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RESEARCH ARTICLE

A study of drug utilization pattern in present urban health facilities

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Abstract

Regular auditing of the prescriptions and drug utilization studies at urban health facilities can identify the problems prevailing in the society pertaining to health care facilities and also create awareness about irrational drug use and reduce distress caused to the patients by higher cost of the medications. With the following background in mind the present study was designed to assess urban utilization pattern for commonly encountered diseases, at secondary health facilities situated in and around Jaipur city.

INTRODUCTION

The assessment of drug utilization is crucial not only for clinical and educational purposes but also for pharmacoeconomic purposes. Drug utilization studies are a prerequisite for the formulation of drug policies. Monitoring of prescriptions and study of drug utilization could identify the associated problems and provide feedback to the prescriber so as to create awareness for the rational use of drugs [1].

This study aims to generate data on urban utilization pattern at secondary health care level in Rajasthan. A randomized and prospective study was conducted selecting 26 urban health facilities spread in and around Jaipur city. Thus data were collected from all parts of the city by two trained workers. Prescriptions for diarrhea, acute respiratory illness (ARI), asthma and hypertension were collected from these health facilities and analyzed. The collected prescriptions were analyzed for the following indicators as recommended by the World Health Organization (WHO): Average number of drugs per encounter, percentage of drugs prescribed by generic name, percentage of encounters with antibiotics and injection, percentage of drugs prescribed from essential drugs list, We also included other parameters like percentage of encounters with fixed dose combination and average consultation time/ Patient's knowledge of correct dosing (%).

Results and Discussion

We analyzed 1054 prescriptions from 26 urban health facilities. Figure1 depicts the number of encounters of common diseases in present day lifestyle.

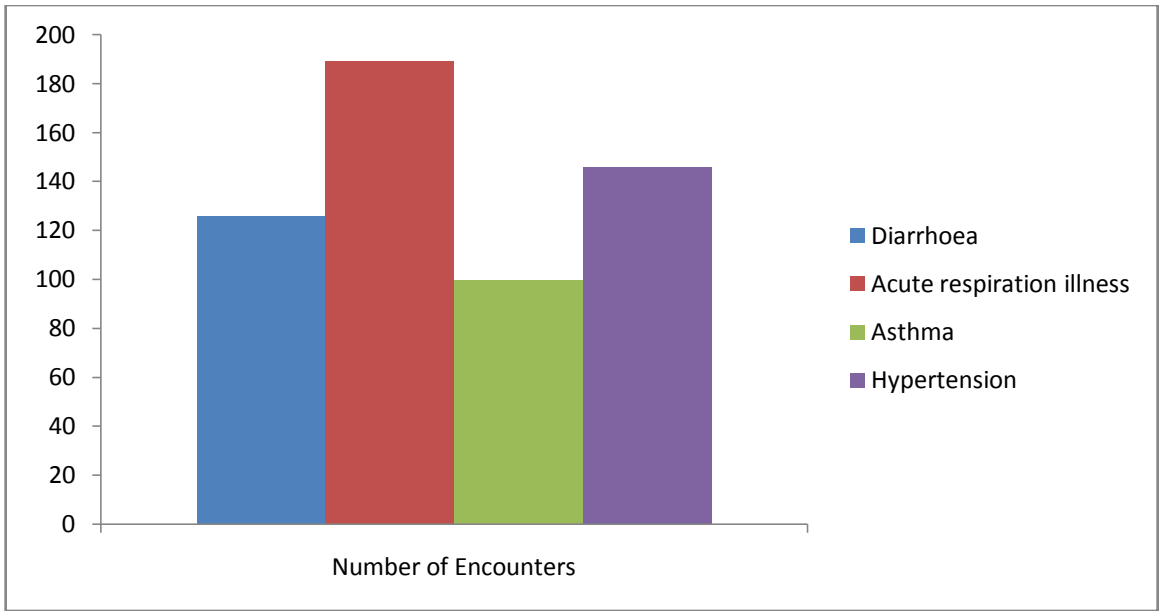

Figure 1: Number of common disease encounter during the study

The following table indicates that 70% of the drugs for asthma patients and 69% of the drugs for hypertensives were from Essential Medicine List. Branded medicines were prescribed more frequently than the generic medicines for these diseases. Average number of the drugs prescribed was also a bit higher, being 2.6, 3.2, 3.6, and 2.7 for diarrhea, acute respiratory illness, asthma and hypertension respectively.

Core Indicators	**Diarrhoea**	**Acute respiratory illness**	**Asthma**	**Hypertension**
Drugs from EDL	12 (10%)	54 (29%)	70 (70%)	110 (69%)
Generic drugs	4	9	13	3
Antimicrobial single	30	135	35	-
Irrational (FDCs)	84	63	-	-
Average number of drugs	2.6	3.2	3.6	2.7

Table 1: Distribution of the drugs prescribed for various diseases

When compared with data of earlier studies by the WHO, our number appears to be higher than that in other countries excepting Indonesia and Nigeria [2]. In the Indian context, the previous two studies showed that on an average each patient received 2.71 and 2.8 drugs [3, 4]. It is recommended that not more than 2 drugs per prescription should be given for fear of drug interactions [4].

Prescription of generic drugs was conspicuously low in all the diseases studied. The reasons for such a practice are concern about quality of generic drugs and the possibility of therapeutic inequivalence when a patient is switched from one product (proprietary or other) to the other. In addition, many nonproprietary names are difficult to remember and spell [5].

The study shows that irrational prescribing was common in diarrhea, ARI and asthma. There was overuse of antimicrobials, antimotility agents and probiotic. Correct use of ORS was provided to 2 out of 20 patients. No injectables were used. Reduction in number of injections per prescription seen in this study might be deceptive because of the practice of general practitioners giving injections in their clinic and not giving a prescription for the

same In acute respiratory illness, the expectorants had duplication of ingredients. Similarly multiple bronchodilators were used in 19 out of 100 patients. Alprazolam was frequently included with antihypertensive (Amlodipine and/ or Atenolol).

Thus, though there seems to be a trend towards a reduction in the use of antibiotics and injections, other factors like average number of drugs per encounter, use of fixed dose combination and multivitamins, drugs prescribed from essential drug list, cost of prescription and drugs prescribed in generic name have not changed and need corrective steps.

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