Abstract

Background: Significant amount is spent by the patients when they attend tertiary care hospitals for treatment despite free services. The objective of this study was to account expenses on the medication, consumable items for patient care and food and transport.

Methods: Fifty patients were recruited, 10 patients each from pediatrics, general medicine, obstetrics and gynaecology, general surgery and orthopaedics indoor wards. First two patients admitted on the day of admission were enrolled and followed for three days. The cost of patient’s expenses on investigations, medicines and consumables, travel to the hospital and food on self and relatives during hospitalization was estimated with the help of a questionnaire.

Results: The expenditure was more on the patients suffering from surgical conditions. Total expenditure on the patients admitted in the orthopedics, surgery and surgical cases of obstetrics and gynaecology wards was INR 31985/-, INR 11798/- and INR 14746/- for 3 days respectively. Out of the total expenses INR 1095/-, INR 1150/- and INR 1316/- were spent on food and travel of the patients and family members to the hospital for admission in orthopedics, surgery and surgical cases of obstetrics and gynaecology wards respectively. In patients with non-surgical conditions like medicine, pediatrics and non-operative cases of obstetrics and gynaecology the total cost per patient was INR 5610/-, INR 5037/- and INR 4416/- respectively.

Conclusions: Patients treated in the private teaching hospital spent significant number of rupees. The expenditure by the patients undergoing surgical treatment spent two to three times more as compared to patients admitted in the general medicine and pediatric wards.

Keywords: Health expenses, Medicaid expansion, Medicine, Transport

Introduction

Health is a state of complete physical, mental and social wellbeing and encompasses curative, preventive, promotive, rehabilitative and palliative care domains.1 Health care largely remains one own responsibility although our country remains, wedded to the concept of “Health for all”.2 Although some medicines and intravenous fluids are freely available to the patients in the primary and secondary care public hospital facilities in the state but tertiary care is largely paid even at public health facilities. Expenditure on food and transport of the patient and family members staying with patient is born by themselves which also accounts significantly. Chronic illness increases the financial burden thereby leading to a vicious cycle. In 2004-2005, 15 percent of households faced significant health costs which rose up to 61.8% in 2011 to 2012.3 Various private medical insurance companies offer Medicaid to people at personal level. Though beneficial in the long run, these are costly.

ELMC and Hospital, Lucknow is a tertiary care teaching hospital, established by a registered trust, and recognized by the Medical Council of India and is a partner in the Ayushman Bharat Scheme of the Government of India.
Most of the patient care services in the hospital including consultation, admission, nursing care and operation are free. Investigations are charged on heavily subsidized rates lower than the state government institutions. However, patients and their family members staying with them have to bear the cost of transport, food, medications, surgical implants etc. Hence the present study was planned with the following objectives: i) to find out expenses incurred by the patient on medicines, investigations, procedures, implants and medical care consumables after admission to ELMCH, ii) to find out the expenditure on family members looking after the patient following admission in the ELMCH.

METHODS

This study was undertaken as a preliminary inquiry including 50 patients, 10 patients each from pediatrics, general medicine, obstetrics and gynaecology, general surgery and orthopaedics indoor wards. Patients admitted in the CCU, ICU, requiring cardiac bypass surgery or angiography were excluded. First two new patients admitted on each day for 5 days were enrolled and followed for three days. The cost of patient’s expenses on investigations, medicines, consumables, travel and food for self and family members, accompanying them during hospitalization, were estimated with the help of a questionnaire. The amount of money left with the patient on 3rd day was also noted.

RESULTS

Of the 50 patients, there were 32 males and 18 females with male: female ratio of approximately 2:1. The mean age of the patient was 30 years ranging from 3 months-80 years amongst the specialties included. However, the mean age of adult patient was 53 years (range 22 to 80 years). Amongst the child patients, the mean age was 6.5 years with 2 infants, and 6 children >5 years.

