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PSYCHOTROPIC DRUG UTILISATION PATTERN CAN BE USEFUL IN MONITORING TREATMENT REGIMENS FOR MENTAL DISORDERS IN PSYCHIATRIC SETTINGS

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Abstract:

Mental disorders are one of the major causes of morbidity. Development of newer drugs like SSRIs and atypical antipsychotics has altered the treatment paradigms. Various factors like cost of drugs, local paradigms, etc. play a role in the selection of drug therapy and hence, affect the outcome. Psychiatric disorders form an important public health priority. Of the top ten health conditions contributing to the Disability Adjusted Life Years (DALYs), four are psychiatric disorders. Mental illness is associated with high levels of health service utilization and associated costs, and in developing countries these costs are mostly paid by the patient. For the treatment of psychiatric disorders, wide classes of psychotropic drugs are available. During the past two decades, the development of newer drugs like Selective Serotonin Reuptake Inhibitors (SSRIs) and atypical anti–psychotics have drastically changed the drug therapy protocols. The growing concern over the burden of psychiatric illnesses in health statistics elicit the importance of rational prescribing of psychotropic drugs. Psychotropic drugs have had a remarkable impact in psychiatric practice. However, their utilization in actual clinical practice, effectiveness and safety in real life situation need continuous study. In this review, we will review about various aspects of drug utilization in psychiatric clinical settings.

Keywords: *psychiatric ailments, anti-psychotics, drug utilization.*

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INTRODUCTION:

In many countries today ensuring the rational use of drugs is one of the most pressing problems faced by public health providers and administrators. WHO published its report on selection of essential drugs in 1977 bringing in the concept of essential drug program to promote rational drug use [1]. The Conference of Experts on the Rational Use of Drugs, convened by the World Health Organization (WHO) in Nairobi in 1985, defined rational use as follows: The rational use of drugs requires that patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community [2]. Rational drug use implies an individual approach to patient treatment. Success of treatment largely depends on the ability of a physician to diagnose the major health problem(s) of a patient, select the correct drug, dosage form and route of administration, foresee probable adverse reactions and drug interactions, and prevent unnecessary or dangerous duplication therapy. Further, rational drug use depends on the performance of the pharmacy and nursing departments in preparing and administering drugs. Implementation of hospital drug formulary systems helps to optimize treatment, make essential drugs available, and control costs of therapy. The drug formulary can be considered the basis of rational drug use. However, the existence of a rationally derived list of drugs approved for procurement and use in a hospital does not ensure that they are prescribed and used correctly.

One mechanism to ensure correct prescribing and use is the drug utilization review (DUR) process; although often considered a component of a drug formulary system, DUR programs can exist in the absence of other formulary activities [3]. Study of drug utilization pattern in a particular setting gives an idea about the prescribing practices and characterizes the early signals of irrational drug use. With the help of WHO prescribed drug use indicators and concept of defined daily doses (DDD) it is possible to compare drug utilization patterns between different settings [4]. DUR programs are carefully planned by the medical staff to include the drugs considered to be most problematic if not used correctly. By comparing actual drug use to predetermined standards, DUR can detect inappropriate and/or unnecessarily costly drug therapy. Programs are designed to monitor individual drugs, or drug classes, as well as to monitor drug use in specified diseases. When problems are identified, interventions are designed and implemented to improve drug use. Interventions can include educational programs, provision of drug information, changes in hospital policies and procedures, and changes in the drug formulary. Psychotropic medications are widely prescribed and the utilization of psychotropic drugs is increasing all over the world [5].

Drug utilization studies in psychiatry setting:

Psychotropic drug utilization rates can be useful in monitoring treatment for mental disorders on a population basis. Moreover, they provide information regarding rational drug use, given current knowledge regarding the risks and benefits of a given medication. In any DUR study it is important to link data on drug usage with the diseases or conditions for which the medicines are prescribed as it gives a better picture on the overall trend of drug use pattern. In order to achieve this it is useful to properly classify the diseases. The International Classification of Diseases (ICD) published by WHO and Diagnostic and Statistical Manual of Mental Disorders (DSM) by the American Psychiatric Association (APA) are two such coding systems that are widely used. The coding system utilized by the DSM-IV is designed to correspond with codes from the ICD. Since early versions of the DSM did not correlate with ICD codes and updates of the publications for the ICD and the DSM are not simultaneous, some distinctions in the coding systems may still be present [6,7].

During the past few years, psychotropic medication use became common and is increasing in all industrialized countries. The information prevalence and patterns of drug use in the general population comes from pharmacoepidemiology investigating the interactions between drugs and populations [8]. This knowledge about the utilization and impact of pharmaceutical products at the level of population actually treated is necessary to inform mental health policies and service developments [9]. Several studies in Europe have explored the utilization of psychotropic drugs in representative samples from the general population, but most have been conducted at the national level [10-15]. Two large international surveys provided data for cross-national comparisons: the telephone-based, cross-national survey of the general populations of France, Germany, Italy, and the United Kingdom [16] and the European study of the Epidemiology of Mental Disorders/Mental Health Disability: a European Assessment (ESEMeD/MHEDEA 200), including the general populations of Belgium, France, Germany, Italy, the Netherlands, and Spain. A substantial difference has emerged in prevalence rates of use among the different countries involved in the ESEMeD survey (2000), here after referred to as the ESEMeD project is the first European survey to

