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Composition of Health Expenditure among the Hospitalization Cases in Manipur

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ABSTRACT

Protecting households from high out-of-pocket expenditure has become one of the main objectives of the health system reforms for many countries, and it has been inducted in the Sustainable Development Goal (SDG-3). The paper intends to seek the distributional dimensions of the out-of-pocket health expenditure of hospitalization cases in Manipur. From this information, a policy to mitigate the high out-of-pocket health expenditure can be highlighted in the state. A cross-section study with primary data was conducted in which only the hospitalization cases during the last 365 days prior to the date of the survey (2016) were included. Descriptive statistics such as mean, median and percentage distribution are employed to examine the distributional aspect of health expenditure. The results show that the medicine costs constitute the highest percentage share with (69 % in public hospital cases), 43 % (private hospitals) and 60 % (overall health facility) to the total direct cost of hospitalization. Medical costs (doctor/ consultation fee, medicines, diagnostics and hospital fees) cover 84 %, 83 % and 84 % shares of total costs of hospitalization respectively at public, private and overall health facility whereas the total non-medical costs (foods, transportation, lodging and others fees) amount to 16 %, 17 % and 16 % respectively at public, private and overall health facility. The results also revealed that the total medical costs co-vary strongly with the types and severity of the ailment and the type of facility where the treatment was taken while non-medical costs associated with the duration of stay in the hospital, transport, and arrangement for caregivers. There is a need for policy intervention in providing free medicine with proper policy implementation (free from supplier induced demand) at the hospital for poor households to achieve the Universal Health Coverage (UHC).

Keywords: Out-of-pocket expenditure; catastrophic health expenditure; Impoverishment.

INTRODUCTION

The major challenges for any developing countries' health financing system are the high out-of-pocket (OOP) expenditure. But in these countries due to very low public expenditure on health, majority of the health expenditure was borne directly by the private health expenditure which ultimately pushes households into poverty (impoverishment) while seeking health service. India also is no exception and has one of the highest average out-of-pocket expenditures, with 74.4 % borne directly by private health expenditure in the utilization of health service [1]. It was also estimated that around 6 % of the Indian population are pushed into poverty due to high expenses on health expenditure [2,3,4]. Moreover, the overall rate of incidence of catastrophic health expenditure (10-40 % of household expenditure on the heath) in India is 18 %, and in Manipur (present study area) a north-eastern part of India is 6.3% [5]. Protecting households from high out-of-pocket expenditure has become one of the main objectives of the health system reforms for many countries, and it has been inducted in the Sustainable Development Goal (SDG-3)

for any health system [6]. A study of health expenditure needs to correlate with the background information of household and characteristics of individual patients, disease and type of hospitals to assess the total costs to society, covering direct costs, indirect costs and intangible costs.

Manipur is a small hilly state in the far eastern side of India that shares its border with Nagaland to the north, Assam to the west, Mizoram to the southwest, and Myanmar (Burma) to the east and south. The valley and the hill are two major geographical regions in Manipur. The hill covers almost 90 % of the surface, while the valley has the remaining 10 %. According to the 2011 census Manipur had 28, 55,794 population. Though small in size the state has 33 different scheduled tribes beside the Muslim and majority Meitei/Meetei communities. In the centre of the state and also within the valley region, Imphal is the capital city [7]. Due to the urbanization process, the development process and progress are observed and happening region in the valley area, especially the surrounding locations around the capital. Manipur has a competitive edge in social indicators. Compared to the national level, the health indicator of Manipur has a better position with respect to the infant mortality rate of 12 compared to 33 in the country [8].

As part of the GSDP, health expenditure in Manipur is very low and stands at 2.79 % [9] failing the WHO recommendation of 5 % of GDP [10]. This might have associated with the rapid growth and expansion of private health care in the state. Meanwhile, the NFHS-4 (2015-16) report showed only 3.6 per cent of households were covered by health insurance as against the national average of 28.7 % [11]. This indicates that most of the expenditure on health care in terms of doctor fees, medicine, medical tests, etc. are financed by private expenditure leading to a heavy burden to the poor households compromising basic needs.

