Pharmacoeconomics & Drug Compliance

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Objectives

Explain pharmaco-economics & cost of prescription

Evaluate the cost effective drug therapy.

Discuss the concept of generic prescribing

Discuss the significance of pharmaco-economics in various strata of society

Explain drug compliance, adherence & therapeutic failure

Discuss the consequences of noncompliance

What is Pharmacoeconomics?

A branch of economics that uses cost-benefit, cost-effectiveness, cost-minimization, cost-of-illness and cost-utility analyses to compare pharmaceutical products and treatment strategies.

Weighing the costs and benefits of option 1 with those of option 2 (for instance, a new drug and the previous best therapy) to determine which is the most efficient

way to use our limited resources.

Efficiency is a key concept in economics, i.e. how to buy the greatest amount of benefit for a given resource use.

Scarcity, choice and prioritisation

The importance of Pharmacoeconomics can be found in;

- Drugs to be included in formulary

- Drugs showing maximum efficacy for a particular individual/patient
- Drugs and services to be provided at different levels of healthcare to ensure most optimum outcome
- Best drug for a particular disease
- Improvement of quality of life of the patient by a particular therapy

Scarcity of resources requires individuals to choose which goods and services they consume. The basis for their choice is the relative value that they place on each good or service. The structure of these relative values is the basis for their system of prioritisation.

What is QALY?

Quality Adjusted Life Year (QALY) : attempts to integrate both quality and the quantity of life.

QALY assumes that if a treatment increases one's life expectancy by 2 years, but causes adverse effects or inconvenience, such that one's quality of life or utility are decreased by 25%, the net gain is 2 x 0.75 = 1.5 QALYs.

METHODS in PE Analysis

What is cost effectiveness?

Cost-effectiveness analysis compares the costs and health effects of an intervention to assess the extent to which it can be regarded as providing value for money.

Cost–utility analysis the benefits are expressed as quality-adjusted life-years (QALYs)

Cost–benefit analysis the benefits are expressed in monetary terms

What constitutes a cost?

Costs are seen differently from different points of view.

Direct costs, Indirect or **productivity costs and Intangibles**

Direct costs:

Medical: drugs; staff time; equipment

Patient: transport; out-of pocket expenses

Indirect costs:
production losses; other uses of time (loss of work)

Intangibles:
pain; suffering; adverse effects.

GENERIC Prescribing

Generic prescribing is the prescribing of a drug by a physician using the generic name.

Paracetamol instead of Panadol

Generic substitution is based on the supposition that therapeutic equivalence, palatibility, and equivalent safety/adverse reactions exist

among the various brands of a prescribed drug.

Lowering of cost is the major factor in favor of generic prescribing.

It is better to avoid generic prescribing in cases of drugs with low therapeutic indices.

PATIENT COMPLIANCE

Compliance may be defined as "the extent to which the patients' behaviour coincides with medical or health advice."

Reasonable to term a patient noncompliant when the failure to comply is sufficient to interfere appreciably with achieving the therapeutic goal.

Determinants of compliance

THE ILLNESS: difficult to relate compliance patterns to particular diseases. Exception being patients with psychiatric illness, who are in general less compliant.

In general, the longer the duration of treatment, the poorer is compliance likely to be.

THE PATIENT: Education (better compliance), Social Status, Geriatric patients with polypharmacy (less compliant)

THE DOCTOR: important influence on compliance (Number of drugs, patient communication, empathy)

MEASURING Compliance
IMPROVING Compliance

By ensuring compliance: Single dose (gonorrhea), Depot formulations

By removing bamers to compliance:

Palatability of medicines can be improved (children)

Blister calendar packs for oral contraceptives or 1 blockers help patients to remember to take the drug

By simplifying therapeutic regimens

reducing the number of tablets a patient has to take

reducing the frequency of administration

By educating the patient

THERAPEUTIC Failure

Failure to accomplish the goals of treatment resulting from inadequate or inappropriate drug

therapy and not related to the natural progression of disease. Multiple factors at different levels are involved;

Non-Compliance

Wrong or Inadequate Prescriptions

Drug interactions

unexplained

CONSEQUENCES of non - compliance

Therapeutic failure

Emergence of drug resistance

Increased episodes of hospitalization

Decreased QoL

THANK YOU