Table 1: Expenditure incurred by patients in selected departments.

| IPD n=10 | Travel expenses (INR) | Investigations (INR) | Medication (INR) | Procedures/surgery (INR) | Food (INR) | Total expenses (INR) | Total expenses (INR) per patients |
|----------|-----------------------|----------------------|------------------|--------------------------|------------|---------------------|----------------------------------|
| Orthopedics | 4450 | 16100 | 24300 | 268500 | 6500 | 319850 | 31985 |
| Pediatrics | 6700 | 17880 | 14400 | - | 11400 | 50380 | 5038 |
| Medicine | 6600 | 21560 | 22000 | - | 5755 | 56115 | 5611.5 |
| Gynaecology | 6680 | 11890 | 27950 | 43000 | 6300 | 95820 | 9528 |
| Surgery | 3800 | 19785 | 18700 | 68000 | 7700 | 117985 | 11798 |

Table 2: Expenses incurred by patients in obstetrics and gynaecology.

| Department (gynaecology) | Travel expenses (INR) | Investigations (INR) | Medication (INR) | Procedures/surgery (INR) | Food (INR) | Total (INR) |
|--------------------------|-----------------------|----------------------|------------------|--------------------------|------------|-------------|
| Non-surgical (n=5) | 2600 | 5590 | 10100 | - | 3800 | 22090 |
| Surgical (n=5) | 4080 | 6300 | 17850 | 43000 | 2500 | 73730 |

Table 2: Expenses incurred by patients in surgical and non-surgical cases.

| IPD | Travel expenses (INR) | Investigations (INR) | Medication (INR) | Procedures/surgery (INR) | Food (INR) | Total (INR) |
|-----|-----------------------|----------------------|------------------|--------------------------|------------|-------------|
| Non-surgical (n=25) | 12330 | 42185 | 60850 | 379500 | 16700 | 511565 |
| Surgical (n=25) | 15900 | 45030 | 46700 | - | 20955 | 128565 |

Figure 1: Total expenses on surgical and non surgical patients.

There were 28 patients from rural and rest (n=22) were from urban areas. The patients belonged to Lucknow and neighbouring districts like Unnao, Hardoi, Sitapur and Sultanpur. The average distance travelled the patients for coming to ELMCH, was 70.5 km, 80.3 km, 111.7 km, 121.6 km and 83.9 km respectively for the surgery, gynaec and obstetrics, medicine, pediatrics and orthopaedics cases, with a mean distance of 93.6 km. Thus, the average distance of the patient’s residence from the hospital was more for non-surgical specialties as compared to the surgical ones.
Average travel cost per patient was estimated to be INR 546.6/- which was INR 493.2/- and INR 636/- for surgical and non-surgical cases respectively (Table 3).

The expenditure was more on the patients suffering from surgical conditions. Total expenditure on the patients admitted in the orthopedics, surgery and surgical cases of obstetrics and gynaecology wards was INR 31985/-, INR 11798/- and INR 14746/- for 3 days respectively. Out of the total expenses INR 1095/-, INR 1150/- and INR 1316/- were spent on food and travel of the patients and family members to the hospital for admission in orthopedics, surgery and surgical cases of obstetrics and gynaecology wards respectively (Tables 1 and 2).

In patients with non-surgical conditions like medicine, pediatrics and non-operative cases of obstetrics and gynaecology the total cost per patient was INR 5610/-, INR 5037/- and INR 4416/- respectively. INR 4184/-, INR 3227/- and INR 3358/- and INR 1426/-, INR 1810/- and INR 1058/- were spent on the patients’ treatment and on the food and travel respectively. Amongst surgical and non-surgical specialities, the average number of attendants per patient was 3 and 2 respectively, whereas it was 4 in pediatrics (Tables 1 and 2).

The cost of investigations was INR 1744.3/- per patient which was INR 1687.4/- and INR 1801.2/- for surgical and non-surgical cases respectively. Average per patient expenditure on the medicines and drugs was INR 2151/- which was INR 2434/- and INR 1868/- for surgical and non-surgical cases respectively (Table 3).

Per patient average cost of procedure/operation was INR 12,650/- which was INR 26850/-, INR 6800/- and INR 4300/- for orthopedics, surgery and surgical cases of obstetrics and gynaecology respectively (Tables 1 and 2).