The paper intends to seek the distributional dimensions of the out-of-pocket health expenditure of hospitalization cases in Manipur. Further, it also attempts to analyze it with different types of morbidity, socioeconomic and demographic characteristics, treatment characteristics and type of facility of the individuals for proper understanding of the cost of illness including both medical cost shares and the non-medical cost. Lastly, it also tries to find out the primary contributing components among the total direct costs which are vital in policy implication for the stakeholders in order to initiate or intervene a new policy to mitigate the high out-of-pocket health expenditure in the state.

LITERATURE REVIEW

The study of the composition of health expenditure includes both medical costs and non-medical cost, which are influenced by the type and severity of diseases and nature on the type of health care service. The amounts spent on medical and non-medical cost are mostly varied and determined by both demand and supply factors. The demand factors such as preferences for nutrient food (special foods) during illness and the supply factors include the availability of health service, the geographical location of health facilities (distance) and price for availing the service (user fee policy) varied on the amount spent on both medical and non-medical costs.

In Ghana, a retrospective study of malaria found that the pharmaceutical costs for treating malaria diseases with mild and severe conditions at public health services cost around 62 % of total health spending whereas at the private hospital cost rose to 70 % of total health expenditure [12]. In Sri Lanka, a contradictory result was found in which medical costs at the public hospital (free) with a of share 32 % of total monthly income as compared with other non-medical costs such as transport costs (22 %). The highest cost was on special diet foods (expensive orange and sweet drinks) with a share of 46 % of direct cost and transport cost among the rural residents [13]. Another qualitative study in Zambia also showed the

importance of expenditure on transportation costs and special nutrient food for the patient seeking tuberculosis treatment. The study revealed that the medical costs have merely 22% of monthly income whereas there was a significant share of non-medical costs of 78 % of monthly income in which the transport cost and special food shared 27% and 44% of monthly income respectively. The special foods in the form of meat, eggs, vegetables, oranges and its flavour drinks were considered not food but therapy for the treatment for tuberculosis patients [14]. These are non-medical costs that are hidden in nature but put a significant burden on the household budget for treatment. Apart from these hidden costs, another form of hidden cost prevalent unofficial or under-the-counter fees charged by the health worker to supplement their income shot up the burden of direct costs substantially to the households [15,16]. A population-based study of direct costs between diabetes patients (Type-2) and non-diabetes patients in Spain observed that the mean yearly cost in Type 2 diabetes mellitus was 72.4 % higher than the non-diabetes patients. It also found that the impact of the illness on costs were more significant among the male of 66-80 years of age and complicated patients. The cost allocation by component was quite identical among both diabetic and non-diabetic patients: the highest percentage of the cost was distributed among hospital care, medicines, and primary care [17]. A similar study of diabetes in Italy found that in diabetic patients, the cost of medication per person annually was 2.8 times greater and shares 18.5 % of the total cost of treatment. The cost of medication was 7.7 times greater in people with type 1 diabetes, and 2.5 times greater in type 2 Diabetic patients, especially in comparison to people without diabetes [18].

Some of the studies confirmed that demographic and socioeconomic factors such as age, sex, marital status, educational levels, occupation, region, the incidence of chronic diseases, utilization of insurance, and income are responsible for high health expenses including both medical and non-medical costs. A cross-section study of medical expenses for middle age and elderly age in China found that the age of the patient was reported a highly associated with not only higher cost of treatment but also other non-medical costs such as transport fee, foods and accommodation and overall total health expenditure among the hospitalization cases. The aged person had a greater incidence of chronic diseases and was compelled to visit the hospital regularly, which imposed more costs of healthcare. As compared with the urban region, the poor income people of the rural region were more likely to spend less on healthcare, mainly due to under-treatment problem. The result also revealed that the patient seeking treatment at lower graded (III) hospitals spent more of their resources on treatment, food and accommodation as compared with the patients treated at higher graded (I) hospitals and cited the reason may be associated with the severity of disease [19].

