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Rational use of medicines

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Abstract

Rational use of drugs can be defined as prescribing the right drug, in sufficient dose for the adequate duration and suitable to the clinical requirements of the patients at least cost. Causes of irrational use comprise not have of knowledge, skills or self-determining information, unhampered accessibility of medicines, overburden of health personnel, unsuitable promotion of medicines and earnings motives from selling medicines. Inappropriate drug use can have dire consequences; it has been associated with hospitalization and even caused deaths of inpatients in health care facilities. A variety of situations and circumstances promote irrational use of medicines. Rational use of medication saves lives, confines undesired toxicity, adverse events and maximize on the benefits that can be imitative from best use of medications. According to surveys conducted in 2004 by HAI Africa and WHO in 11 Sub-Saharan Africa countries in 2004, the average accessibility of the essential medicines in public health facilities was below 70%. Communication between professionals and consumers is essential to the enhancement of rational use of medicines. It is essential to recommence collaboration of physicians and pharmacists concerning accurate and competent drugs prescribing. Governments, private health care institutions, entity health care providers and patients all have an accountability to endorse rational use of medicines. Professionals should provide information to the customers about the name of the medicine, the intention for which the medicine is being taken, dose, frequency of use, and duration of use.

Keywords: Inappropriate use, medications, rational use, reasons, strategies

Introduction

Rational use of drugs can be defined as prescribing the right drug, in sufficient dose for the adequate duration and suitable to the clinical requirements of the patients at least cost^[1]. The thought of rational drug use throughout the earlier period was the premise of diverse national & international gatherings. A variety of studies conducted in urbanized as well as in budding countries during precedent years concerning the safe & effective use of drugs demonstrate that irrational drug use is a comprehensive occurrence & simply few prescriptions pretext rational use of drugs^[2]. Management with medicines is the majority cost-effective therapeutic interventions recognized and the fraction of nationwide health budget exhausted on medicines ranges amid 10% and 20% in urbanized countries and amid 20% and 40% in budding countries. Over 50% of the entire medicines universal are prescribed, dispensed, or sold improperly and 50% of patients not make the grade to take them accurately. Rational drug use attained further consequence currently in terms of therapeutic, socio economical and lawful characteristic. As a result, it is awfully stern with the aim of a lot of medicine is used in an improper and unreasonable approach^[3].

Reasons for irrational use of drugs

1. Be short of information
2. Defective, insufficient training and education of HCPs
3. underprivileged communication between HCPs and patient
4. Not have diagnostic services
5. Insist from the patient
6. Substandard drug supply system and hopeless drug regulation
7. Promotional performance of pharmaceutical industries^[4]

Types of irrational use of medicines

- Polypharmacy
- Inappropriate use of antibiotics
- Excess use of injections
- Not accordance with clinical guidelines
- Self-medication^[5]

People frequently have awfully rational reasons for using medicines irrationally. Causes of irrational use comprise not have of knowledge, skills or self-determining information, unhampered accessibility of medicines, overburden of health personnel, unsuitable promotion of medicines and earnings motives from selling medicines. In the last 20 years progress has been made to promote rational use of medicine. The primary action to correcting irrational use of medicines is to quantify it. On the other hand, rational use of medicines for all medical circumstances is elemental to the prerequisite of widespread access to satisfactory health care, fulfilment of health-related individual human rights. It is consequently essential that methods taken to progress the rational use of medicines. Since the effort of the precedent 20 years and the confirmation accessible at two international conferences on recuperating the use of medicines (ICIUM 1997 and 2004), greatly is notorious about promotion of rationalise of medicines^[6].

Mainstay interventions to promote rational use of medicines

- A mandated multi-disciplinary nationalized body to organize medicineuse policies
- Clinical guidelines
- Essential medicines lists based on treatments of choice
- Drugs and therapeutics committees in districts and hospitals
- Problem-based pharmacotherapy training in undergraduate programme
- Progressing in-service medical education as a licensure prerequisite
- Control, audit and comment
- Sovereign information on medicines
- Public education about medicines
- Averting of perverse financial incentives
- Suitable and obligatory regulation^[7]

Strategies to promote rational use of medicines**Governments**

- Doing a situational investigation
- Assess the impact of programmes in terms of medicine use, quality of service and costs
- Means of access with doctors and MPs
- Engage customers and the media
- World Health Organization (WHO) make recommendations to Ministry of Health (MOH) to establish units, with adequate possessions, dedicated promoting rational use of medicines.

NGOs

- Campaigner for the benefits of rational use of medicines from public health and financial perspectives
- Comprise a rational use of medicines indicator in each scheme

- MOH/WHO to organize NGOs in association with public, regarding actions pertaining to rational use of medicines.

