An Analysis of Out-of-Pocket Expenditure Due to Non-Availability of Computed Tomography Scan in Public Sector: A Case Study of Hira Medical Center Sukkur Pakistan

Shahbaz Iftikhar¹, Hammal Khan Naseer Baloch², Sonia Riaz³, Sami Iqbal⁴

Abstract

Background: Out of pocket (OOP) spending on health contributes significantly to levels of poverty in developing countries such as Pakistan. In poor countries there is reduced or limited access to health services, the issue of affordability and availability which all lead to impaired health status and increased morbidity and mortality rates in developing countries. Catastrophic health expenditure is not always synonymous with high health care costs; even small Out of pocket expenses may cause catastrophic condition for poor people.

Methods: This is a cross sectional study that determined the out of pocket cost of computed tomography scan test (CT scan). The study was conducted from April to June 2015. The study population was those patients who came for CT scan at Hira medical center in district Sukkur Sindh Pakistan. The study sample was one hundred and seventy patients. (n=150). From the perspective of consumer the methodology was adopted, various recurrent costs were determined under different levels of input and cost centers. The data was entered and analyses using SPSS 20 to provide the results as percentages and averages for the different variables in this study.

Results: Through this research we found that out of pocket payments are way too high while putting a lot of burden on lower socioeconomic groups. Health expenditure Average cost per patient calculated were Rs. 11000 which means people spend more than 40% of their monthly income on health. There should be a government health facility in the city to compensate the huge cost which people pay for health especially low monthly income people.

Conclusion: Government should introduce a health coverage insurance system in Pakistan in order to cover all health care needs of the people irrespective of their socioeconomic status. Keeping in view high out of pocket spending on health, the Government should subsidize the prices of diagnostic test to give relief to its Population. Community participation is also essential for sustainable solutions.

Keywords: CT Scan, out-of-pocket expenditure, health insurance

¹Post Graduate Alumni
Health Services Academy,
Islamabad

²Associate Professor,
Community and Preventive
Dentistry,
Bolan Medical College,
Quetta

³Deputy Director
Sehat Sahulat Program,
Islamabad

⁴Demonstrator,
Bolan Medical College,
Quetta

Corresponding Author:

Shahbaz Iftikhar

Email:

shahbaziftikhar@hsa.edu.pk

Introduction

The fundamental goal of health care system is to ensure that its population has access to high quality care. Out of pocket household

expenditures are typically the first or second largest source of health care financing in developing countries.⁽¹⁾ Out of pocket payments have side effects.

They may lead to impoverishment and further hardship for people. (2) The Out-of-pocket payments are particularly hard on the poor, illness will either remain untreated or force patients into deeper poverty. The poor may not seek medical care and, as a result, remain trapped in the vicious circle of illness and catastrophic health expenditure. Protection against catastrophic health expenditures and health shocks is a health systems goal. (3)

In Pakistan 26.32% of the population is covered for health care costs. Majority pay out-of-pocket (73.68%). (4) Many people spend catastrophic health expenditure because of these expenditures they are pushed into medical poverty trap or worst not receive any health care. (5) Healthcare costs account for more than 70% of the economic shocks faced by poor households. In Pakistan many people can't afford pretreatment or indirect cost like (transport, food, medical tested) and daily wages people to losing a day of pay or even job. (6)

Sukkur is the third largest city of SINDH (Pakistan). (7) The main occupation of the people in district Sukkur is agriculture. Health care services in district Sukkur need improvement and concerted efforts to meet National as well as Millennium Developmental Goals (MDGs). (8) Catastrophic health expenditure is not always synonymous with high health care costs even small OOP expenses may cause this condition. It is essential to find out how much an absence of a basic diagnostic service is contributing to this situation in Sukkur (Pakistan) (9)

This study focused on how to reduce high out of pocket expenditures associated with non-availability of essential health care services at public sector hospitals.

Objective

To calculate out of pocket spending due to non-availability of CT scan.

Methodology

Cross sectional descriptive study method was used using convenience sampling techniques and a semi structured questionnaire was developed for data collection. Total sample size calculated using the n formula was 150 and questionnaire was distributed among all 150 patients who visited the hospital and were above 18 years aged. The study was conducted in district Sukkur Sindh Pakistan. The duration of this

research was 03 months. People without financial protection or any kind of reimbursement mechanism through public and private sector were considered for the analysis in this study. Data was recorded on pre designed structured Proforma which was analyzed by using SPSS version 20 for window. Tabular and graphical form. In descriptive analysis frequencies and percentages were calculated. The ethical approval from an Internal Review Board of Health Services Academy was obtained to conduct the study. Verbal or written informed consent was also been obtained from the participants before filling the questionnaire.

Results

Interviewed cases were classified on gender basis. Out of total 60 % patients were female and 40 % patients were male. Majority of the population was above 30 years of age. 40 % of cases were educated up to metric. Primary was 7 percent and master 9%. Out of all the respondents, 7% were unemployed. Out of the employed, majority were self-employed whereas 26% in government and 26% private sector employed.

Figure 1. Employment status percentage of cases

Interviewed cases earn up to 2500 were high percentage of 30 the highest level of income is up to 25000 (30%) and up to 50000 (7%) Cases up to 20000 health expenditure were percent and minimum 4000 were 9 percent. Cases in this study were 25 percent of KUB and 19 percent injury 16 percent chest.