Another study in the USA observed the role of health literacy in the healthcare cost and found that the emergency room costs were higher among people who had inadequate health information as compared with well-informed people. The study also revealed that inadequate health literacy often ended with high healthcare cost due to unnecessary utilization of mixed healthcare services [20]. Another evidence synthesis study of the relationship between health literacy and healthcare costs further supplemented that the patients' poor ability to comprehend health knowledge and to manage the health system was shown to be a significant indicator of inappropriate access to healthcare. However, patients with problematic health awareness were prevented from engaging in the delivery of healthcare services and were likely to exhibit low self-efficacy in coping with their health-related issues. Ultimately, patient with inadequate health literacy is expected to be more at greater risk of aggravating

their health issues, which in turn contributes to increased healthcare costs. Despite these findings, both policy-makers and practitioners appear to overlook the importance of literacy in health. Lastly, it suggested that joint involvement in laws, policies, strategic planning, and procedures was essential for dealing with the challenges of limited health literacy [21].

MATERIALS & METHODS

Data

This study collected data during 2016 as a part of the author's (corresponding) thesis "Catastrophic Health Expenditure in Manipur". At first, the hospital (both private & public) records of the patients were collected and traced their addresses and lastly visited their respective houses for interview. For patients of public hospitals, sample household was selected and surveyed with the criterion on the duration of hospital stay (at least 10 days in case of public hospitals) with the anticipation of high expenses on the household whereas for patients of a private hospital at least two days were applied. The components of out-of-pocket health expenditure namely doctor fees/consultation fee/registration fee, bed charges, attendant fees, diagnostic fees, medicine fees, medical appliances were summated to constitute medical costs whereas other components of out-of-pocket health expenditure such as food and transportation fees for both types of patients and caregivers (were measured in terms of monetary value), lodging fees and other non-medical items were added to constitute non-medical costs.

Statistical Analysis

Descriptive statistics such as mean and median expenditure as well as percentage distribution (univariate) for each composition of out-of-pocket health expenditure were highlighted along with different types of health facilities (public, private & both) to describe the total direct cost (total health expenditure). And also the bivariate relationship between the components of OOP and type of diseases based on International Classification of Diseases 10^{th} editions (ICD-10) guideline was examined. The classification of diseases on the basis of ICD-10 are neoplasm (any forms of cancer), circulatory diseases, digestive diseases, genitourinary diseases, others diseases which are not included or listed among the earlier four diseases were included in this category. A total of 222 cases were reported from a total of 200 households of the sample for analysis. Individual-level unit of analysis was adopted for computing the distributional aspects of the composition of the OOP.

RESULT

Results of the analysis are presented in three sections. The first section demonstrates the socioeconomic, demographic, and treatment characteristics of the individuals who were hospitalized. Bivariate relationship between the total direct cost, including medical costs and non-medical cost and the socioeconomic and demographic characteristics and treatment characteristics, is discussed. The second section shows the distribution of the composition of out-of-pocket health expenditure. Further, the last section represents the univariate relationship of the composition of OOP at different health facilities.

Table no.1 shows the socioeconomic and demographic distribution of the individuals of the sample population. From the table, the rural region had more share of the sample with 67% while the urban region covered around 33% of the total sample. There was no significant difference in terms of the gender distribution of the sample covering both male and female with 49% and 51% of the total sample. In the religion category, the highest share was covered by Hinduism with 68 percent, and Sanamahi 28% and others category comprise of Christian and Islam with a minimum of nearly 4%. Among the social group, the General and Others Backward Classes (OBC) category covered the highest share of the sample with 52 % and 34 %. Among the

marital status of the individuals, currently married individuals had the highest share with 75 %. In the relationship status group, the spouse of the household head had the maximum share with 37 % followed by a household head with 32 % while the spouse of a married child had the lowest representation of sample with only 5 %. Among the educational levels, the individuals with less than matriculation had the highest share of the sample (31 %) followed by secondary and above with 23 %. Economically inactive persons constituted the maximum in the sample (37 %). Individuals in the 35-59 age-group had the highest representation (45 %) followed by 60 and above (36 %) indicating the middle age and aged had more incidence of illness hospitalized in the sample.

