number of serious health problems which reflects a paradox. It is a combination of high morbidity rate and low mortality rate. Hence, the Kerala situation is described as "Low mortality-High morbidity

Syndrome". As such, it is contradicting to state the paradox that on the one side, Kerala had all better healthcare indicators in terms of Infant Mortality Rate, Maternal Mortality Rate, birth rate, death rate etc; on the other side, it outstrips all other Indian states in terms of some specific chronic illness like cancer, diabetics, blood pressure etc.

Relevance of the study

Kerala has one of the highest 'out of pocket' expenditures on health in the country. With the unique 'high-morbidity with low mortality' model, not only the health care infrastructure, but, also the finances of the common man have come under stress. The morbidity profile of the state is increasingly influenced by demographic transition, high health seeking behavior and prevalence of a wide range of non-communicable disease. The spectrum of diseases in Kerala has been changing from communicable to non-communicable diseases to chronic diseases, especially CVD and diabetes, cancer and hypertension. Due to all these changes in the health profile, the cost of health care in Kerala is very high.

As per the National Health Accounts (2016-17), the share of Out of PocketExpenditure (OOPE) against Total Health Expenditure (THE) was 67 % in Kerala against the national average of 58.7%. The Government Health Expenditure in Kerala wasRs. 7522crore (26.6% of THE), while OOPE stood at 18967 crores. Per capita health expenditure is highest in Kerala at Rs.8083 while the lowest in Bihar at Rs 2358. The per capita OOPE is again highest in Kerala at Rs. 5419 while lowest in Gujarat at Rs 1781.

Various research studies have also shown that the high cost of treatment and out-ofpocket expenditure in Kerala has contributed to people falling below the poverty line. A recent study done by Peter Berman and Rajeev Ahuja using NSSO 2004 survey data has estimated that around 12 % of rural households and 8 % of urban household in Kerala were pushed below the poverty line (BPL) due to health care expenditure.

Objectives of the study

1. To study the patterns of health care expenditure in the state

2. To study the patterns of health services utilization in the state

Sample size and sampling

A sample of 400 households was selected fromfour panchayat in Ernakulam district in Kerala using a multi stage stratified random sampling. From each panchayat, two wards were selected using simple random. From each ward;fifty households were selected for the survey.

Patterns of health care expenditure in Kerala

a) Total Health Expenditure (THE) as a percentage of GDP and Per Capita

The Total Health Expenditure (THE) comprises of health expenditure in both public and private sectors providing healthcare in India. For the year 2016-17, Total Health Expenditure (THE) for India is estimated at Rs. 581023 crores (3.8%of GDP and Rs.4381 per capita).

As per the National Health Accounts (2016-17), the total health expenditure in Kerala was Rs.28291 crores. It was 4.5% of GSDP, higher than national average (3.8%). Percapita health expenditure in Kerala was Rs. 8083 as against national average of Rs. 4381.Table 1 shows the per capita public and private health expenditure across major states of India.

b) Government Health Expenditure (GHE) as a percentage of Total Health Expenditure(THE)

GHE constitutes spending under all schemes funded and managed by Union, State and local Governments including quasi-Governmental organizations and donors in case funds are channeled through Government organizations. It has an important bearing on the health system as low Government health expenditures may mean high dependence on household out of pocket expenditures.

Government Health Expenditure (GHE) including capital expenditure wasRs.188010 crores in India (32 % of THE, 1.2% GDP and Rs.1418 per capita). The maximum government spending on health is highest in Uttar Pradesh (Rs. 16828 crore) then Maharashtra (Rs.14708 crore) as shown in the table 1 below.

The Government Health Expenditure in Kerala wasRs.7522 crore (26.6% of THE), while OOPE stood at 18967 crores (Table 1).This shows that total expenditure borne in by government is significantly lower compared to out-of-pocket expenditure incurred by citizen on healthcare.

c) Out of Pocket Expenditures (OOPE) as a percentage of Total Health Expenditure (THE)

Out of Pocket Expenditures are expenditures directly made by households at the point of receiving health care. This indicates the extent of financial protection available for households towards healthcare payments. Household out of Pocket Expenditure on health (OOPE) is Rs. 340196 crores in India (58.7% of THE, 2.2 of GDP, Rs. 2570 per capita).

Among major States, the share of OOPE against Total Health Expenditure was highest in Bihar at 77.6% against the national average at 58.7%. The share of OOPE against Total Health Expenditure in Kerala was 67%.

