Rational drug use

GNK 585 Block 18

Rational drug use (RDU)

- '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'
- WHO conference of experts, *Nairobi 1985.*

Major principles

- There are two major principles that define rational drug use
- 1. use of drugs according to scientific data on efficacy, safety and adherence
- 2. cost-effective use of drugs within the constraints of a given health system

Rational drug use

- Factors that have led to sudden realisation for rational drug use are:
- Increase in numbers of drugs available
- Efforts in the prevention of development of resistance
- Growing awareness by consumers of new developments
- Increased cost of treatment

Hazards of irrational use of drugs

- Irrational use of drugs may lead to:
- 1. Ineffective and unsafe treatment
- 2. Exacerbation or prolongation of illness
- 3 Distress and harm to the patient
- 4. Increase the cost of treatment

Parameters linked to RDU

- Treatment guidelines
- Essential Drug list
- Perception of drug quality
- Medical education and drug culture
- Patient education
- Prescriber monitoring
- Incentives for providers and physicians
- Dispensing rights for physicians

Problems in drug use in the health sector

- Inadequate training in use of drugs
- Inadequate continuing education
- Unethical medical advertising
- Busy outpatients
- Inducements by medical companies
- Unauthorised prescribing
- Drugs as substitutes for caring
- Commercialisation of the medical profession

Promoting RDU in the health sector

- National Drug Policy
- Steps to Good prescribing according to WHO guidelines
- Standard treatment guidelines
- Essential drugs lists
- Pharmacy and therapeutic committees
- Formularies
- Ensuring Quality control and assurance
- Strengthening prescribing
- Continuing education
- Training all health professionals on RDU
- Role of media
- RDU in curriculum of medical, dental, pharmacy, nursing
- Pharmacovigilance

The process of rational treatment

- Rational treatment is based on a thorough understanding of the patho-physiology of the disease
- Treatment options can be divided into the following types
- 1. advice/information
- 2. non-drug treatment
- 3. drug treatment
- 4. referral

The process …

- There are two stages in treating a patient:
- 1. choosing a p-drug(s) for common conditions and complaints
- A p-drug is a *drug ready for action*. It is a active substance defined by it's generic name, with a recommended route of administration, strength, dosage schedule, duration of treatment, and information and warnings to a patient
- 2. the six-step routine in treating a patient

The six-step routine

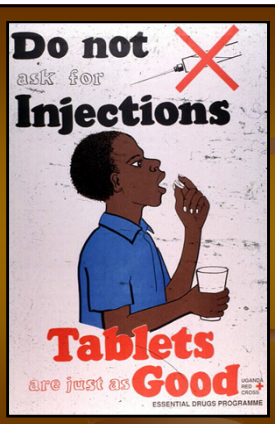
- Step 1: Define the patient's problem.
- Step 2: Specify the therapeutic objective. What do you want to achieve with the treatment?
- Step 3: Choosing suitable treatment. Check effectiveness and safety.
- Step 4: Start the treatment.
- Step 5: Give information, instructions and warnings.
- Step 6: Monitor (and stop?) treatment.

Problems in drug use by consumers

- Self-medication
- Use of unutilised drugs
- Inadequate labelling or storage of medicines
- Peer-group exchange
- Multiple consultations
- Inadequate consumer awareness

Improving RDU by consumers

- Education: creating awareness via unbiased up to date information by print and electronic media
- Rational diagnosis and prescribing
- Rational dispensing and counselling
- Adherence advice and support
- Drug information centres that can be accessed by the public
- Help lines and support groups for certain diseases e.g. HIV, diabetes, psychiatric



The Pharmaceutical Industry

- Local and foreign pharmaceutical industry pressure, advertising and incentives may lead to irrational drug choices.
- If inaccurate information on indications, risks and the side effects is conveyed to prescribers and consumers then a drug's potential for benefit is converted into potential for harm.

The Pharmaceutical Industry …

- Industry spends a large proportion of its promotional budget on representatives who regularly visit prescribers to promote company products.
- Although many doctors deny it advertising works. (has been shown by clinical trials)
- Drug company representatives have a powerful influence on prescribing.