CT scan charges:

Interviewed cases were expend on ct scan test 17 percent 7000 because of abdomen test and equal 17 percent 2000 brain or fracture and 21 percent expend 5000 because of CVA

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Figure 2: CT Scan Charges

Interviewed cases were use treatment from public hospital where 39 percent private were 22 percent .

Figure 3: Treatment Seeking

Transportation Cost:

40 percent of interviewed cases paid up to 500 cash for transportation to visit hira medical center and people who came from side areas pay 2000 they are 18 percent.

Figure 4. transportation cost

Transportation Mode:

Interviewed cases uses transportation 60 percent taxi personal vehicle 10 percent riksha uses 18 percent of cases.

Figure 5: Transport Type

Treatment cost were counted cases 24 percent expend 6000 and 12 percent upto 15000

Treatment cost for patients ranged from 2000 to 15000 Rs, were 12%.

87 percent cases interviewed were paying out of pocket cash whereas 5 percent were reimbursed by employer. Interestingly, only 8% had health insurance

Figure 5: Payment Mode

65% of target population pay from their own pocket for CT scan test and 5% of people pay from someone else's help like community solidarity etc.

36 percent cases were interviewed spending are up to 20000 and 17 percent 15000 and up to 40000 18 percent.

Figure 6. Cope Payment

Table 1: Household spending

	Income	Health Expenditure	CT Scene Test Cost	Treatment Cost	Traveling Cost	House Hold Spending
	380000	56000	50000	62000	28500	375000
	1175000	384000	105000	152000	38000	1100000
	1110000	432000	132000	210000	40500	1075000
	1360000	375000	155000	270000	56000	1080000
	650000	540000	182000	270000		
Total	4675000	1787000	624000	964000	163000	3630000
Average	31166.7	11913	4160	6426.66	1086	24200

Figure 7. Household Spending

Discussion

Out of pocket (OOP) spending on health contributes significantly to levels of poverty and developing countries. The poor may not seek medical care and, as a result, remain trapped in the vicious circle of illness and catastrophic health expenditure. Protection against catastrophic health expenditures and health shocks is a health systems goal. (10)

This study is an attempt to identify the out of pocket expenditure and its impact on patients and their household life who came for CT scan test in private hospital because of non availability of CT scan in public sector. Semi structure questionnaire was used to identify the cost of Ct scan and house hold income and consumption. Patients who came for test of CT scan data was collected by them total sample size were one hundred seventy. After data collection and data entry the basic result of all categorical data were studies by using the percentages and all the continuous data was studied using measure of central tendencies.

The studies reveal there is a high expenditure on non-communicable diseases. (11) The patients with depression spend approximately 3130 rupees per month (and most of them earn only a few thousand more than this cost). The major contributors among the cost of healthcare are medications and

transportation. Such a high cost adversely affects the economic situation of the family and ultimately the productivity of the main bread winners of the family. According to my study females who came for CT scan test they were 60% and male were 40% mean age of patients assessed was 2.17 CT scan test cost mean was 2.99. Transportation cost was high 2.17 mean of transportation cost sample. In this study 40 percentage of cases were educated up to metric. Primary was 7 percent and master 9%. Interviewed cases were 7% unemployed and equal 26% in government and 26% private employed. Cases up to 20000 health expenditure were percent and minimum 4000 were 9 percent. cases in this study were 25 percent of KUB and 19 percent injury 16 percent chest. Interviewed cases were expend on ct scan test 17 percent 7000 because of abdomen test and equal 17 percent 2000 brain or fracture and 21 percent expend 5000 because of CVA. Interviewed cases were use treatment from public hospital were 39 percent private were 22 percent.

40 percent of interviewed cases paid up to 500 cash for transportation to visit hira medical center and people who came from side areas pay 2000 they are 18 percent. Interviewed cases uses transportation 60 percent taxi personal vehicle 10 percent riksha uses 18 percent of cases. Treatment cost were counted cases 24 percent expend 6000 and 12 percent upto 15000. 87 percent cases interviewed were pay out of pocket cash and carry 5 percent reimbursed by employer. Interviewed cases were pay for test where own money and 5 percent community or other paid. 36 percent cases where interviewed spending are up to 20000 and 17 percent 15000 and up to 40000 18 percent.

Conclusion

We explored the health seeking behavior and patterns and out of pocket payments for patients who came for

diagnostic test for CT scan. through this research we found that out of pocket payment are way to high almost 100% and it put more burden on low socio economic group. There should be a government health facility in the city to compensate the huge cost which people pay for health especially low monthly income people. (12) There should be a scheme on community level or an insurance system. However the success of this program will depend on evidence based information as well as adequate involvement of stakeholder in the conceptualization and implementation of this program. (13) There is a need to explore qualitatively the social and cultural determents of the health seeking behavior. (14) These study findings give an idea of health seeking patterns of out of pocket expenditure on house hold regarding diagnostic tests CT scan. (15) This may be inadequate but it provides the baseline information to start with.

Recommendations

- The Government should introduce a health coverage insurance system in Pakistan in order to cover all health care needs of the people irrespective of their socioeconomic status.
- Keeping in view high out of pocket spending on health, the Government should subsidize the prices of diagnostic test to give relief to its Population.
- Community participation is also essential for sustainable solutions. When effectively organized, it can improve the responsiveness and program to their needs and ensure transparency and accountability in policy making and implementation.
- Already working private sector providers(formal as well as non-formal) in the community can be taken under the umbrella and government should regulate the quality of services provided by them.

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