

Cost Awareness and Containment : OPD Pharmaceutical Services of a Speciality Hospital

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Abstract

A major share of the hospital budget gets consumed in maintaining its pharmacy services. The cost consumption pattern of different group of medicines is directly related to the prescription load and prescription pattern. The Medical Officers and specialists of the hospital have got all important role in rational prescription in term of current therapeutics and saving on over prescription. A study carried out in a tertiary level super-speciality hospital indicated that the total cost of medicine per OPD day and cost of antibiotics work out to be Rs. 45291 and Rs. 11974 on an average, respectively. The average cost per prescription of OPD was up to Rs. 123.75.

Key Words

Cost awareness, Cost containment, Formulary, Antibiotic policy

Introduction

The medicine man, the priest, the herbalist and the magician all under look in various ways to cure man's disease and/or to bring to relief to sick. After 1900, medicine moved faster towards specialization and a rational, scientific approach to disease (1). Despite of this, the cost of medical care continued to increase due to invention of highly sophisticated equipment and technology, increase in the cost of the manpower, materials and irrational use of drugs specially antibiotics.

Materials in the hospital is the second major area (next to men) of consumable cost. Out of the materials cost, approximate 60% of total consumable cost is comprised of drug/medicine and disposable cost. Approximate 20% of drug cost can be saved without impairing the quality of care and maintaining the patient satisfaction (2). In this era of cost containment, it is imperative that health care professionals should make fiscally prudent decisions. The present environment necessitates a critical appraisal of apparently equi-efficacious therapeutic modalitis (3). Three economic

concepts have particular importance to the thinking of every doctor who takes up a pen to prescribe i.e. to distribute resources: the opportunity cost, the cost effectiveness and the cost benefit analysis (4). As evident, high proportion of operational cost of a hospital can be directly attributed to the pharmacy services, which becomes a major component of the expenditure and an important cost center. Wide spectrum of measures can be initiated in the hospital for cost containment and cost reduction with a view to make optimum utilization of available resources without compromising the quality of care. A wide-spread impression that increased cost indicates better care is not true. It is known that it is possible to provide more ethical care with lesser cost by various measures. Towards this objective, one of the most important tool is cost awareness and cost consciousness amongst the different functionaries in hospital.

A study was carried out in a tertiary care super-speciality hospital for ascertaining the prescription pattern and their cost implications from different OPD's.

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Material and Methods

The present study was undertaken to analyze the prescription load and pattern from different OPDs and to find out their cost implications. As well as to find out the antibiotic prescription pattern and its cost with the objective to recommend measures for implementing cost awareness and cost containment programme.

In a one week preliminary prospective study firstly, familiarization with aspects like OPD schedules, number of OPDs and average OPD attendance was worked out. The study was for a period so as to cover at least eight (08) OPD days of each specialty.

The cost of the medicines were taken from the price list accepted for procurement. The drugs were tabulated in groups as per the daily summary list. The antibiotic group was charted separately into different sub-groups and their prescriptions were worked out specialty-wise. Apportioning of cost towards each group of drug was accomplished to facilitate the ultimate objective of clinical pharmaceutical audit. The study included the general OPD, all specialist & super-speciality OPDs. The anti-neoplastic drugs were kept outside the purview of study. In order to work out only the cost of medicines and prescriptions, the overhead cost like staff cost & facilities cost were excluded, because the basic aim was to calculate the cost of medicines.

Results

The total OPD attendance per day varied from 342 to 380, with an average of 366 patients. The total cost of medicine per OPD day varied from Rs.42950 to Rs.50154 averaging Rs.45,251 per day. Whereas the cost on antibiotic prescriptions per OPD day ranged Rs. 9875 to Rs. 12738, which worked out to be Rs. 11974 per day, on an average. Thus the cost of antibiotic prescription vis-à-vis the total cost of OPD prescription came upto 26.5%. The percentage of prescriptions in which antibiotic were prescribed averaged to 24.5%. The important issue, that is the cost per prescription worked out to be Rs. 123.75.

It was seen that 16.2% of the patients from medical OPD were on anti-bacterial therapy. Surgical, Obs and Gynae as well as Pediatrics antibiotic prescriptions were in 18.4%, 28.5% and 48% of cases respectively. It was found that 44.5% of prescriptions from common OPD contained antibiotics.

Table 1. % prescriptions for anti-bacterials in various OPDs.

