Out of pocket expenditure among the households of a rural area in Puducherry, South India

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Abstract

Background: As a measure to reduce the out of pocket health spending in our country, the high level expert group on Universal Health Coverage recommends a National Health Package free of cost to all. Whether availability of services free of cost, will reduce out of pocket expenditure?

Aim: To assess this, we studied the out of pocket health spending among the households of Ramanathpuram, a village in Puducherry, where surplus health services are available free of cost. Settings and Design: An exploratory study was conducted in by 200 purposively selected households of Ramanathpuram, during the months of March-April 2012. Materials and Methods: Information was sought on socio-demographic details (age, gender, and income), expenditure incurred during OPD visits, follow up for chronic diseases, and hospitalization using a pretested questionnaire. Recall periods of 1 and 3 months were considered for OPD visits and hospitalizations, respectively. Results: Of the total 935 individuals from the 200 households included, 51.3% (480) were men and 455 (48.7%) were women. A total of 231 visits to health care facilities were recorded from 143 (71.5%) households, of which 153 (66.2%) were for acute illness and 68 (29.4%) for follow up of chronic diseases and 10 (4.3%) for hospitalization. The mean per visit expenditure for acute illness, chronic diseases, and hospitalization were INR72.7 ± 143.6, 135.7 ± 196.2, and 1340 ± 1192.9, respectively. Government facilities were availed for 175 (75.7%) visits. Majority of those who incurred health expenditure for acute illness (80.4%) and utilized the private sector for acute illness (78.4%) were from higher socioeconomic class (P = 0.001). Conclusion: Majority (58.1%) of the households did not incur health care expenditure. Public health care facilities were preferred (75.5%) for seeking care. Availability of services free of cost reduces out of pocket expenditure among non-hospitalized cases.

Key words: Health care, out of pocket expenditure, rural households

INTRODUCTION

In spite of the economic growth in India, wealth has not been distributed equally between the rich and the poor.[1] Increased use of technology in diagnostics and treatment of diseases, together with the rising knowledge and expectations of the population regarding therapeutic measures, has led to an increase in the cost of treatment.[2] This increase in health care cost in turn has led to inequity in access to health care services. Among those who decided not to seek medical care for an ailment, nearly 28% rural households cited financial constraints as the limiting factor.[3] In India, only 5% of the GDP is spent on health[4] and 80% of this is in the form of out of pocket expenditure. In view of this high share of out of pocket expenditure on health care, the Government of India has commissioned a task force, to develop a framework for universal health coverage, as a part of the 12th five year plan.[5]

This high level expert group (HLEG) on universal health coverage recommends a “National health package” that consists of a list of health services that will be made available free of cost to all.[6] In this juncture, it is important to consider whether provision of free services will reduce out of pocket expenditure or not. To answer this question...
we need to look at the out of pocket expenditure in regions with surplus public health facilities, which are providing services free of cost. One such region is the union territory of Puducherry, which has a total population of 12 lakhs. There are two general hospitals (GH) and nine medical colleges in the region including the Jawaharlal Institute of Post graduate Medical Education and Research (JIPMER). The services, both OPD and IPD provided by GH and JIPMER are totally free of cost. Hence, we decided to study the out of pocket expenditure among the households of a rural village in Puducherry.

MATERIALS AND METHODS

Study setting
An exploratory study was done during April-May 2012 in Ramanathapuram, a village about 15 km from Pondicherry town, where the rural health center of JIPMER (JIRHC) is situated. The majority (98%) of the population are Hindus belonging to the backward community. The population is homogenously distributed throughout the village in terms of age, gender, and socioeconomic status.

Study population
200 households purposively selected were included in the study. After obtaining consent, the head of the household or in his absence the eldest adult in the household were taken as respondents.

Study tool
Data were collected using a pretested questionnaire on socio demographic details (age, gender, and income) and out of pocket expenditure incurred under the following heads: Doctors’ fees, investigations, medicines, transportation, food, room rent, and wages lost. The details of health care expenditure incurred for all episodes of hospitalization during the last 3 months (Jan-March 2012) and for all OPD visits during the last 1 month (March 2012) were collected. Expenditure incurred during follow-up visits for chronic diseases for the past month (March 2012) were also collected. Although follow-up visits for chronic diseases were also mostly OPD visits, we decided to study them as a separate entity.

Data analysis
The health care expenditure was expressed in terms of mean and standard deviation. Statistical differences in the categorical variables were tested by using the Chi-square test and a $P < 0.05$ was considered as significant.