Table1: Socioeconomic and demographic profile of the hospitalized cases

Characteristics	Frequency	Percentage	Cumulative
Type of residence			
Rural region	148	67	67
Urban region	74	33	100
Sex			
Male	108	49	49
Female	114	51	100
Religion			
Hinduism	152	68	68
Sanamahi	62	28	96
Others	8	4	100
Social group			
General	116	52	52
Scheduled Tribe	11	5	57
Scheduled Caste	19	9	66
Other backward classes	76	34	100
Marital status			
Never married	23	10	10
currently married	167	75	85
Widowed/Divorced/Separated	32	15	100
Relationship status			
Head	71	32	32
Spouse of head	83	37	69
Married child	25	11	80
Spouse of married child	11	5	85
Unmarried child	16	7	93
Others	16	7	100
Individual monthly income (Rs.)			
0-4999	165	74	74
5000-9999	33	15	89
10000 & above	24	11	100
Educational status			
Illiterate	35	16	16
Less than Primary	42	19	35
Less than Matriculate	69	31	66
Less than Secondary	24	11	77
Secondary & above	52	23	100
Individual occupation			
Agriculture & allied activities	31	14	14
Non-agriculture activities	41	18	32
Regular Income earner	28	13	45
Casual labour in construction	8	4	49
Economic inactive	83	37	86
Others	31	14	100
Age category			
1-15	8	4	4
16-34	33	15	19
35-59	101	45	64
60 & above	80	36	100

Table no.2 represents the treatment characteristics of the individuals reported hospitalization. From the table, a total of 222 individuals had hospitalization indicating around 20 per cent of the total 1130 individuals of the sample. As per the

design of the study, 200 households were traced from the hospital records (both public & private hospitals) during the last 365 days before the day of the survey (2016). In the sample majority of the patients were from 15 km (55 %); otherwise, the rest were within the range of less than 15 km from the hospitals. Apparently, the majority of the cases approached the public hospital (65 %) while the private counterpart covered 19 %, and the rest went for both public and private hospitals. Digestive system-related diseases were reportedly highest (27 %) in the sample followed by neoplasm (22 %), and the minimum share came from multi-morbidity cases (9 %). While examining the duration of stay in hospital cases with 11-20 days of hospitalization (38 %) and 21 & above days (33 %) together contributed 71 % of the total sample. Further, individuals with a single episode of hospitalization had the highest share of 54 % compared to higher episodes of hospitalization.

Table 2: Treatment characteristics of the individuals

Characteristics	Frequency	Percentage	Cumulative
Hospitalized during the last 365 days			
Yes	222	20	20
No	908	80	100
Distance from Hospital			
(0-5)km	33	15	15
(6-10)km	36	16	31
(11-15)km	31	14	45
16 km & more	122	55	100
Type of facility			
Public hospital	144	65	65
Private hospital	43	19	84
Both Public & Private hospital	35	16	100
Type of ailment			
Neoplasm	50	22	22
Others	48	22	44
Circulatory	23	10	54
Digestive	59	26	81
Genitourinary	22	10	91
Multi-morbidity	20	9	100
Total duration of stay in hospital			
0-10	63	28	28
11-20	85	38	67
21 & above	74	33	100
Total Episode of hospitalization			
1	120	54	54
2	59	26	81
3 & above	43	19	100