The table 1also shows that per capita health expenditure is highest in Kerala at Rs.8083 while the lowest in Bihar at Rs 2358. The per capita OOPE is again highest in Kerala at Rs. 5419 while lowest in Gujarat at Rs 1781.Besides; the government health expenditure incurred per citizen is highest in Kerala at Rs 2149 while lowest in Bihar at Rs.504.

Table 1 Key Health Financing Indicators for select States

States	Total Health Expenditure (THE)			Government Health Expenditure(GHE)				Out of Pocket Expenditure (OOPE)			
	In Rs. Crore	Per Capita in Rs.	%GSDP	In Rs. Crore	Per Capita in Rs.	% THE	% GSDP	In Rs. Crore	Per capita in Rs.	%THE	% GSDP
Assam	8453	2562	3.3	3294	998	39	1.3	4547	1378	53.8	1.8
Andhra Pradesh	28981	4600	4.2	7090	1125	24.5	1	20928	3322	72.2	3
Bihar	26885	2358	6.4	5740	504	21.3	1.4	20857	1830	77.6	4.9
Chhattisgarh	10214	3648	4	3463	1237	33.9	1.4	5711	2040	55.9	2.2
Gujarat	23700	3703	2.1	9145	1429	38.6	0.8	11399	1781	48.1	1
Haryana	12238	4533	2.2	3621	1341	29.6	0.7	6923	2564	56.6	1.2
Himachal	3851	5501	3.1	1971	2816	51.2	1.6	1785	2550	46.4	1.4

Pradesh											
Jammu and Kashmir	5138	3952	4.1	1995	1535	38.8	1.6	3004	2311	58.5	2.4
Jharkhand	8325	2313	3.5	2582	717	31	1.1	5496	1527	66	2.3
Karnataka	34210	5183	2.8	9168	1389	26.8	0.8	16815	2548	49.2	1.4
Kerala	28291	8083	4.5	7522	2149	26.6	1.2	18967	5419	67	3
Madhya Pradesh	21999	2820	3.4	6324	811	28.7	1	15166	1944	68.9	2.3
Maharashtra	63046	5210	2.9	14708	1216	23.3	0.7	35771	2956	56.7	1.6
Odisha	18266	4059	4.6	4988	1108	27.3	1.3	12582	2796	68.9	3.2
Punjab	17285	5960	4	3421	1180	19.8	0.8	13362	4608	77.3	3.1
Rajasthan	25592	3412	3.4	8447	1126	33	1.1	14504	1934	56.7	1.9
Tamil Nadu	36451	4734	2.8	9959	1293	27.3	0.8	22626	2938	62.1	1.7
Uttar Pradesh	75634	3469	6.1	16828	772	22.2	1.3	56609	2597	74.8	4.5
Uttarakhand	4421	4019	2.3	1595	1450	36.1	0.8	2748	2498	62.1	1.4
West Bengal	41059	4277	4.7	8697	906	21.2	1	30420	3169	74.1	3.5
All India	581023	4381	3.8	188010	1418	32	1.2	340196	2570	58.7	2.2

Source: NHA Estimates 2016-17

Expenditure on hospitalization

Table 2 represents the average medical expenditure incurred during stay at hospital per case of hospitalization (excluding childbirth), separately for Government /public hospitals and private hospitals among the states in India.

Table 2: Average medical expenditure incurred for treatment during stay at hospital per case of hospitalization for each State separately for public and private hospitals

States	**Average medical expenses (Rs.) during hospital stay per case of hospitalization in**			
	Public Hospitals		**Private Hospitals**	
	Rural	**Urban**	**Rural**	**Urban**
Andhra Pradesh	1,453	1,208	22,415	32,847
Arunachal Pradesh	3,793	4,810	13,966	23,497
Assam	4,545	7,842	28,785	71,657
Bihar	4,064	4,027	16,479	25,052
Chhattisgarh	3,303	4,618	65,288	28,151
Delhi	3,378	2,217	27,868	64,075
Goa	1,818	3,466	41,351	35,512
Gujarat	1,151	3,529	25,027	29,281
Haryana	7,242	7,215	26,346	34,109
Himachal Pradesh	12,797	12,738	37,797	36,003
Jammu & Kashmir	4,720	9,203	50,043	39,718