RESULTS

There were 935 individuals living in the 200 households included, nearly half (51.3%) of whom were men. Majority belonged to class III (37%) and class IV (27.5%) socioeconomic status as per modified Prasad’s classification.

We found that 115 persons had reported illnesses for which they visited the OPD, 50 persons were on follow up for chronic diseases and 10 were hospitalized during the reference period of the study. The number of persons reporting any morbidity during a period of 1 month was 177/1000 population (165/935 pop) and the number of persons hospitalized during a period of 3 months was found to be 11/1000 population (10/935 pop).

These people belonged to 143 households (71.5%) and the remaining 57 (28.5%) households reported no morbidity during the reference period. The total number of visits was found to be 231, as for each episode of illness some of the patients visited the health care facilities more than once and also the sometimes the same individuals had reported falling ill more than once. Of the total 231 visits to health care facilities, 153 (66.2%) were OPD visits and 68 (29.4%) were for follow up of chronic diseases, and 10 (4.3%) for hospitalization [Table 1]. URI was the most common (31.4%) reason for OPD visits and hypertension was the most common (38.2%) chronic disease for which follow-up visit was sought. Four pregnancies for safe confinement, two cases of meningitis, and one episode each of IHD, chronic kidney disease, anaemia, and bronchial asthma resulted in hospitalization.

No health care expenditure was incurred for majority (69.03%) of the OPD visits and half (50%) of the follow-up visits by chronic disease patients. Expenditure was incurred in all episodes of hospitalization. Of the 143 households that had individuals who sought health care, health spending was found in 60 (41.9%) households. The mean expenditure at the household level (among those who had morbidity) for OPD visits, chronic diseases, and hospitalization were INR 118.16 ± 2, 195.58 ± 254.8, and 1565 ± 1344, respectively [Table 1].

The total mean per visit expenditure for OPD visits and follow-up visits for chronic diseases are INR72.7 ± 143.6 and 135.7 ± 196.2, respectively. It is seen that for the OPD visits most of the out of pocket expenditure is in terms of doctors’ fees (31.69%) and medicines (31.78%), whereas for the chronic diseases most of the expenditure is in terms of medication (27.6%), transportation (23.7), and doctors’ fees (22.2%) [Table 2].

The mean total expenditure per hospitalization was found to be INR1340 ± 1192.9. For hospitalization episodes the majority of expenditure is in the form of transportation (48.9%) and food expenses (35.4%). Nearly
Table 1: Health care expenditure per visit among the study population

| Reason for health care expenditure | Number of visits that incurred expenditure N (%) | Mean per visit expenditure±SD (Rupees) | Total expenditure (Rupees) |
|-----------------------------------|-----------------------------------------------|----------------------------------------|---------------------------|
| OPD visit (n=153)                 | 46 (30.06)                                    | 251±177.4                              | 11580.00                  |
| Follow up visit for chronic diseases (n=68) | 34 (50)                                       | 299.12±173.9                           | 10170.00                  |
| Hospitalizations (n=10)           | 10 (100)                                      | 1565±1344                              | 15650.00                  |

OPD=Outpatient department; SD=Standard deviation

Table 2: Healthcare expenditure at the household level

| Reason for health care expenditure | Number of households that incurred expenditure N (%) | Mean household expenditure±SD (Rupees) | Total expenditure (Rupees) |
|-----------------------------------|-----------------------------------------------|----------------------------------------|---------------------------|
| OPD visits (n=98)                 | 28 (28.6)                                     | 413.6±272.6                            | 11580.00                  |
| Follow up visit for chronic diseases (n=52) | 27 (51.9)                                     | 376.7±237.7                            | 10170.00                  |
| Hospitalizations (n=10)           | 10 (100)                                      | 1565±1344                              | 15650.00                  |

*Total number of households given as “n” in each category in the first column adds up to more than 143, because some households had individuals visiting the OPD as well as those with chronic diseases, OPD=Outpatient department; SD=Standard deviation

