

Cost of Care: A Study of Patients Hospitalized for Treatment of Psychotic Illness

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ABSTRACT

Background: Combination of ill health and poverty poses special challenges to health care providers. Mental illness and costs are linked in terms of long-term treatment and lost productivity, and it affects social development. The purpose of the present study is to assess the economic burden of poor families when a family member needs hospitalization due to psychosis. **Materials and Methods:** The information was gathered from caregivers of 100 psychotic inpatients of Medical College Hospital of Kerala during a period of 6 months. Data regarding components of expenses such as cost of medicine, laboratory investigations, food, travel, and other miscellaneous expenses during their inpatient period were collected by direct personal interview using specially designed proforma. The data were analyzed using Epi-info software. The patients below the poverty line (BPL) were compared with those above poverty line (APL). **Results:** There was no significant difference between patients from BPL and APL in respect of amounts spent on the studied variables except for laboratory investigations during the hospital stay. **Conclusions:** The results showed that the studied subjects are facing financial difficulties not only due to hospitalization, but also due to the recurrent expense of their ongoing medication. The study recommends the need of financial support from the government for the treatment of psychotic patients.

Key words: Above poverty line, below poverty line, cost

INTRODUCTION

It is a paradox that ill health and poverty often co-exist. The combination of ill health and poverty poses special challenges to health care providers. Most poor people seek help at public run hospitals where services are free, and those from families below the poverty line (BPL) are exempted from payments for medicines and investigations. While this is helpful, there are other

hidden costs which the family has to bear.

Patients often need to buy medicines which are unavailable in the hospital, meet the expenses for food, transport, etc. Then there are indirect costs like lost wages and other treatment related expenses. The total costs usually workout to be well beyond the means of those coming from BPL households. In fact, health care costs often lead to further impoverishment and sets off a vicious cycle of ill-health and poverty, one fuelling the other. Poverty is thus an important barrier which prevents scaling up of services. This had been investigated in maternal health^[1,2] and it is relevant for scaling up of mental health care too.^[3,4] The financial impact of hospitalization for psychoses needs to be evaluated, especially on the poorer sections of the society. This study aims to assess the treatment related expenses of patients admitted to a government general hospital with psychotic illness.

Access this article online	
Website: www.ijpm.info	Quick Response Code 
DOI: 10.4103/0253-7176.150823	

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MATERIALS AND METHODS

The present study was conducted after getting approval from Institutional Research Board of Government Medical College, Thrissur. Patients who meet the International Classification of Diseases (ICD)-10 criteria^[5] for schizophrenia, bipolar mood disorders, and other psychotic conditions were prospectively identified from the psychiatry wards of Government Medical College, Thrissur. Patients with co-morbid alcohol dependence or drug dependence were excluded. The caregivers of these patients were invited to take part in the study. They were interviewed after getting informed consent (written) and we used specially designed study proforma for data collection. These in-depth interviews were aimed to explore the financial burden experienced by the family during hospitalization.

We assessed both the direct and indirect costs of treatment. The major components of expenses during the hospital stay were categorized as cost of medicines, investigations, food, travel, and other incidental expenses. The details of medication and investigations were collected from the case records on the last day of hospitalization. The payment particulars were gathered by interviewing the caregivers. We enquired about the financial resources to meet the expenses. We also asked about the loans availed by the family.

We also analyzed the different categories of expenses and calculated the total expenses incurred during hospitalization. All those who had a BPL card issued by the revenue department of Kerala were considered as poor. They were compared with those who are not from BPL families. We used descriptive statistics such as mean, median, range, and standard deviation to explain the results. Mann — Whitney *U*-test was used to compare costs among BPL and above poverty line (APL) patients. Spearman's rank correlation coefficient was used for finding out the correlation between study variables.

RESULTS

There were 104 cases who received an ICD-10 diagnosis of psychosis during the 6-months study period. This amounted to 18% of all admissions to psychiatry wards during that period. We could interview the caregivers of 100 (96%) patients admitted for psychosis. Four cases had to be excluded due to lack of consent and inability to schedule the interviews on the day of discharge.

There were 57 patients with schizophrenia and 43 with bipolar disorder. There were 54 males and 46 females in the study sample. The mean age was 35.6 (ranged from 17 to 70). Only 3% of the subjects were illiterate

while 34% had primary level education, and the rest had education up to high school or more. Most of the patients (67%) were from BPL households. The number of earning members in each family ranged from 1 to 4 while the average family size was four. The average daily and monthly family income was INR 300 and INR 8000 respectively. Pension benefits were available to 29% of the families, but the average pension was only INR 300/month.

About a half of all patients (49%) were engaged in skilled, semiskilled or unskilled work, often for daily wages, before the onset of illness. About 21 of them stopped working less than a month prior to admission whereas 13 patients were not working for the last 1-6 months. During the hospitalization, the average loss of income per patient was INR 2000.

All caregivers were family members. About 49% of the caregivers had to cut back work resulting in an average loss INR 1500 from the caregiver income during the hospitalization period alone. Nearly half (45%) of the families had availed loans for different purposes, and a significant proportion (22.2%) of them took loans to meet the expenses of hospitalization for psychosis.

The expenses incurred during hospitalization included cost of medicines, laboratory investigations, food, travel and other incidental costs. Though most patients (76%) received free medicines from the hospital, some drugs had to be purchased. Almost a quarter (24%) had to purchase all the necessary medicines from elsewhere. Both BPL and APL patients spent almost same amount for purchase of medicines ($Z = 0.469, P = 0.639$). The average cost of medicines per patient was INR 198. More hospital days meant more money spent on medication ($r = 0.442, P = 0.00$).