WHO

- Assign personnel in every region with a detailed command to work in teamwork with MOHs to endorse rational use of medicines.
- Maintain countries to launch a division on rational use of medicines within the MOH.
- Enterprise advocacy.
- Financial statement for actions on rational use of medicines^[8].

1. Measuring the impact/obtaining the evidence:

Conducting cost benefit analysis; given that cost implication of irrational drug use; quantifying the drug maltreatment; documenting the expenditure in requisites of encumber of ailment, mortality and morbidity due to irrational use.

2. Formation of alliances: Provide facts to communities on the acquaintances between irrational drug use and their lack of access to valuable and safe drugs; incorporate RUM needs in development programmes.

3. Communication Strategies: Providing regular updates to the media on positive messages for RUM; highlighting consequences of irrational drug use such as deaths from resistant organisms; naming and shaming activities promoting irrational drug use.

4. Empowerment of consumers: Carrying out simple rational drug use activities within the communities to ensure step by step learning of RUM; providing communities with information to enable them and grassroots groups to demand appropriate use of their medicines.

5. Providing practical messages: Marketing widely the Swedish model on antibiotic use; replicating and publicising the positive ICIU Moutcomes more widely, sharing successful local experiences within the country through support of local WHO offices and/or Ministries of Health.

6. Advocacy and lobbying: Making RUM part of training curriculum; making presentation on RUM at all possible venues; providing politicians with data for their deliberations in parliament; providing factual sheets on RUM to lobbyists.

7. Address at global level: Passing of a strong resolution on RUM at the World Health Assembly, allocating of funds for promoting RUM in the budgets, including RUM as a requirement in agreements, addressing RUM as part of strengthening health systems.

8. Address industry power: Providing leadership in addressing excesses of the pharmaceutical industry that lead to irrational drug use; holding industry accountable to their social responsibilities^[9].

Inappropriate use of medicines is a serious concern, especially when it affects the more vulnerable people and occurs for extended durations. Inappropriate drug use can have dire consequences; it has been associated with hospitalization and even caused deaths of inpatients in health care facilities. A variety of situations and circumstances promote irrational use of medicines^[10].

Self-medication

Self medication may also be facilitated by certain situations including:

- Poor access to desirable health care because of high costs, long distance and discriminatory policies;
- Poor regulation and/or implementation of regulations on prescription drugs and pharmacy practices (with profit motives overriding the professional requirements);
- Overzealous advertisements of medications, that make claims of efficacy and scope of use but conceal adverse effects;
- Poorly informed public on matters of health and self-care;
- High burden of diseases, many of them with overlapping symptoms, e.g. pain, fever, insomnia and depression are common symptoms for different conditions which require different medication, but the correct medicine can only be determined by consultation a medical practitioner for diagnosis;
- Poverty which puts consultations out of reach for people who cannot afford to pay for professional health care services.

From a psychological viewpoint, the most general cause of self medication arises from complaints of insomnia or lack of sleep at night. Temporary insomnia which lasts for only a short time may be treated for extended periods of time devoid of direction by practised persons and this leads to dependence to otherwise superior medicines and gives a ghastly name, not only to the medicines but also to the doctors who advise them ^[11].

Commonly misused medicines

The most usually used medications world over are analgesics and antibiotics. These medicines are frequently used incorrectly because they taken for the wrong reasons (wrong drug used to treat exacting symptoms) and used wrongly (taken for inaccurate periods or in wrong amounts). This mistreatment has unwanted outcomes. The widespread is treatment is non-adherence and a lot of patients not succeed to acquire the full course prescribed. A fewer familiar but escalating dilemma of irrational use of medicines is the use wrongly of cough mixtures containing codeine. It is obvious from the preceding that rational use of medicines is a significant existing concern that has a lot of chief psychological aspects, distressing professional and lay persons and demands accomplishment by all. ^[12]

Rational use of medication saves lives, confines undesired toxicity, adverse events and maximize on the benefits that can be imitative from best use of medications. Patients are optimistic to forever quire suggestion from a healthcare provider to construe symptoms of an illness and the suitable remedy. Patients must knowledgeable about rational drug use through the mass media or through private consultation for maximum gains to be derived from the medications available to them. Between 25 to 30% of patients who attend primary health care facilities do so because of minor, but common psychiatric disorders ^[13].