Table no.3 demonstrates the bivariate relationship between the socioeconomic, demographic characteristics and the total direct costs of hospitalization, including both total medical and non-medical costs. By residence, the urban patients spent more on medical costs as confirmed through mean and median values compared with rural counterpart. In contrast, rural patients had greater total non-medical costs implying that the rural residents had to cover more difficulty in accessing the health services. The female patients were found to bear more burden of total medical costs and total non-medical terms shown by mean and median costs than the male counterpart. While examining this phenomenon, it was found that female patients had more severe ailments (neoplasm) than the male counterpart. Among the religious group, the Hinduism community had the highest representation with variety of diseases and so also the cost of hospitalization. Among the social group, the Scheduled Tribe (ST) category has the uppermost total medical costs with mean and median costs of Rs. 71064, and Rs. 54300 respectively which points out that the ST category endured the highest-burden of total medical costs against their counterparts mainly due to the incidence of more severe ailments like neoplasm (27%), digestive

(27%), circulatory (18 %) and genitourinary (18 %) coupled with longer duration of stay in the hospital (72% stay more than 11 days and above in the hospital). In Table no.1 also revealed that majority of the patients were married and so also the cost of hospitalization due to a variety of diseases. Except for the spouse of the head of the household, there was no clear relationship of cost of hospitalization with the relationship with the head. Similar is the case of household income level. No systematic relationship could be observed by educational level and occupation.) Household or individual characteristics did not seem to have a direct bearing on the hospitalization expenditure. However, it is required to understand which antecedent factors are associated with a typical disease among the sampled patients. As found in a relationship with the head of the household (the majority were spouse), it was clear that higher age from 35 and above had a higher cost of hospitalization (they were mostly spouses).

Table 3: Bivariate relationship between socioeconomic, demographic characteristics and the total direct costs

Background characteristics	N (n=222)	Total medical cost		Total non-medical cost		Total direct cost	
		Mean	Median	Mean	Median	Mean	Median
Type of residence							
Rural	148	63546	47400	13306	8400	76851	54050
Urban	74	68144	53410	12359	7850	80504	62475
Gender							
Male	108	60002	43725	12348	7450	72351	51475
Female	114	69888	50950	13598	8950	83486	59225
Religion							
Hinduism	152	67674	48275	13263	8400	80937	57950
Sanamahi	62	61591	48425	13019	8400	74611	54025
Others	8	42794	22775	7587	5800	50381	28375
Social group							
General	116	69449	50975	13111	8000	82560	59225
Scheduled Tribe	11	71064	54300	11409	8400	82474	62700
Scheduled Caste	19	64539	36200	20066	7700	84605	49000
OBC	76	57676	46050	11266	8400	68942	52350
Marital status							
Never married	23	42739	36850	6517	6500	49256	43750
Currently married	167	70634	48100	13877	8600	84511	57750
Widowed/Divorced/Separated	32	52141	42175	13017	6550	65158	51550
Relationship status							
Head	71	49161	37250	9527	6800	58689	45650
Spouse of head	83	87581	57100	18050	9800	105631	67400
Married child	25	63118	49350	14470	8400	77588	57750
Spouse of married child	11	52650	34200	6768	5700	59418	41050
Unmarried child	16	48053	44300	7624	7650	55677	51450
Others	16	47616	36725	9441	6200	57056	44225
Individual monthly income (Rs.)							
0-4999	165	73168	52670	14699	8900	87868	63900
5000-9999	33	42028	32050	8201	6300	50230	39400
10000 & above	24	41154	37625	7825	5950	48979	45650
Educational level of the individuals							
Illiterate	35	64661	39150	13137	7500	77798	49000
Less than Primary	42	68862	54675	14504	8850	83367	66625
Less than Matriculate	69	60771	46650	11001	8600	71773	53950
Less than Secondary	24	49817	36400	9064	5950	58882	42350
Secondary & above	52	75064	52150	16119	8700	91183	60425
Individual occupation							
Agriculture & allied activities	31	67806	48600	16325	7400	84131	57750
Non-agriculture activities	41	40613	26600	7869	5900	48483	32800
Regular Income earner	28	43657	43725	8984	6850	52641	52150
Casual labour in construction	8	33156	27775	5394	4900	38550	34525
Economic inactive	83	62913	55050	11296	9300	74209	65150
Others	31	128093	97410	26543	15400	154637	119260
Age category of the individuals							
1-15	8	28825	15950	3769	2850	32594	19050
16-34	33	46683	32950	8628	6900	55312	39700
35-59	101	77565	54150	15327	8900	92893	63050
60 & above	80	60527	46425	12761	8450	73288	51675

