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ORIGINAL ARTICLE

ASSESSMENT OF OUT OF POCKET HEALTHCARE EXPENDITURE AMONG PATIENTS ATTENDING SECONDARY HEALTH CARE FACILITY IN HIMACHAL PRADESH

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ABSTRACT:

Background: Patient treatment adherence is dependent on out of pocket expenditure which can lead to delay in seeking hospital care. The study was conducted to assess out of pocket healthcare expenditure among patients attending secondary healthcare facility in Himachal Pradesh. **Methods:** A cross sectional study was conducted at rural health training centre Shahpur attached to department of community medicine, Dr Rajendra Prasad Government Medical College Tanda from July 2015 through August 2015. A total of 400 patients attending OPD and IPD were selected and interviewed after obtaining informed consent and approval from Institutional Ethics Committee. A structured questionnaire containing demographic variables including age, sex, place, income, morbidity and out of pocket health care expenditure incurred was administered to all patients attending OPD and IPD . Data obtained was analysed using SPSS software version 21. **Results:** 400 participants were interviewed. Maximum out of pocket expenditure was incurred on medication with mean of 311.65±477.38 rupees. Mean expenditure on transport was 155.31±271.87 rupees. Stay while in the hospital had minimum expenditure. Expenditure on food, diagnostics, transportation was significantly more among females as compared to males. OOPE was more among OPD patients and those having less monthly income ie between 5000 to 20,000 rupees. **Conclusion:** Out of pocket expenditure is on rise due to increase in life expectancy and the demographic change of aged population along with chronic diseases.

Keywords: Out of pocket expenditure, rural health training centre, himachal Pradesh

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INTRODUCTION

Universal health coverage is high on the agenda of many low and middle income countries in the world .One of the major impediments in achieving universal health coverage is the lack of financial coverage leading to high out of pocket expenditure on health care by the households in these countries.[1] The incidence of Catastrophic Healthcare Expenditure (CHE) is growing and is now estimated to be one of the major contributors to poverty.[2] Health care costs are more impoverishing than ever before and almost all hospitalizations, even in public hospitals leads to CHE and over 63 million people are facing poverty every year due to health care costs alone.[2] Healthcare access in India is affected with 70:70 paradox; 70 per cent of healthcare expenses are incurred by people from their pockets, of which 70 per cent is spent on medicines alone, leading to impoverishment and indebtedness.[3] For decades, economic planners of India regarded health expenditure as financially non productive social spending and public financing levels were low and total spending on healthcare was about 4.1% of GDP.[4] Global evidence on health spending shows that unless a country spends at least 5–6% of its GDP on health and the major part of it is from government expenditure, basic health care needs are seldom met .The Government expenditure on healthcare in India is only 1.04% of GDP which is about 4 % of total expenditure, less than 30% of total health spending which is Rs. 957 per capita at current market prices (1 US dollar = 65.04 Indian Rupee). [2] On per capita basis the Central Government's share of this is Rs. 325 while state government's share is Rs. 632 . [2] Patient treatment adherence is of utmost importance in achieving cure.[5] It is influenced by a variety of patient-related, provider-related, and healthcare delivery–related factors.[6] Non adherence can lead to

complications and thus unavoidable hospitalizations and consequent mortalities.[7] Thus, it is important to identify factors that are associated with non adherence. One reason patients delay needed care is a high out-of-pocket expenditure. [8]

Out of pocket expenditure includes money spent by the patient on medication , medical services and non medical expenses like transportation, home care and medical equipments.[9] Out of pocket expenditure is incurred substantially in patients suffering from chronic conditions like hypertension, diabetes.[10] This study aimed to assess out of pocket expenditures incurred by patients attending both OPD and IPD at Secondary level of health care (rural health training centre at shahpur in this case) in district Kangra of Himachal Pradesh.

Sample size: Assuming a prevalence of overloading of 64%, and an absolute error of 5%, the sample size amounts to 353 with power 80% and confidence level 95%. The numbers were rounded off to 400. Therefore a minimum of 400 patients were chosen from the health facility to be included in this study.

MATERIAL AND METHODS

The data for the present study was collected for a period of 2 months starting from July 2015 through August 2015. A structured questionnaire containing demographic variables including age, sex, place, income , morbidity and out of pocket health care expenditure incurred was administered to all patients attending OPD and IPD at RHTC Shahpur (except those reporting with an emergency) using systematic sampling . Every fifteenth patient attending the OPD was recruited for the systematic random sampling method after obtaining a written informed consent. If the fifteenth patient refused inclusion the next patient was included and from him the next 15th patient. For indoor patients every newly admitted patient during the study period eligible for the study was included and interviewed.

In the cases of the children below 15 years of age if the accompanying person was parent with the child, information was obtained from him, otherwise the subject was not be considered eligible for the study. The information was obtained on basic demographic and clinical profile of the study subjects. To find out income per capita, the whole income of the family was considered. If members of a household shared same kitchen then they were considered one family.