While most patients (94%) needed laboratory investigations, only a minority (19.2%) could get all the investigations done in the hospital itself. Many (41.5%) patients had to pay and use other facilities for some investigations. Among 94 patients who needed investigations, only 13 (13.83%) were totally exempted from payment of laboratory fees. The average amount of money spent for investigation charges was INR 300. Patients from BPL households spent significantly less amount of money for investigations ($Z = -2.682, P = 0.007$) and this expense did not depend on the duration of hospitalization ($r = -0.101, P = 0.320$).

Even though, food was available at free of cost for inpatients from BPL families, the quantity was insufficient. Patients who came from families APL had to get food from outside the hospital. The average cost of food during the hospitalization was INR 1200,

and this increased with the duration of hospital stay ($r = 0.619, P = 0.00$).

Among the 100 patients admitted in the hospital, 65% hailed from Thrissur district and the remaining 35% were from the neighboring districts such as Palakkad, Malappuram, and Ernakulam. Majority of patients (60%) made use of vehicles such as car, auto or ambulance for conveyance. The number of persons accompanying the patient on their journey to the hospital was 1-5 while 1-3 persons accompanied the patient after getting discharged from the hospital. An average cost of travel per patient was INR 396 for their journey to and fro the hospital. The average amount spent for miscellaneous expenses was about INR 100.

The average duration of hospital stay was 13 days. The total direct expense of hospital stay was calculated as the sum of cost of medicine, laboratory test, food, travel, and other miscellaneous expenses. The average direct expenses incurred during hospitalization amounted to INR 2421. The average total expenses including indirect expenses was INR 3975 and this increased with the duration of hospital stay ($r = 0.515, P = 0.00$). Almost half of the families (46%) had received financial support from relatives outside their household and this averaged INR 500.

DISCUSSION

Majority (67%) of patients treated for psychosis in a government-run medical college came from low-income households living below the poverty line. Hospitalization was associated with considerable financial strain and out of pocket expenses. The average out of pocket expense was more than 1200 rupees and averaged INR 100/day. The average cost of hospitalization rose to about INR 4000 when indirect expenses are added on. We did not find a significant difference between APL and BPL families in the expenses related to hospitalization except that the patients from BPL families spent less on investigations that were free for them.

Many families had to rely on hired vehicles for bringing the patient to the hospital. The use of public transport was not always feasible. There are schemes that allow reimbursement of the expenses for transport during emergency obstetric care.^[6] There is no provision to reimburse the cost of transport of a person who needs hospital admission and care for psychosis. Government should extend such schemes to include those who need hospitalization for a psychotic illness.

We found travel expenses and investigation charges

adding to the financial strain. Relatives had to travel many times to the hospital. They often took turns to stay with the patient. They also had to pay for laboratory investigations. Investigations like thyroid stimulating hormone is not free even for patients from BPL families.

Almost half (45%) of the families had availed loans, a clear indication of their strained financial status. About a fifth of these families borrowed money to meet the expenses for the current hospitalization and treatment. This is a matter of great concern as health care costs, especially out of pocket expenses and is a major cause for further impoverishment of poor households. Lack of support would lead these families to take more loans and get into a debt trap.

Our study shows that health care cost, especially the costs associated with management of psychosis is well beyond the financial capability of low-income families. Government should recognize this and offer financial support to meet the treatment related expenses of people with psychosis. The model of Janani Suraksha Yojana^[7] can be adopted for financing expenses of psychiatric hospitalization.

Mental health and development are intimately linked. Most individuals with psychotic illness can lead a normal life with treatments. Many families are laboring under serious financial strain while they are engaged in the treatment of psychosis. The governments should seriously consider financial support for treatment of poor people affected by major health conditions like psychoses. Support should extend well beyond free services and should include strategies to finance the direct and indirect costs of treatment.

To the best of our knowledge, this is the first study from India to report the costs associated with hospitalization for people with psychotic illness in a general hospital setting. The treatment of mental illness involves significant expenditure, frequent, and considerable use of health care resources. Health care financing in India is vastly different from western countries and some developed economies where in health insurance plays a very large role. Even there, the situation is bad, if the provision for third party payment is unavailable. There are schemes like Rashtriya Swasthya Bima Yojana (RSBY)^[8] and other health insurance policies under government of India that are running essentially for inpatient service for people from BPL families.

People with psychiatric illness were kept out of the benefits of RSBY scheme till recently. Even now the benefits of RSBY for inpatients with psychosis are negligible in practical terms. A special scheme

to support management of psychotic disorders like schizophrenia and bipolar disorders would be helpful to many families. Relapses are major clinical events and could lead to recurrent hospitalizations. Good access to effective treatment and adherence to long-term prophylactic treatment is important in the management of schizophrenia and recurrent bipolar disorder. Poverty is a barrier that denies access to good quality mental health care for them. Delivery of mental health care is a demanding task in resource limited settings. Governments and policy makers should design and implement schemes to finance treatment of psychosis that eventually will help to improve outcomes.

CONCLUSION

Mental health care is an integral component of health care. Mental health problems can affect human development and thus is a developmental issue. The cost of care leading to further impoverishment is a real problem, especially in low-income settings. Poverty plays a major role in determining health outcomes and can adversely impact development.^[9] We need to adopt an intervention which goes well beyond the conventional management of illness to prevent this. Let us begin by identifying ways and means to finance care for psychosis.

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How to cite this article: Rejani PP, Sumesh TP, Shaji KS. Cost of care: A study of patients hospitalized for treatment of psychotic illness. *Indian J Psychol Med* 2015;37:71-4.

Source of Support: The present work has done with the financial aid of State Board of Medical Research, Kerala. **Conflict of Interest:** None.