Table 4: Bivariate relationship between treatment characteristics and the total direct costs

Treatment characteristics	N (n=222)	Total medical cost		Total non-medical cost		Total direct cost	
		Mean	Median	Mean	Median	Mean	Median
Distance from Hospital							
(0-5)km	33	70092	55500	12168	9400	82260	64150
(6-10)km	36	62368	52300	10371	7950	72739	60425
(11-15)km	31	46722	37250	8912	7900	55635	45000
16 km & more	122	69186	47025	15021	7950	84208	53975
Type of facility							
Public hospital	144	56892	38575	10765	8550	67658	48500
Private hospital	43	51723	43900	6756	4300	58479	51000
Both Public & Private hospital	35	115167	80650	29804	17000	144971	106750
Type of ailment							
Neoplasm	50	107811	97005	19599	11200	127410	108500
Others	48	45892	32825	11554	7950	57446	41375
Circulatory	23	46282	45450	8530	8400	54812	54000
Digestive	59	46347	29300	9508	5800	55855	33800
Genitourinary	22	74238	53100	12168	9700	55855	63475
Multi-morbidity	20	71096	57950	16220	12950	87316	70975
Total duration of stay in hospital							
0-10	63	34009	29300	4116	3850	38124	32950
11-20	85	45913	34340	8968	7600	54881	41600
21 & above	74	113544	83050	25166	15675	138710	98400
Total episode of hospitalization							
1	120	35395	28725	5935	5850	41330	34200
2	59	70528	57800	14398	10400	84926	68400
3 & above	43	140440	121500	30746	18400	171187	141350

Table no. 4 shows the bivariate relationship between the treatment characteristics and the total medical costs, total non-medical costs and the total direct costs. Distance from the health facility (public or private) was thought to have some effect due to the transportation and movement of the caregivers. This conjecture did not come out convincingly with the data. The shortest and longest distance had higher cost both in medical and non-medical cost. Type of health facility explained better the variation in the cost of hospitalization whereby the cost of treatment in the public hospital was slightly higher than the private hospital, but this difference is marginal in case of the medical cost. As described above the duration of stay in the public hospital was much longer than in the private hospital, which was well reflected in the non-medical cost (lower in a private hospital). However, the highest cost of hospitalization could be observed among those who sought treatment in both public and private hospitals. Here the issue is which type of problems was made to put to both types of hospitals (chronic/referred etc.). Among the major types of ailment group, neoplasm (breast cancer, lung cancer and other types of cancer) had the highest cost of hospitalization, followed by genitourinary and multi- morbidity. This signifies the fact that some of the diseases had high hospitalization cost both medical and non-medical. As expected, the duration of stay and the total number of episodes had a positive relationship with cost. In other words, the longer the duration of stay in the hospital and the higher the episodes of hospitalization had higher health expenditure in the sample.