Many of these conditions are presented to the medical providers as complaints of headache, backache, abdominal and other body pains. The overwhelmed, overworked and undertrained primary health care provider who does not have time to delve into the underlying cause of the symptoms simply takes the shortcut of the irrational drug use to quickly attend to the high number of patients. Health is an individual account ability. Intriguing care of one's

body and health and the health of one's family should be the main concern of every human being. The accountability of personal health has handed over to the healthcare system and the faith is that doctors, pharmacists and other healthcare professionals are accountable for health. This results in enslavement on health professionals and neglects one's personal liability of health. One alarming statistic shows that, 300,000 patients are hospitalized yearly in Germany because of illnesses caused by using up of medications. An approximate one third of the world's population is deficient in regular access to essential medicines with this numeral increasing to over 50% of the population in the poorest parts of Africa and Asia. ^[14] The manner customers used medicines is predisposed by a extensive assortment of factors include: knowledge about use, the cost of medicines, regulatory systems, civilizing factors, neighbourhood beliefs, communication between them and prescribers to certify accurate use of the drugs, outpatient support, way into intention information on medicines, and mercantile endorsement. According to surveys conducted in 2004 by HAI Africa and WHO in 11 Sub-Saharan Africa countries in 2004, the average accessibility of the essential medicines in public health facilities was below 70%. This way that many patients who go to public health facilities for treatment frequently go reverse home without attainment the medicines they need. Some of these patients have to way out to buying the essential medication from the private segment where they are more costly. The trouble is that essential medicines are not reasonable to widely hold of the population. Some segments of the inhabitants have developed misconception that the expensive medicines are more effective than the cheaper generic versions. In most developing countries, national drug regulatory agencies do not have enough qualified personnel, financial resources and equipment. As a result the function of regulating the importation, distribution, promotion, and sale of medicines is not adequate. This has resulted in medicines being dispensed by unqualified personnel in facilities that are not licensed to provide these services. To exacerbate the situation, qualified health professionals are often concentrated in the urban areas. ^[15]

Communication between professionals and consumers is essential to the enhancement of rational use of medicines. Professionals should afford the following information to the consumers: the name of the medicine, the purpose for which the medicine is being taken, dose, frequency of use, and duration of use. The prescribed and dispensed medicines should also be accurately labelled demonstrating the above information. The dearth of qualified health personnel in public health facilities has resulted in insufficient labelling of medications by prescribers and dispensers, and in not enough time spent by them to notify the consumers on how to take the medicine because the most imperative sources of information for customers about medicines are doctors, followed by the pharmacists, then nurses and other healthcare personnel. Customers particularly in the developing countries are not often consulted on the treatment judgment. With miniature or no monitoring of drug prescribing, these might have severe implications for suitable drug use and patient care. Besides, the current circumstances shows that self-regulation by the medical profession has disastrous. In the majority of errors deduced professional guidance to pharmacists would help to avoid

them. Day-to-day tests and normal revision of prescriptions would change the treatment and reduce the risk of adverse reactions which emerge as a result of maltreatment of the preparations. It is essential to recommence collaboration of physicians and pharmacists concerning accurate and competent drugs prescribing.^[16]

Indicators of rational use of drugs

The mainstay indicators to assess drug usage are.

Prescribing indicators

1. Average number of drugs per prescription
2. Percentage of generic drugs prescribed
3. Percentage of antibiotics prescribed per prescription
4. Percentage of injectables prescribed per prescription
5. Percentage of drugs prescribed from essential medicines list of the hospital/institution.

Patient care indicators

1. Average consultation of time
2. Average dispensing time
3. Percentage of drugs actually dispensed
4. Percentage of drugs adequately labelled
5. Patient's knowledge of correct dosage

Health facility indicators

1. Availability of essential medicines list or formulary
2. Availability of key drugs for some general health problems.

Steps to advance rational drug prescribing

Step: I Recognize the patient's crisis based on symptoms & distinguish the need for action.

Step:-II Diagnosis of the disease

- Recognize primary cause & fascinating factors.

Step:-III List out possible intervention or treatment

This includes non pharmacological treatment or drug treatment. Drug must be elected from diverse alternatives based on efficacy, convenience & safety of drugs including, drug inter-actions & high risk group of patients.

Step:-IV Commence the treatment by writing a precise & comprehensive prescription e.g. name of drugs with dosage forms, dosage schedule & total duration of the treatment.

Step:-V Specified proper information

- Instruction & caution concerning the treatment given e.g. side-effects (ADR), dosage schedule & dangers/risk of stopping the therapy abruptly.

Step:-VI Supervise the treatment to check, if the exacting treatment has solved the patient's problem. It may be:

(a) Passive monitoring – done by the patient himself. Explain the patient what to do if the treatment is not efficient or if too many side effects occur

(b) Active monitoring done by physician and he make an appointment to check the response of the treatment^[17-21].

Conclusion

Irrational use of medicines continues to be a severe and extensive community health problem. Governments, private health care institutions, entity health care providers and patients all have an accountability to endorse rational use of medicines. Patients must be well-informed about rational drug use in the course of the mass media or through private consultation for greatest gains to be imitative from the medications accessible to them. Professionals should

provide information to the customers about the name of the medicine, the intention for which the medicine is being taken, dose, frequency of use, and duration of use.

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