Jharkhand	3,971	15,699	28,229	33,058
Karnataka	3,445	4,195	17,085	31,462
Kerala	4,395	4,589	25,949	32,746
Madhya Pradesh	2,093	2,030	25,086	31,094
Maharashtra	5,606	7,189	23,821	42,540
Manipur	5,932	9,051	60,361	39,541
Meghalaya	1,894	7,668	14,870	35,687
Mizoram	5,622	7,528	19,558	47,740
Nagaland	4,648	5,089	13,098	19,699
Odisha	5,098	6,698	29,974	33,935
Punjab	15,093	10,293	40,303	37,502
Rajasthan	7,332	6,707	25,788	35,228
Sikkim	3,339	2,915	24,805	19,168
Tamil Nadu	520	433	28,412	41,566
Telangana	1,278	6,922	26,019	35,191
Tripura	3,314	6,077	64,017	67,139
Uttarakhand	2,774	22,376	25,502	41,647
Uttar Pradesh	6,914	10,239	29,768	40,706
West Bengal	2,726	3,954	45,023	57,549
All India	4,290	4,837	27,347	38,822

Source: Key Indicators of Social Consumption in India & Health, NSS 75th round (July, 2017 to June, 2018)

Utilization of health care services

To study the patterns of health service utilization in the state is one of the important objectives of our study. To analyze this objective, the researcher collected data from 400 households belonging to various sectors. Analysis of the data relating to health hazards and medical treatment correspond to the reference period of one year.

Baseline information regarding the study population

About 7% of the participants belonged to SC/ST groups and more than 49% belonged to OBC groups. Majority of the respondents,ie, 215 (53.75%) are Hindus while 103 (25.75%) are Christians and 88 (22%) are Muslims.

About 9% of households used taped water in their homes and another 4.25% sourced water from their own tube wells. More than 74.25% of the households had well as their main source of drinking water and though small, close to 4 percent of the households main water source were of potentially low quality like tanker, rivers and open ponds.

There were a total of 1697 individual members in the 400 households that were included in the survey. Of them, slightly more than 51 percent of the members were female and about 49% were male.

Table 3: Baseline information regarding the study population

Variables	Category	Frequency	Pecentage
Ration Card	APL	204	51.00
	BPL	175	43.75
	Anthyodaya	19	4.75
	Nil	2	.50
	Total	400	100
Caste	Scheduled Caste	27	6.75
	OBC	199	49.75
	General	165	41.25
	OEC	9	2.25
	Total	250	100
Religion	Hindu	209	52.25
	Christian	103	25.75
	Muslim	88	22. 00
	Total	400	100
Sex	Male	828	48.79
	Female	869	51. 21
	Total	1697	100
Source of drinking water	Tap or Pipe	36	9.00
	Tube well	17	4.25
	Pucca Well	297	74.25
	Tank or Pond reserved for drinking	16	4.00
	Public well or tap	34	8.50
	Total	400	100

Source: Primary data

Incidence and intensity of health hazards of the sample population

In this section, the researcher undertakes a detailed enquiry into the health hazards of the respondents. Among the participants, 103 (6.07%) had a history of hospitalization in the last 1 year preceding the date of interview

Table 4: Demographics and hospitalization

	Category	Sample size	Hospitalization (%)
Age group	Under 10 years of age	24	23.30
	Adolescents (10-19 years)	17	16.50
	Adults (20-59 years)	21	20.38
	Elderly (60 years and above)	41	39.81

	Total	103	100
Gender	Male	52	50.49
	Female	51	49.51
	Total	103	100

Source: Primary data

There was a significant difference in hospitalization across the age groups. As expected, people belonging to older age groups (60 years and above) reported more hospitalizations followed by those under 10 years of age. There was no significant difference between males and females in terms of hospitalization in the previous 365 days.

Hospitalization episodes

Among those who were hospitalized, about 76 percent were hospitalized once, 14.56 percent were hospitalized twice and around 9 percent were hospitalized thrice or more. When the number of hospitalizations in the previous year was considered, more than one admission was mainly among the older groups

Table 5: Frequency of hospitalization in the previous 365 days

Number of times hospitalized in the previous 365 days	Frequency	Percent
Once	78	75.73
Twice	15	14.56
Thrice	7	6.80
>Thrice	3	2.91
Total	103	100

Source: Primary data

Hospitalization and choice of the system of medicine

There were 103 hospitalization events in the previous 365 days, 92(93.88%) were in the modern medicine institutions. An analysis of the medical system where the hospitalizations occurred and the type of medical institutions where they were admitted are provided in the tables below

Table 6: Hospitalizations and choice of the system of medicine

Category	Frequency	Percent
Allopathy	96	93.20
Ayurveda	6	5.83
Homeopathy	1	0.97
Total	103	100

Source: Primary data

Selection of hospital

During the field survey, detailed investigation is conducted among the respondents regarding the type of hospital, ie whether private or Government for which they seek medical aid.