A dedicated section is put to describe out of pocket expenditure on a different component of health care cost during hospitalization. Table no.5 shows the percentage share of each of the expenditure components and the average summary amount of health expenditure in public and private hospitals. This analysis brings out fundamental similarities in major total expenditure on medical and non-medical expenditure. But a closer examination can differentiate the shares of these different components. Quite evidently within the medical cost in public hospitals, the major expenditure went to medicines, but by nature, the consultation and hospital fee was negligible (1 %) while this component was very high in the private hospitals (25 %). In the case of non-medical OOP expenditure, it

was relatively higher on transport and lodging among the patients who went to private hospitals. Mention may be made here that in this study, the inclusion criteria were at least 2 days of hospitalization in private hospitals and 10 days in public hospitals. Had the sample from the private hospitals been similar to the public hospital, this cost might be significantly different. Overall it is very clear that medical cost (60 %) was a major component of OOP or otherwise too in hospitalization cases followed by the diagnostic fees (14 %) and consultation fee due to hospitalization in private hospitals. Among the non-medical cost transportation charges were the reasonably the biggest component in both systems.

Table 5: Univariate distribution of the composition of the Out-of-pocket health expenditure (OOP)

Components of OOP	Percentage (%)	Mean (Rs.)
1) Public consultation & hospital fees	1	619
2) Public diagnostic fee	14	6888
3) Public medicine & other therapies	69	34596
Subtotal public medical cost	84	42104
1) Public foods	10	5256
2) Public transportation	5	2373
3) Public lodging & others	1	579
Subtotal public non-medical cost	16	8200
Total public total direct cost	100	50313
1) Private consultation & hospital fees	25	6941
2) Private diagnostic fee	15	3976
3) Private medicine & other therapies	43	11714
Subtotal private medical cost	83	22632
1) Private foods	5	1373
2) Private transportation	8	2177
3) Private lodging & others	4	1229
Subtotal private non-medical cost	17	4800
Total private total direct cost	100	27412
1) Overall consultation hospital fee	10	7561
2) Overall diagnostic fee	14	10864
3) Overall medicine & other therapies	60	46653
Subtotal overall medical cost	84	65079
1) Overall foods	8	6629
2) Overall transportation	6	4550
3) Overall lodging & others	2	1810
Subtotal overall non-medical cost	16	12990
Total overall total direct cost	**100**	**78069**

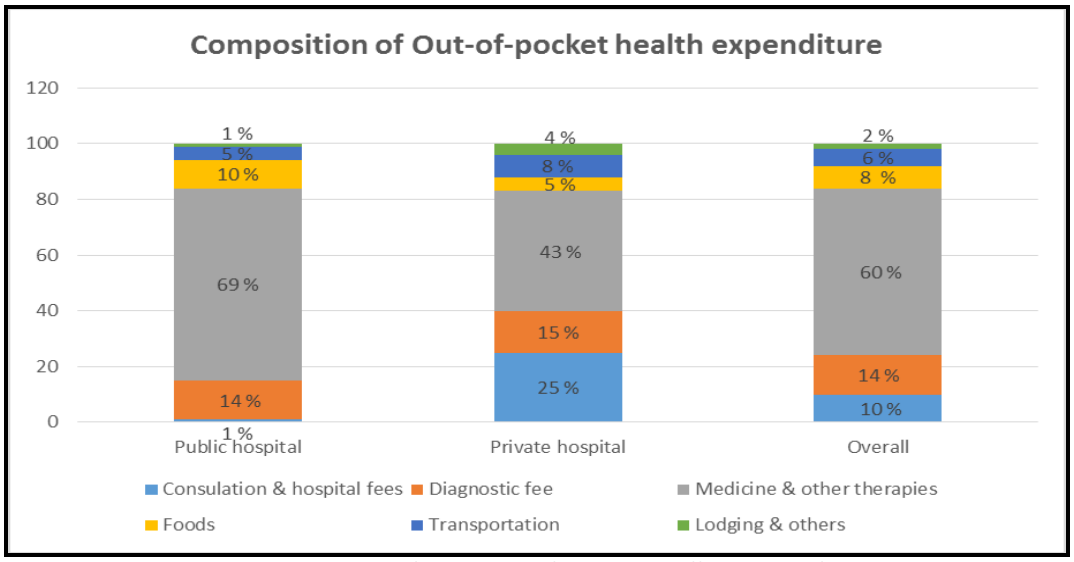

Figure 1: Distribution of composition of OOP at the different health facility

Figure no.1 represents the percentage distributions of the composition of the out-of-pocket health expenditure among the different types of health facility

