

RATIONAL USE OF DRUGS

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ABSTRACT: Health is a fundamental human right and the attainment of the highest possible level of health is the most important worldwide social goal. Medicines are the most powerful weapon of health care. Advances in medicines treat a disease and save lives. The selection of essential or appropriate medications is the only way to improve the best quality of healthcare. 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 with full information and with the lowest possible cost. If one of these is not met, it is referred to as irrational drug use. Many drugs have been sold or prescribed inappropriately in the world, and a significant part of the world population lacks access to essential medicine.

KEYWORDS: Rational, Patient care, Appropriate, Effective, Indicators, Irrational, Prescribing, Quality, Strategies

INTRODUCTION

Nowadays, the number of diseases has increased, as a result, the number of drug use has also increased. Commonly, the drugs are used for several purposes like disease treating, diagnosis,

and prophylaxis. As per the WHO report, 50% of drugs were used inappropriately which leads to high morbidity and mortality rate and financial ramification. Inappropriate or irrational drug use arose by some factors like incorrect prescribing or profligate prescribing. Rationalized drug use may attain when the drug is safe, effective, appropriate, and affordable. So, WHO recommended to follow some indicators, strategies, standard treatment guidelines, essential medicine list, drug and therapeutic committee to rectify inappropriate drug use.

Definition

According to WHO (1985), rational use of medicine is defined as " Patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period and at the lowest cost to them and their community".^[1]

Causes

1. Substandard medical documentation
2. Insufficient patient education about sickness and medication.
3. Absence of family physician system.
4. A dearth of standard treatment guidelines.

5. Poor involvement in educational activities like continuing medical education (CME) for doctors and pharmacists.
6. Taking medication by ourselves.
7. Overuse of antibiotics, NSAIDs & antidiarrheals.
8. Instead of a generic name most of the drugs prescribing by brand name.^[2]
9. Pharmaceutical misuse like polypharmacy, widespread of antibiotics, patient non-compliances, overuse of injection.^[3]

Rationalization usefulness to the community

1. Cost-Effective Drugs

The drug cost is reduced by using formularies essential medicine list (or) limited list^[4] and increased generic drug prescribing also reduces the cost of the drug.^[5]

2. Avoidance of unnecessary ADR & misuse

Eg: Some unnecessary ADR arose from drug misuse and self-medication (OTC). Urban area consume more OTC drugs than rural areas. It causes potential toxicity. Which is controlled by pharmacists' strict instructions about the "Dispensing of drug only prescription" concept.^[6]

3. Minimized morbidity and mortality rate

Eg: Through antibiotic policy^[7] and appropriate use of antibiotics as per WHO indicators which avoids antimicrobial resistance due to avoidable

antimicrobial resistance, decreases the morbidity and mortality rate.^[5]

4. Enriched Quality of Life

Eg: Polypharmacy is the main problem. However, the drugs are administered as per the guidelines of EML.^[8] Increase the number of drugs directly proportional to the increased number of ADR and also cause drug-drug interaction. It leads to atrocious effects. The community may get improved quality of life by avoiding polypharmacy.^[9]

5. Improve Compliances

Eg: Non-compliances creates a problem in health outcomes. Drug adherence or compliances improved by the improvement of the doctor-patient relationship^[10] and symptom-based management.^[11]

Methods to overcome the irrational use of drugs

Well designed intervention studies are essential for improving rational drug use. Most drug use was worse in the private sector than the public. These issues should be overcome by following WHO & INRUD indicators, Strategies.

WHO/INRUD drug use indicators (WHO, 1993) [1]

1. Establishment of a multi-disciplinary national body to coordinate policies on medicine use

To promote rational use of the drug, a multi-disciplinary approach is required for intervention development, implementation, and evaluation. A national body is needed to coordinate National level policy and strategy which is used for both government and private sectors. Agency of regulatory authority involved in pharmaceutical legislation & regulation development and implementation.^[1]

2. Standard treatment guidelines

Clinical guidelines are helpful for prescribers to make decisions about the right treatment for particular clinical conditions. The Guideline should be based on prevalent clinical conditions, skills of available prescribers, and developed for each level of care. clinical guidelines, regular updating and Evidence-based treatment recommendation lead to its acceptance by practitioners.^[1]

3. Essential medicine list (EML)

Essential medicine list plays a vital role in every aspect of drug management like procurement, storage, distribution, prescribing, and dispensing of drugs. EML should be based upon clinical guidelines. It should be regularly updated like clinical guidelines.^[1]

4. Drug and therapeutics committee

The "Drug and Therapeutics Committee" was designed to ensure the safety and the effective use of medicine under its jurisdiction. DTC is responsible for clinical guidelines development and adaptation, selection of cost-effective drugs, implementing, and evaluating strategies.^[1]

5. Problem-based training in pharmacotherapy

To establish good prescribing habits, rational pharmacotherapy is necessary which is interconnected with essential medicine lists and clinical guidelines. Training based on common clinical condition and problem based which

improves student's knowledge, skills, attitude for the future good prescribing.^[1]

6. Continuing In-service medical education as a licensure requirement

CME is an educational activity to develop knowledge and skill. CME is more effective when it is problem-based. continuing medical education is a need for professional medical personnel as well as medical retailers.^[1]

7. Supervision audit and feedback

Good quality of life ensured by supervision. satisfied supervision includes prescription audit, feedback, peer review. Audit and feedback are also known as drug use evaluations which analyze the appropriateness of prescription. It is essential for identifying the problem of medicine use and correct the problem by strategy development, implementation, and evaluation.^[1]

8.Independent medicine information

Providing independent and unbiased information about the medicine is important to promote the rational use of medicine. Independent medicine information may be provided in two ways i.e, drug information center (DIC) and drug bulletin which are run by a government or non-government organization. It should be independent.^[1]

9.Public education about medicine

Unexpected clinical outcomes and adverse effects may be caused by poor public education about using medication. Governments are responsible for ensuring both quality of medicine and the quality of information on the medicine. Public education may improve by advertisement monitor & regulation, accurate and easily understood full labeled instruction like indication, drug name, contra-indication, dosage, the route of administration, drug interaction, storage, warning of OTC drugs.^[1]

10. Avoidance of perverse financial incentives

Financial incentives may harm as well as good on the rational use of medicine. Eg:



Prescriber who was money-minded, only prescribes expensive drugs and if dispensing fee calculated based upon the cost of medicine leads to expensive medication sale. ^[1]

Strategies to promote rational drug use ^[3]

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