



## Review on Drug Utilization Pattern in Outpatient General Department

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### ABSTRACT

Drug utilization reviews DUR also referred to be as drug utilization evaluation DUE .It is defined as authorized, structured. Ongoing review of healthcare provider prescribing pharmacist dispensing and patient use of medication. Drug utilization reviews involve a detailed review of patient's prescription and medication data before, during dispensing and after dispensing to ensure appropriate medication decisions making and positive patient outcomes. World health organization (WHO) defines drug utilization review as authorized research as the marketing, distribution, prescription and use of drug in a society, with a special emphasis on the resulting medical, social, and economic sequences. Inherent in the definition, such studies provide logical background for determining the rationality of drug use as well as providing the evidence based guidance for making the policies and making decisions at various levels of health care. This review studies are Aimed to discuss in detail on drug utilization pattern in outpatient general department.

### Key words:

Drug utilization evaluation, Outpatient, General department, defined daily dose, Prospective DUR, Retrospective DUR, Concurrent DUR, Prescribed daily dose.

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### INTRODUCTION

Drug utilization review is defined as authorized, structured, ongoing review of healthcare provider prescribing, pharmacist dispensing and patient medication<sup>1</sup>. Rational drug use is an important factor to be checked for the optimal benefit of drug therapy in patients' health care system. In India , many factors like illiteracy poverty, use of multiple health care systems, drug advertising and promotion, sale of prescriptions, prescribing pattern, competition in medical and pharmaceutical market place and limited availability this provides the drug information are the main chief reasons for not achieving the optimal health care<sup>2</sup>. Inappropriate use of drugs also further leads to random increase in the cost of the medical care, antimicrobial resistance, adverse effects and utilization evaluation DUE studies becomes one of the potential tools in evaluation of health system. Drug utilization studies focuses on factors related to prescribing, dispensing, administering and taking of medication and associated events.

Drug therapy accounts for a major portion of health expenditures. A useful strategy for achieving cost efficient health care is drug utilization research as it forms the basis for making amendments in drug policies and helps in rational drug use<sup>3</sup>. Antibiotics were prescribed most frequently and also accounted for majority of drug use. Antibiotics are prescribed as most frequent also accounted for majority of drug Resistance. The prescribed daily dose for most of the antibiotics corresponding to daily dose reflecting adherence to international recommendations.

Brand name prescribing and poly pharmacy was very common. <sup>[16]</sup> 78% of the total drugs prescribed were from the National List of Essential Medicines 2003<sup>[4]</sup>. Restricting the use of newer and costlier antibiotics, branded drugs and number of drugs and number of drugs per prescriptions could be considered as targets to cut down the cost of drug therapy significantly<sup>5</sup>.

Drug utilization research holds a crucial place in the clinical practices as it forms that the basis for making amendments in the drug dispensing policies at local and national levels<sup>1</sup>. The ultimate goal of such research is to facilitate rational drug use. Also, since it helps in developing strategies to utilize health resources in the most efficient manner, it is particularly needed in developing economies of India, where 72% of all health care burdens are borne by the patients<sup>6</sup>.

The reference standard for drug utilization is WHO ATC/DDD (Anatomical Therapeutic Chemical/Defined daily dose) methodology<sup>7</sup>. For each drug and route of administration, defined daily dose (DDD) is defined by the WHO Collaborating Centre for Drug Statistics and Methodology as the assumed average maintenance adult dose per day for its main indication<sup>8</sup>.

The DDD therefore is an international unit serving for international or regional comparisons<sup>14</sup>. However, DDD does not necessarily reflect the recommended or prescribed daily dose (PDD). In fact, several studies have reported discrepancies between DDD and PDD for different groups of drugs<sup>9</sup>.

A number of studies have reported drug usage patterns in different health care sectors in India. The aim of the present study was to generate the data on drug utilization in outpatients of general department<sup>10</sup>.

### CLASSIFICATION OF DRUG UTILIZATION EVALUATION<sup>11</sup>:

DUR is typically classified into three different categories.

#### 1. PROSPECTIVE DUR

Prospective review evaluation a patient's planned drug theory before a medication described. This drug utilization review helps the pharmacist to Access the prescription medications and resolve drug related problems.

**CONCURRENT DUR:**

It is performed during the course of treatment and the ongoing monitoring of drug therapy for the positive patients outcomes.

**RETROSPECTIVE DUR**

It is a review of drug therapy so that the patient has received the medication. A retrospective review aims to detect the pattern in prescribing, dispensing or advertising drugs and it helps to prevent recurrence of inappropriate medication use. The advantage of this drug utilization review is to ease of data collection, as records are assessed at the data collectors' convenience. A disadvantage is that some information may be unclear or missing and N phase.

**STEPS IN DUE<sup>12</sup>**

Drug utilization evaluation process is divided into four phases.

**Phase 1: Planning**

- Develop a DUR committee.
- Write policies and procedures.
- Describe about the departments of the hospital, where drugs are utilized.

Assess resources available for critical development, data collection, and evaluation. Consider the indications, dosing, dosage form, frequency of drug used to monitor and evaluate. Select criteria and establish performance threshold. Develop the methodology for data collection, evaluation and create a schedule. Educate hospital staff about DUE study and current criteria.

**Phase 2: Data Collection and Evaluation**

Start the data collections in proper way evaluate the collected data and determine if drug use problem exist.

**Phase 3: Interventions**

Send the results to hospital staff.

If a drug use problem was found, design and implement interventions. Collect new data on problem drug to determine with drug use has improved as a result of the intervention.

Disseminate results of re-evolution

**Phase 4: Program Evaluation**

Evaluate all DUR program activities at the end of the year, and plan the new activities for the upcoming year.

**INDICATORS USED<sup>13</sup>:**

The indicators of prescribing practices measure the performance of health care providers in several key Dimensions related to the appropriate use of drugs WHO prescribing indicators used in our study:

a. Average number of drug prescribed per patients.

$$= \frac{\text{Total number of drug prescribed}}{\text{Total no of encounter sample}}$$

b. Total number of encounter sample Percentage of encounters with an antibiotic prescribed

$$= \frac{\text{Number of patient encounter with an antibiotic}}{\text{Total no of encounter sample}} \times 100$$

c. Percentage of encounters with an injection prescribed

$$= \frac{\text{Number of patient encounters with an injection prescribed}}{\text{Total number of encounter sample}} \times 100$$

d. Percentage of drugs prescribed from essential drug list

$$= \frac{\text{Number of drugs prescribed from essential drug list}}{\text{Total no of prescribed drugs}} \times 100$$

**CONCLUSION**

This study provides the information about the drug utilization patterns in the general outpatient department. It has helped to identify irrational prescribing patterns in the general department. Hence, the clinical pharmacist must be considered to be an integral part. They should be involved in collection and presentation of prescribing data as a part of clinical audit and also counselling of patients care takers. Pharmaceutical care is needed in the correct management of drugs which is even more important in case of patients above 80 years when compared to other groups. The world health organization WHO core indicators helped to improve the prescribing pattern, identify significant problems involved in the knowledge gap of patients or caretakers understanding of instructions provided by consultants and even to minimize the cost burden on patient.

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