OPD	Antibiotics (%)
Medical	16.2
Surgical	18.4
Obs & Gynae	28.5
Pediatrics	48.0
General	44.5

Table 2. The cost consumption pattern of some antibiotics have been reflected below.

S. No.	Antibiotic	% of antibiotic cost consumption
1.	Ciproflox	28.6
2.	Amoxycillin	23.74
3.	Co-trimoxazole	10.33
4.	Ampicillin	08.56
5.	Ampiclox	08.23
6.	Tiniba	06.08
7.	Doxy-cycline	04.89
8.	Erythromycin	03.43

Discussion

The analysis of the morbidity, prescription pattern and prescription behaviour shows that they are at variance with the standard therapeutic practice. The higher % of antibiotic prescription from pediatric OPD can be explained because of the acute infectious nature of the morbidity pattern. Prophylactic antibiotic was started based on the pediatricians experience and taking the trend of antibiotic sensitivity and poor risk group patients among the infant & young children. But it was seen that prescriptions from common OPD had more than required number of medicine specially the antibiotics, which were prescribed without waiting for the laboratory investigations. Ciprofloxacin prescriptions was usually seen in febrile patients with cough. Even in the viral upper respiratory tract infections, antibiotics were prescribed at the first visit, where clinical findings recorded on prescriptions did not justify it. The rational prescription behaviour is dependent on the continued medical education, availability of relevant information and self-regulation based on current concepts of the therapeutic practices and ethics.

The drug usage and pharmaceutical audit carried out by senior specialists and it's finding thereafter, should be used as an educational tool for the medical officers

and junior specialists. Such analysis should be periodically carried out with assistance of I/c medical stores.

It is time to constitute a hospital formulary committee comprising of all senior specialist and I/c medical stores, whose aim should be to develop and implement a suitable formulary of selected medications. A bulletin of drugs can be published by all hospitals, which should reflect the list of drugs. It should show drugs available in ample stock, drugs in short supply, list of controlled drugs. All efforts to be made to make available the vital and essential drugs (5). Drugs should be procured as per their generic names and duplication can thus be avoided. This will promote rational therapeutics and prevent ambiguity & waste. Economy can also be achieved by this means. Here it has to be remembered that quality should not be compromised in any case due to economic considerations.

There is an increasing trend in unjustified use of antibiotics. Throughout the world unnecessary drugs are prescribed for self-limiting conditions (6). All hospital must have a specified antibiotic policy. The method of surveillance and reporting for any infection must be determined. Identification of hospital antibiotic sensitivity testing should be done adopting standard techniques. The factors that influence antibiotic resistance and also the cause for multi-drug resistant strains need to be identified. The infection control committee of the hospital has to enforce sample collection & testing meticulously. The uses of antibiotics are to be monitored and controlled. Only the sensitive antibiotic should be prescribed. The antibiotic policy should specify the cases where prophylactic uses of antibiotics are recommended. It should also specify the criteria for starting empirical antibiotics. Empirical use of broad-spectrum antibiotics should be kept to a minimum. Antimicrobial chemotherapy should be started only in high-risk patients.

It was seen that though this hospital has a well-specified, pragmatic antibiotic policy, which has been formulated for each specialty on a scientific basis, only limited dissemination to all medical officers & specialist is seen as a problem area. Therefore, implications of

different therapeutic measures would be of immense value in promoting rational use of medicine. Pathologists & microbiologists have a significant role to play in disseminating information on the micro-organism isolated, antibacterial sensitivity pattern and resistant strain. If a monthly compilation of such information is made available to medical officers & specialists it will help in promoting rational antibiotic usage. The medical officers need to be appraised periodically about the latest antibiotic trends & their uses. The same measures may be instituted in all hospitals.

Conclusion

The study of prescription pattern of medications especially antibiotics saves irrational therapeutic practice which stems from lack of awareness and application of scientific practice. Dissemination of antibiotic policy to all medical officers would go a long way in improving the quality of antibiotic prescriptions. However, this policy is intended to provide only the guidelines and in no way does it curtail the clinician's judgment, to the contrary in individual cases. It is the moral responsibility of doctors to avoid improper use of drugs. The medical profession needs to be more cautious and discreet in prescribing drugs (7). As far as, cost containment in the hospital is concerned, it should be an on going and continuous program which must maintain the critical balance between the quality and cost of service.

References

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