by the sample households. It was derived from the ratio of the average mean costs of each component of OOP with respect to the total direct cost of Table no.5 in public, private hospitals and combined respectively. From the figure, it could be seen that in a public and private hospital, the medicine charges had the highest percentage share of 69 and 43 % respectively followed by diagnostic fees of 14 and 15%. A major highlight of the private hospitals was the cost of consultation/doctor and hospital fees constituting 25 % of the total cost.

DISCUSSION

The primary purpose of this paper was to investigate the distributional characteristics of the composition of out-of-pocket health expenditure (OOP) in Manipur. Some of the important findings of this paper can be highlighted. There was an unequal distribution of the burden of the medical and non-medical costs of hospitalization among different socioeconomic, demographic and disease-specific treatment characteristics. Further, it has also shown that the distribution of percentage shares of the composition of out-of-pocket health expenditure in different health facilities in Manipur during hospitalization. This analysis is able to uncover how much share medicine costs escalated to the tune of 69 % (public hospitals), 43 % (private hospitals) and 60 % (overall health facility) in relation to the total direct cost of hospitalization. It also found that the total medical costs (doctor/consultation fee, medicines, and diagnostics and hospital fees) in aggregate covered 84 %, 83 % and 84 % of the total cost of hospitalization respectively at public, private and overall health facility. Among the non-medical cost food, transportation, lodging and others fees shared covering 16 %, 17 % and 16 % of total costs of hospitalization in public, private and overall health facility respectively. Furthermore, the bivariate relationship between the types of ailment and the components of health expenditure reflected that neoplasm ailment had the highest-burden both in medical and non-medical cost of hospitalization in any type of health facilities. Such cost rose to an extent which normally is known as catastrophic health expenditure. A similar finding was observed in a quantitative study of cancer (Lung, Breast, Cervical and Others) in Nepal with more details on the component of direct costs revealing that medical cost covering 80.91 % of the total costs in which medicine, therapies and surgeries share 58.58 %, diagnostic fees 11.66 %, consultation and hospital care 10.67 %. In contrast, non-medical cost covers 19.09 % of total costs in which food and accommodation cost 12.75 % and transportation cost 6.34 % of total costs. The results also found that total direct costs, including both medical and non-medical cost, had a statistically significant association with age of the patients, socioeconomic condition, types of cancer and the treatment. Further, it also suggested that the direct cost of cancer solely can cause catastrophic health payment [22].

This paper helps to understand the contributing factors which led to changes in each item of the components of the health expenditure. The results have also revealed that the total medical costs among the different characteristics are determined by the types and severity of the ailment and the type of facility which plunged medical costs into an increasing trend whereas the total non-medical costs were determined by the severity of the ailment which further effected on the duration of stay in the hospital characteristics. Geographical factors eventually put the burden of both food (including special food behaviours) and transportation expenses for patients and caregivers. Therefore most of the background and treatment characteristics led to the high total medical costs, total non-medical costs and eventually, the total direct costs of hospitalization.

The present study could not cover outpatient cases and other indirect costs of illness which might lead to an underestimation of the total cost of health

expenditure, but the studies of direct costs of illness have been widely accepted.

CONCLUSION

This study has successfully revealed that the total medical costs bore the highest-burden shares in the total direct cost of hospitalization whereby the cost of medicine placed the uppermost shares of burden in the medical cost. In short, should there be any need for policy intervention in providing free medicine with a dedicated policy for strong implementation (free from supplier induced demand) at the health serviced delivery points for the poor households it would pave the march towards achieving the Universal Health Coverage (UHC).

Ethical approval: The study is based on the survey data which does not involve any human experiment and got "informed consent" for sharing household and personal information. Therefore, no ethical issue is involved.

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Conflicts of Interests: None.

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