systematically assess the use of psychotropic drugs, using standardized methodologies in representative samples of the general population of six European countries; it is also the first study to link use patterns of all psychotropic drugs to prevalence rates of common mental disorder [17-22]. The Netherlands and Germany showed the lowest and France the highest prevalence rates, with the latter country having a use rate that was more than threefold higher compared to the Netherlands. Belgium, Italy and Spain showed prevalence rates in between, with more than 10% of the surveyed population having used at least once any psychotropic drugs in the previous year. Intercountry differences in the use of psychotropic drugs may be attributed to a variety of factors, including differences in prevalence rates of mental disorders, in the utilization rate of health and mental health services and finally in the administrative and legal rules affecting the prescription, retail and use of psychotropic drugs.[23] Few other studies are compared in table 3 [24-27].

Table 3: Comparison of DUR studies

Indicators	**Shankar et al**	**Schulz et al**	**Cuevas et al**	**Padmini et al**
	Nepal (2002)	Switzerland (1984)	Spain (2004)	India (2007)
Number of prescriptions	239	403	2647	1159
Average no of drugs/ prescription	1.75	1.8	1.63	1.8
% drug prescribed with generic names	29.7%	-	-	-
% drugs prescribed from WHO EML	29.48%	-	-	-
Duration	45 days	90 days	-	365 days

There are great variations in the way psychotropic drugs are prescribed. Most experts are in favour of psychopharmacological monotherapy, but little is known about the extent to which it is actually practiced. A survey of the psychopharmacological medication of all patients under treatment was carried out in three Austrian psychiatric clinics. It was established that only 8% to 22% of the patients underwent psycho-pharmacological monotherapy and that the patients received 2.2 to 3.3 psychotropics on average. Five to 22% of the patients received five or more psychotropic agents. The rare occurrence of monotherapy might be due to unsound treatment regimens in some instances, but much more to a general trend in psychiatry fostering polydrug use [43]. A prescription provides an insight into the nature of the health care delivery system [44]. The role of the psychiatrist in ensuring compliance to the drug treatment cannot be over-emphasized. Average number of drugs in a prescription audit is an important factor because higher number increases the risk of drug interactions. This is especially important in psychiatry as polypharmacy is common and psychotherapeutic drugs have been over-prescribed and misused [28].

Psychiatrists are now very keen to use newer psychotropic medications in psychiatric practice which require vast study on their utilization and consequences on real life effectiveness and safety in actual clinical practice [29].Various factors like cost of drugs, local paradigms, etc. play a role in the selection of drug therapy and hence, affect the outcome. It is impossible to give suggestions for improving the attitude of physicians regarding the pattern of prescription without the knowledge of utilization pattern of drug. Prescription order is an important transaction between the physician and patient. It brings into focus the diagnostic acumen and therapeutic proficiency of the physician with instruction for palliation or restoration of the patient's health [30]. .Now a days prescribing pattern is changing and it has become just an indication of medicine with some instructions of doses without considering its rationality [31].The rationality of prescribing pattern is of utmost importance because, bad prescribing habits includes misuse, overuse and underuse of medicines which can lead to unsafe treatment, exacerbation of the disease, health hazards, economic burden on the patients and wastage of resources [32]. The principle aim of drug utilization research is to facilitate rational drug use in population. For the individual patient rational drug use implies the prescription of a well-documented drug in an optimal dose on the right indication, with the correct information and at an affordable price. Drug utilization research affords a baseline reference points about the effect of diverse interventions in prescribing the concerned drugs [33]. Setting standards and assessing the quality of care through

performance review should become part of everyday clinical practice [34]. It oversees the observance of standards of medical treatment at all level of health care delivery system. It is concerned with the evaluation of medical care in retrospect through analysis of clinical records; to provide full benefits of medical knowledge effectively and rationally [35]. It is a component of medical audit that does monitoring and evaluation of the drug prescribing patterns and suggests necessary modifications in prescribing practices to achieve rational therapeutic practice as well as cost effective health care [36]. Bringing information on patterns of existing practice together with information on appropriate practice is an essential component of efforts to improve healthcare. This is possible only when each and every prescription in the hospital is audited by a prescription auditing team. The process of prescription auditing in its broad sense include prescription monitoring, drug utilization studies, prescription pattern studies, study of prescription habits of doctors, adverse drug reaction monitoring, drug interaction monitoring, criteria based prescription auditing and many other activities. But the grass root activities include checking the prescription for drug name (brand name or generic), strength, formulation, dose, and route of administration, frequency, duration of treatment and drug allergies. Drug utilization studies are a pre-requisite for the formulation of drug policies. This review identifies the problems that arise from drug usage in health care delivery system and highlights the current approaches to the rational use of drugs. Data of utilization patterns of drugs at out-patient departments of tertiary care teaching hospitals and analysis of that data is a very beneficial measure to formulate guidelines for improving the pattern of prescriptions aligned to rationality & effective outcome of the treatment with cost effectiveness [37]. .Measurement of drug use in health facilities not only describes drug use patterns and prescribing behavior but also helps in the identification of factors responsible for the practice of polypharmacy and the problems associated with it [38] .Setting standards and assessing the quality of care through performance review should become part of everyday clinical practice [39] .

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