It is found that majority of the respondents (59.22%) depend on private medical facilities who mainly belong to better socio-economic status and those depending government hospitals are from lower socio-economic status.

Table7. Distribution of respondents on the basis of selection of hospital

Category	Frequency	Percent
Public	42	40.78
Private	61	59.22
Total	103	100

Source: Primary data

Type of ward in the case of the hospitalizations

Around 25.24% of the hospitalizations were in wards that provided free care and 74.76% of them were in paid general or special wards

Table 8: Type of ward in the case of the hospitalizations

Category	Frequency	Percent
Free	26	25.24
Paid general	57	55.34
Paid special	20	19.42
Total	103	100

Source: Primary data

Major source of financing of expenditure

Households having persons who had been admitted to hospital during the last 365 days were asked about the major source of financing the hospitalization expenses. The responses were classified into five categories, namely, (i) household income/savings, (ii) borrowings, (iii) sale of physical assets, (iv) contribution from friends and relatives, and (v) other sources. Table 9 shows the estimated percentage break-up of hospitalization cases by major source of finance of hospitalization expenditure.

Table 9: Percentage of hospitalization cases with breakup by source of finance of expenditure

Category	Frequency	Percent
household income/savings	21	20.39
borrowings	24	23.30
sale of physical assets,	9	8.74
contribution from friends and relatives	13	12.62
Other sources	36	34.95
Total	103	100

Source: Primary data

Reasons for hospitalization in private hospitals

The commonest reasons that were stated by those who sought admission at a private institution was “the required service was not available” followed by “Quality satisfactory but facility too far” in the government hospitals. About 20 % of the respondents reported their perception of low-quality services as the reason for seeking care from the private sector.

Table 10: Reasons for not availing services at a government facility

Category	Frequency	Percent
Required specific services not available	21	34.23
Quality satisfactory but involves long waiting time	9	14.75
Available but quality not satisfactory	12	19.67
Quality satisfactory but facility too far	19	31.15
Total	61	100

Source: Primary data

Financial protection - insurance

Health insurance is emerging to be an important financing tool in meeting health care needs and reducing health care burden of the poor. The need for health insurance is very much essential due to the heavy burden of out of pocket expenditure while seeking health care. Private out of pocket expenditure can be reduced through comprehensive health insurance, particularly the poor. It is intended to facilitate the financing of medical care and it protects the poor against the catastrophic financial burden resulting from unexpected illness or injury. It is accepted as an instrument of improving access to health care among the poor and protecting them from indebtedness and impoverishment resulting from medical expenditure.

Information collected from the field survey reveals that out of 400 sample population, 211respondents (52.75%) had joined in various health insurance schemes. Out of 211 health insurance policy holders of the sample, 154 (38.5%) had enrolled in Government funded insurance schemes mainly RSBY-CHIS scheme and majority of them are belonging to BPL group because the premium amount of this scheme is fully paid by the Government.

The study revealed that only a small percentage of respondents (4.75%) subscribe to private insurance companies and majority of them belong to APL category.However more .than 47% of the respondents did not have any insurance coverage for health conditions.

Table 11: Financial protection - insurance

Insurance coverage	Frequency	Percent
Government funded insurance	154	38.5
Employer supported health protection	34	8.50
Private Insurance Company	19	4.75
Others	4	1.00
Not covered	189	47.25
Total	400	100

Source: Primary data

Conclusion

Private sector has been the dominant provider for inpatient as well as outpatient curative services in Kerala as well as in India since the 1990s. Even though the cost of treatment in private hospital is very high compared to government hospital, majority of the respondents prefer to have medical treatment from private hospital. Surveys carried out by the National Sample Survey Organization (NSSO) during 2017-18 indicated that 62% of the inpatient care was provided by the private health care sector in Kerala and the percentage share of the government hospitals in the hospitalization cases was only 38 percent. The present study found that 44 percent of respondents, who are hospitalized in the last year, borrow money or sell assets to cover the cost of medical expenditure. Many people are reluctant to seek health care because of high costs involved in connection with consultation fees, conduct of medical check up and tests, hospitalization, etc.The commonest reasons that were stated by those who sought admission at a private institution was “the required service was not available” followed by Quality satisfactory but

facility too far" in the government hospitals. This points to the fact that focused efforts for the betterment of medical facilities and services in the government sector especially for inpatient services and making them client centred is required. It was also observed that only about 52.57% of the households had any form of insurance coverage and about 73 percent of those who insured were covered by the government insurance scheme.

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