Commercial promotional material

- even when ethical, promotes a certain product and does not provide the comparative, comprehensive and independent information needed by prescribers and consumers to make a fully informed choice. Sole reliance on this information can lead to use that may be unnecessarily expensive, therapeutically inappropriate or even harmful. Reliance by consumers on this information may lead to purchase of drugs that are heavily promoted but unnecessary and there is the risk that these purchases may replace necessities such as food or a truly needed medicine.

WHO's ethical criteria for Medicinal drug promotion

- Drug promotion should be in keeping with national drug policies; should be reliable, accurate, truthful, informative, balanced, up-to-date, capable of substantiation and in good taste; and that it should not contain misleading or unverified statements or omissions likely to induce medically unjustifiable drug use or to give rise to undue risks.

Irrational drug use

- **Diagnosis:**
- Inadequate examination of the patient
- Incomplete communication between patient and doctor
- Lack of documented medical history
- Inadequate laboratory resources

Irrational drug use

- **Prescribing:**
- Extravagant prescribing
- Over-prescribing
- Incorrect prescribing
- Under-prescribing
- Multiple prescribers

What do we need to know for rational prescribing

- 1. Basic pharmacology of the drug
- 2. Indications for this drugs use
- 3. Contraindications to this drug's use
- 4. Side effects of this drug
- 5. Drug interactions
- 6. Cost to the patient and the community
- 7. Dosage schedule
- 8. What is the quality of the evidence provided about the risk/benefit ratio of this new drug compared to existing therapy
- 9. What conclusions have independent experts reached about the role of this new drug (e.g. review articles, editorials e.t.c)

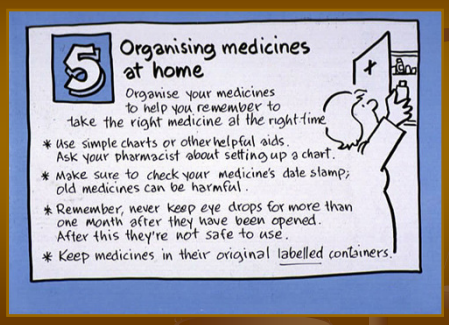
Irrational drug use

- **Patient adherence:**
- Poor labelling
- Inadequate verbal instructions
- Inadequate counselling to encourage adherence
- Inadequate follow-up/support of patients
- Treatment or instructions that do not consider the patient's beliefs, environment, or culture

Rational dispensing

- Labelling – can include pictures, symbols
- Counselling – information provided orally and written via patient information leaflets
- Adherence support – especially with ARV's
- Many patients will not be able to afford all the medicines prescribed, the prescribed items e.g. vitamins can be identified that can be missed to reduce the overall cost of the prescription.
- The pharmacist is often the first port of call before a visit to the doctor so they need to be able to advise when the patient can self-treat and when they must go to the doctor.

Good advice …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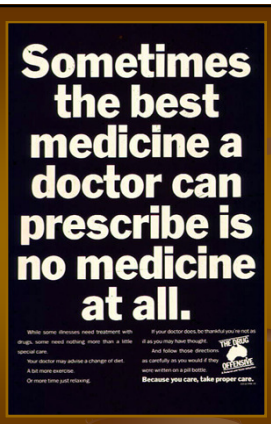
Organising medicines at home
Organise your medicines to help you remember to take the right medicine at the right time.
* Use simple charts or other helpful aids. Ask your pharmacist about setting up a chart.
* Make sure to check your medicine's date stamp; old medicines can be harmful.
* Remember, never keep eye drops for more than one month after they have been opened. After this they're not safe to use.
* Keep medicines in their original labelled containers.


Sometimes the best medicine a doctor can prescribe is no medicine at all.
While some illnesses need treatment with drugs, some need nothing more than a little special care.
Your doctor may advise a change of diet.
A bit more exercise.
Or more time just relaxing.
If your doctor does, be thankful you're not as ill as you may have thought.
And follow those directions, as carefully as you would if they were written on a gold bottle.
Because you care, take proper care.