



Cost of managing COVID 19 patients in an intensive care unit

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Abstract

The study revealed that Total average cost for per Inpatient per day was Rupees 15802. Manpower cost constituted the maximum proportion of the total average cost followed by drug cost.

Keywords: COVID 19, Cost, Hospital Infections Manpower Cost, Utility cost, Material cost, ICU

INTRODUCTION

By understanding the costs of various activities, managers can improve the efficiency of hospital departments, as well as hospital system as a whole. Hospital management has a responsibility to the community to provide health services that the community needs at an acceptable level of quality and at the least possible cost. Cost finding and analysis can help departmental managers, hospital administrators and policy makers to determine how well their institutions meet these public needs.(1,2) Moreover knowledge of costs can assist in planning of future budgets and in establishing a schedule of charges for patient services. Finally cost accounting and analysis are also of value to management in ensuring that costs do not exceed available revenues and subsidies. They are the best techniques available for accomplishing this.(1,2)

COVID 19 has emerged as greatest challenge that has weakened the very basis of human existence. It has devastated economies and created unparalleled human needs. It has overstretched a health system that has been seen never before. Even plague of middle age Europe and Spanish flu were less devastating than COVID 19 pandemic. The study aimed at determining the cost of treatment of per patient per day in a general COVID 19 ward.

Objective

Study of In-Patient Cost of treatment of COVID 19 patients in an intensive care unit

Methodology

Study Design: A prospective study was carried out.

Study duration: A prospective study was carried out in COVID 19 ICU of Sher-i-Kashmir Institute of Medical Sciences, SKIMS for a period of three months).

Study setting: COVID 19 ICU

To study the Material Cost incurred per patient per day

Cost of drugs and disposables utilized and purchased from hospital was calculated by taking the rate list from the drug and pharmacy department and the central drug store. Cost of drugs and disposables brought from outside the market was calculated by asking for the bill brought from the market. General consumable items cost was directly calculated by seeing the consumption register of the store and cost of item was calculated.

To study the Manpower Cost per patient per day

Cumulative salary of all the members for one month was worked out. The data was entered on a predesigned performa

To study cost incurred on utilities per patient per day

Major utility services which were studied include water, electricity, Manifold services, laundry services, CSSD services and dietary services.

Data analysis

The data was received from the answered questionnaires and was plotted on excel 2013. The data was analyzed statistically with the help of statistical software SPSS v19. All the continuous variables of the study were represented by the descriptive statistics and all the categorical variables in the term of frequency and percentage.

Result and discussion

Table 1: Cost per patient per day (In Rupees)

| Entity | Cost per patient per day(In Rupees) |
|---------------|--------------------------------------|
| Material cost | 10000 |
| Labour Cost | 5000 |
| Utility Cost | 802 |
| Total Cost | 15802 |

Table 2: Material cost

| Material | Cost per patient per day(In Rupees) |
|---------------------|--------------------------------------|
| Drugs | 6000 |
| Disposables | 3000 |
| General consumables | 1000 |
| TOTAL | 10000 |

Table 3: Manpower cost

| | Cost per patient per day(In Rupees) |
|---------------|--------------------------------------|
| Manpower cost | 5000 |

Utility cost

| Entity | Cost per patient perday(In Rupees) |
|-----------------|-------------------------------------|
| CSSD | 80 |
| LINEN & laundry | 40 |
| Dietetics | 275 |
| Manifold | 80 |
| Electricity | 4 |
| Water | 2 |
| Total cost | 802 |

For the purpose of this study, costs were broadly calculated under three major cost centres i.e Material cost, Manpower cost and Utility cost. As per the results of the present study it is reveals that the average total cost for COVID 19 inpatient per day is Rupees 15802.

No comparative studies are available for comparison as this is the first study calculating cost of inpatient COVID 19 patients in ICU.

The study are consistent with the findings of other costing studies of Shaista Ganai et al 1and Amin tabish, Yashpal Sharma 3,4,5 et al though there study was not a COVID 19 based study.

Summary

The study revealed that Total average cost for per COVID 19 Inpatient per day was Rupees 15802. Manpower cost constituted the maximum proportion of the total average cost followed by drug cost.

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