The selection of study participants was done on the basis of a systematic random sampling from among patients attending RHTC Shahpur and excluded the following:

1. Emergencies
2. Patients/attendants not willing to participate
3. Patients/attendants not able to respond.
4. Patients reporting after 4 pm (emergency or non-emergency)

Data Analysis: Data was collected from 400 patients during the period of study. Data was entered in MS-Excel and analyzed using SPSS-21. To find out the association between two variables chi-square test was used and OR was calculated to observe the trend. A p value of 0.05 and less was considered to be statistically significant.

Ethical considerations

Approval was taken from the Institutional Ethics Committee of Dr Rajendra Prasad Government Medical College, Tanda before conducting the study. Informed consent was obtained from the patients before interviewing them.

RESULTS

A total of 400 participants agreed to participate in the study. The participants were interviewed using structured questionnaire. Table 1 provides the socio demographic characteristics of participants. Females outnumbered males in the present study. Majority of the patients belonged to age group 21 to 30 years followed by 31 to 40 years. Monthly income of all the family members from all sources ranged from Rs 5000 to Rs 20,000. Number of outdoor patients were more as compared to indoor patients. Nearest health facility was community health centre in 41% participants and primary health centre in 37.3%. None of the participants consulted private practitioners. The mean distance from nearest health facility was 3.78±3.27 kilometres. It ranged from a minimum of 0.5 kilometres to 20 kilometres. Most common reason for coming to RHTC in our study was that it was nearest in 67% participants. Second most common reasons was better accessibility of RHTC in 16%. In 3% participants did not get relieved by medication given by some other physician. In 2.5% patients reason identified was absence of doctor at referral facility or they had come to their parents home for some reason.

Direct out of pocket expenditure included money spent on medication and diagnostics. While indirect OOPE included money spent on food, transport and stay while in hospital. As seen in table 2 maximum out of pocket expenditure was incurred on medication with mean of 311.65±477.38 rupees. Mean expenditure on transport was 155.31±271.87 rupees. It was incurred by 322 of total participants. 36.6% participants paid it themselves while in the remaining it was paid by caregivers. Similarly mean expenditure on diagnostics was 139.60 ±232.389 rupees . 64 patients paid by themselves and in 92 of the remaining 156 it was paid by caregivers. Stay while in the hospital had minimum expenditure.

Table 3 and Table 4 shows association between out of expenditure incurred on transport, stay while in hospital, diagnostics, medication, food and variables mainly gender, age group, monthly income and whether attending OPD or IPD.

Chi square χ^2 test was used to determine the association. It is seen that more number of females spent on transportation as compared to males. The difference between two groups is statistically significant (p value .006). Similarly expenditure on diagnostics by females significantly more as compared to males (p value .004). Expenditure on food was significantly more among female participants (p value 0.019). Expenditure on transport who attended OPD was significantly more as

compared to indoor patients (p value .000). Out of pocket expenditure was more on food, medication etc among participants attending OPD but was not statistically significant. OOPE while stay in hospital was more among participants having monthly income less than 5000 rupees (P value 0.057).Expenditure on food was significantly more among participants having monthly income between 5000 to 10,000 in rupees. So it is seen that people having less monthly income had to spend more while availing healthcare services. Age group wise maximum expenditure on transport and food was incurred by 31 to 40 years. Expenditure on diagnostics was maximum in the age group 21 to 30 years (p value .108). Expenses while stay in hospital was same in age groups 21-30 years, 31-40 years and more than 61 years (value 0.295).

Table 1: Socio demographic features of interview participants

Gender	N (%)
Males	76(19)
Females	324(81)
Age group(years)	
1-10	62(15.5)
11-20	19(4.8)
21-30	83(20.8)
31-40	78(19.5)
41-50	54(13.5)
51-60	49(12.3)
61 and above	55(13.8)
Monthly income from all sources	
<5000	90(22.5)
5000-10,000	166(41.5)
10,000-20,000	102(25.5)
20,000-30,000	33(8.3)
30,000-40,000	Nil
41,000 and above	9(2.3)
Indoor patients	112(28.0)
Outdoor patients	288(72.0)
Nearest health facility	
Subcentre	49(12.3)
Primary health centre (PHC)	149(37.3)
Community health centre (CHC)	164 (41.0)
District hospital	3 3(8.3)
Private practitioner	Nil
Others	5(1.3)

Table 2: Out of pocket expenditure (in rupees) incurred by the participants

Direct costs	No of patients N %	Mean expenditure incurred (in rupees)
Diagnostics	156 (39)	139.60±232.389
Medication	227(56.75)	311.65±477.38
Indirect costs		
Stay while in hospital	6(1.5)	13.11±67.78
Transport	322(80.5)	155.31±271.87
Food	173(43.25%)	92.71±443.42