Table 3: Health spending and health facility utilized as per socio economic status

| OPD visits (n=153) | High SES* | Low SES* | Chi square | P value |
|--------------------|-----------|----------|------------|---------|
| Health spending    | 33 (71.7) | 13 (28.2)| 36.595     | 0.001†  |
| No (n=107)         | 22 (20.6) | 85 (79.4)|            |         |
| Health facility utilized |          |          |            |         |
| Public (n=116)     | 26 (22.4) | 90 (77.6)| 38.158     | 0.001†  |
| Private (n=37)     | 29 (78.3) | 8 (21.6) |            |         |
| Follow up visits for chronic diseases (n=68) |          |          |            |         |
| Health spending    | 12 (54.54)| 22 (65.47)| 0.249      | 0.648   |
| No (n=34)          | 14 (41.1) | 20 (58.8)|            |         |
| Health facility utilized |          |          |            |         |
| Public (n=47)      | 19 (40.4) | 28 (59.6)| 1.349      | 0.509   |
| Private (n=2)      | 0 (0)     | 2 (100)  |            |         |
| Both (n=19)        | 7 (36.8)  | 12 (63.2)|            |         |

*High SES: Class 1 and 2 of modified Prasad’s classification; Low SES: Class 3, 4 and 5 of modified Prasad’s classification; †P < 0.05: Statistically significant; OPD=Outpatient department; SES=Socioeconomic status

DISCUSSION

The number of persons reporting any morbidity during a period of 1 month was 177/1000 population and the number of persons hospitalized during a period of 3 months was found to be 11/1000 population. According to the 60th round of National Sample survey done in 2004, the number of persons reporting any ailment during a period of last 15 days in rural India was found to be 88/1000 population and the number of hospitalization during any period of 365 days was 23/1000 population.[3] The change in reference period, growth in population since the year 2004, and the inclusion of pregnancy also as a cause for hospitalization could be the possible reasons for the increase in the number of persons with morbidity in this study.

Majority of the visits to health care facilities (nearly 69% for OPD visits and 50% for follow up of chronic diseases) did not result in out of pocket expenditure for health care. This is in contrast with the situation elsewhere in the country, where more than 80% of health spending is out of pocket.[4] This may be because of the presence of a PHC (JIRHC) in the same village which provides free health care and also the presence of two tertiary care centres within a distance of 10 km from the village.

For follow up of chronic diseases, 69.1% had utilized public health care services for OPD visits, 92.2% of whom had visited JIRHC, and the remaining visited JIPMER and GH. Majority of those who incurred health expenditure for OPD visits (80.4%) were from higher socioeconomic class (P < 0.05) [Table 3].

75% had utilized public health care services for OPD visits, 92.2% of whom had visited JIRHC, and the remaining visited JIPMER and GH. Majority of those who incurred health expenditure for OPD visits (80.4%) were from higher socioeconomic class (P < 0.05) [Table 3].

Utilization of public sector for OPD visits was significantly more among those from low socioeconomic status (77.6%) (P < 0.05) [Table 3].

For follow up of chronic diseases, 69.1% had utilized public health care facilities (50% JIRHC and 29.1% JIPMER) and 27.9% both public and private health facilities. Only 3% had utilized private health care facilities alone for chronic disease follow up. Majority of those who incurred health expenditure for follow up for chronic diseases (64.7%) were from lower socioeconomic class. However, this is not statistically significant [Table 3].
hospitalization was 1 year, OPD visits was 3 months, and chronic disease follow up was 1 month.

In spite of the inflation and price rise during the intervening period (our study was conducted in 2012 as against the above, done in 2004 and 2007), compared with the above two studies, the out of pocket expenditure for the non-hospitalized cases (both OPD and follow up for chronic diseases) was much lower in our study population. This could be because of the surplus free health services available in the region.

The expenses of hospitalization were slightly lower in our study than NSSO estimates and slightly higher than the Bengal study. Therefore, the out of pocket spending on hospitalized cases does not seem to differ much.

Nearly 70% of the population had utilized the public sector for OPD visits and follow of chronic diseases in contrast to 19.9% reported by a study done in Haryana. This may suggest an increased faith in the public sector among the study population and also increased availability of free services.

**CONCLUSION**

Our study shows that the out of pocket expenditure for non-hospitalized cases are much lower in a region where abundant free health services are available. However, the expenditure for hospitalized cases was not much different from other regions. Hence, if the National Health package as recommended by the high level expert group of UHC (Universal Health coverage) is brought in practice, out of pocket expenditure, at least due to non-hospitalized cases might most likely show a significant drop.

We could not study the seasonal differences in morbidity and thereby out of pocket expenditure, as ours was a cross sectional study. We have done purposive sampling due to constraint of resources, which could also be one of the limitations of the study.

**ACKNOWLEDGMENT**

We acknowledge the help of our the interns, C. Vinay, Debasish Sahoo, Bijita Deb, Badari Mylliemngap and Venkata Ganesh, in data collection. We express our sincere thanks to all the participants of the study.

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