The mean food expense for patient and his/her relatives was INR 883/- in three days which was INR 668/-, INR 838.2/- and INR 1145.6/- for surgical and non-surgical cases and pediatrics respectively. Thus, the food expenses accounted to a total of 34% more in pediatrics than the other specialities (Tables 1 and 3).

Total money left with the patient following three days of expenditure in the hospital in surgical and non-surgical cases were INR 116/- and INR 238/- respectively. None of the patient had medical insurance nor anyone of them was eligible to Ayushman Bharat Scheme.

**DISCUSSION**

In this study 50 patients were recruited across surgical and non-surgical wards and their 3-day expenses catering to medical and non-medical needs were taken into account. The total treatment related cost came out to be INR 19301/- and INR 3700/- across surgical and non-surgical fields respectively. The medicines and various consumable goods like gloves catheter etc. have been included under the cost of treatment. The cost incurred by the patients on their relatives and various other needs came out to be INR 1160/- and INR 1474/- amongst surgical and non-surgical cases. The average stay of the patients in the hospital was 7 days and 5 days in surgical and non-surgical cases respectively. Inspite of free patient care services in the hospital a patient spent a significant amount from his pocket.

Tuberculosis is the single most important cause of death in India at present. Maternal, perinatal and childhood conditions account for another significant percentage of the disease burden, of particular importance for the poor. In countries such as India where there are limited resources and competing demands, not all conditions can be treated and not every intervention is available at public expense. By one estimate 63 million Indians are pushed into poverty each year due to diseases with health expenses being the chief cause. In order to solve the above problem, Government has started various health schemes latest being Ayushman Bharat Yojana, 2018 to transform the primary, secondary and tertiary health care system in India. This scheme, targets around 10 crore families that can be categorized as poor and vulnerable population. The eligibility for the above is on the basis of socio economic and caste census that was done in 2011.

Another scheme catering the maternal health issues is Janani Suraksha Yojana which was launched in 2005 to improve mother and child health by giving financial aid of upto INR 1400/- for mother and INR 600/- for ASHA facilitating the delivery. Government has also taken an initiative under RNTCP scheme by providing incentive of INR 500/- per patient per month for the nutritional support of Tuberculosis affected patients during the course of treatment. However, inspite of all the efforts undertaken by the Government to improve the health status of the country, still there is a need for improvising Medicaid expansion as many patients are pushed into poverty due to financial drain caused by health related expenses.

This was a preliminary study. Detail survey was not carried out. We did not ask for per capita income of the family, sole earner and source of income lest patients and relatives might get alarmed that they might be asked to pay for the treatment. However, this was a limitation of the study as we could not assess impact of the treatment on the economic status of the family.

There is a need of scheme catering the financial needs of middle-income group families who currently get no financial aid through the government health schemes currently prevailing and are pushed into poverty due to health-related expenses.

**CONCLUSION**

Although, the patient care services in the hospital including consultation, admission, nursing care and
operation are free and investigations are charged on heavily subsidised rates, the patients and their family members staying with them have to bear the cost of transport, food, medications, surgical implants etc. None of the patients enrolled in this study got the benefit of medical insurance. Patients treated in the general surgical and obstetric wards spent two to three times more as compared to the patients in the general medicine wards. Surgical cases spent INR 11000- INR 31000 as compared to non-surgical cases who spent INR 4000-INR 6000 over a period of three days which included the cost of treatment as well as the cost of transport, food, travel and family members attending the patient. Thus, this creates a financial burden on the patient and his attendants.

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ANNEXURE

Questionnaire:

| Particulars           | Income | Occupation | Address |
|-----------------------|--------|------------|---------|

Q. No. of attendants with the patient each day?

Q. Expense on investigation/ Medicine/ Procedure/ operation (each calculated day wise)

Q. Expense on food for patient/ attendant/visitors?

Q. Expense on travel (up down) from hospital and home (based on distance of home from hospital)?

Q. What are the other issues like bath/washroom/night stay of the attendants/visitors?

Q. Total amount of money left with patient after Day 3 (to estimate insignificant daily expenses)