Table 3: Association between Out of pocket expenditure on direct costs and Socio demographic variables

Variables		Medication				Diagnostics			
		N	χ^2	df	P value	N	χ^2	df	P value
Gender	Male	40	16.68	29	0.967	25	39.38	19	0.004
	Female	187				131			
IPD/OPD	IPD	64	29.36	29	0.446	40	27.065	19	0.103
	OPD	163				116			
Monthly income from all sources	<5000	61	108.11	116	0.687	31	73.21	76	0.569
	5000-10000	94				69			
	10000-20000	53				39			
	20000-30000	15				15			
	30000-40000					0			
	41,000 and Above	4				2			
Age groups	1-10 years	37	209.33	174	0.035	16	132.99	114	0.108
	11-20 years	8				9			
	21-30 years	40				46			
	31-40 years	43				23			
	41-50 years	35				21			
	51-60 years	27				24			
	61 years and above	37				17			

P<0.05; IPD- indoor patient department; OPD- outdoor patient department ; N – number of patients who incurred the expenditure; χ^2- Chi square; df – degree of freedom

Variables		Stay while in hospital				Transport				Food			
		N	χ^2	df	P value	N	χ^2	df	P value	N	χ^2	df	P value
Gender	Male	5	8.91	10	0.540	62	49.99	28	0.006	38	46.94	29	0.019
	Female	21				246				135			
IPD/OPD	IPD	6	13.14	10	0.216	92	83.96	28	0.000	52	26.35	29	0.606
	OPD	20				230				121			
Monthly income from all sources	<5000	9	55.02	40	0.057	71	109.91	112	0.538	41	192.53	116	.000
	5000-10000	6				135				76			
	10000-20000	5				82				38			
	20000-30000	5				26				13			
	30000-40000	0				0				0			
	41,000 and Above	1				8				5			
Age groups	1-10 years	2	65.38	60	0.295	51	205.17	168	0.027	25	173.06	174	0.506
	11-20 years	2				17				7			
	21-30 years	6				67				43			
	31-40 years	6				68				36			
	41-50 years	3				42				25			
	51-60 years	1				32				17			
	61 years and above	6				45				20			

P<0.05; IPD- indoor patient department; OPD- outdoor patient department ; N – number of patients who incurred the expenditure; χ^2- Chi square; df – degree of freedom

Table 4: Association between Out of pocket expenditure on indirect costs and Socio demographic variables

DISCUSSION

Impoverishment due to medical expenditure following the neoliberal doctrines which increased the involvement of private sector in medical care was predicted earlier by many authors. [11][12]The proportion of households that incur catastrophic health expenditure (CHE)in a country is widely used as an indicator of the extent to which the health system protects households needing health care against financial hardships and offering such protection is one of its major goals.[13] It is widely acknowledged that low OOP spending and high government health expenditure (GHE) is a sign of a good and functional health system .[14] The drain on family incomes due to health care costs can neutralize the gains of income and every government scheme aimed to reduce poverty. A study based on CES data from NSSO for the year 1999–2000 in India and a study on Out of Pocket Expenditure for Hospitalization among Below Poverty Line Households in DistrictSolan,HimachalPradesh,India,2013 had shown that the major proportion of OOPE was incurred on drugs.[15] We also had similar observations more so when the drugs or diagnostics were not available in the health facility irrespective of the insurance. This might be either due to inadequate availability of drugs and diagnostics or due to lack of tie ups with outside agencies to provide a cashless experience to the patient. These gaps can be addressed by adopting better and effective procurement system for drugs and diagnostics in the public sector as have been adopted in the southern state of Tamil Nadu in India. [17]

Maximum out of pocket expenditure in our study was incurred by low income families. So to reduce such expenditures schemes like health insurance and rashtriya swasthya bima yojna (RSBY) have to be in place. RSBY achieved the objective of reducing the OOPE, improving access to health care and expanding the choice

of care providers among below poverty line households in Himachal Pradesh. RSBY enabled beneficiaries to get more facilities such as drugs, consumables and diagnostics from the health facility. The impact of health (HI) can only be known if the enrollment of eligible beneficiaries is good as low enrollment dilutes the effect of HI .There is a wide variation in the enrollment in various Indian states with few states having enrollment as low as 21%. [16] Findings of the present study must be interpreted in light of limitations. The questionnaire did not include information regarding utilization of schemes like RSBY and other health insurance. The limitation of our study was that information on the expenditure was based on recall.

CONCLUSION

The present study concludes that out of pocket expenditure is on rise due to increase in life expectancy and the demographic change of aged population along with chronic diseases. A comprehensive review of RSBY and other healthcare schemes should be conducted with the aim of ensuring universal healthcare. The Government should be the primary provider of healthcare.

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