

Application of Pharmacoeconomics in Clinical Practice

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Outline

- Status of pharmacoeconomics in SA
- Why is pharmacoeconomics important?
- Factors influencing medicine prices in SA
- Legislation influencing medicine pricing in SA
- How to perform a simple pharmacoeconomic evaluation in clinical practice.

Definition: Pharmacoeconomics

- Identifies, measures, and compares the **costs** and **consequences** of drug therapy to healthcare systems and society.
- Refers to the **scientific discipline** that compares the **value** of one drug or drug therapy to another. A pharmacoeconomic study evaluates the **cost** and **effects** (expressed in terms of monetary value, efficacy or quality of life) of a pharmaceutical product.
- Pharmacoeconomics provides information critical to the optimal allocation of health care resources.

Status of pharmacoeconomics in SA

- Pharmacoeconomics guidelines – NDOH
- Voluntary submissions
- Introduction of new chemical entities
- NHI

Ministerial Advisory Committee on Health Technology Assessment

- representative from the council of deans of health science faculties, dental and medical faculties
- representative from the health professional councils (HPCSA, SANC, PCSA)
- colleges of medicine
- private hospital groups
- professional societies
- Council for Medical Schemes
- medical schemes and/or administration of medical schemes
- actuarial expert with healthcare benefit design experience
- academic and research organisations

Why Pharmaco-economics?

- Health care is becoming more costly than available funding.
- Need for detailed evidence-based analyses examining cost and effectiveness.
- Medical inflation has outpaced cost of living increases.
- Cost-effectiveness does not always mean affordable.

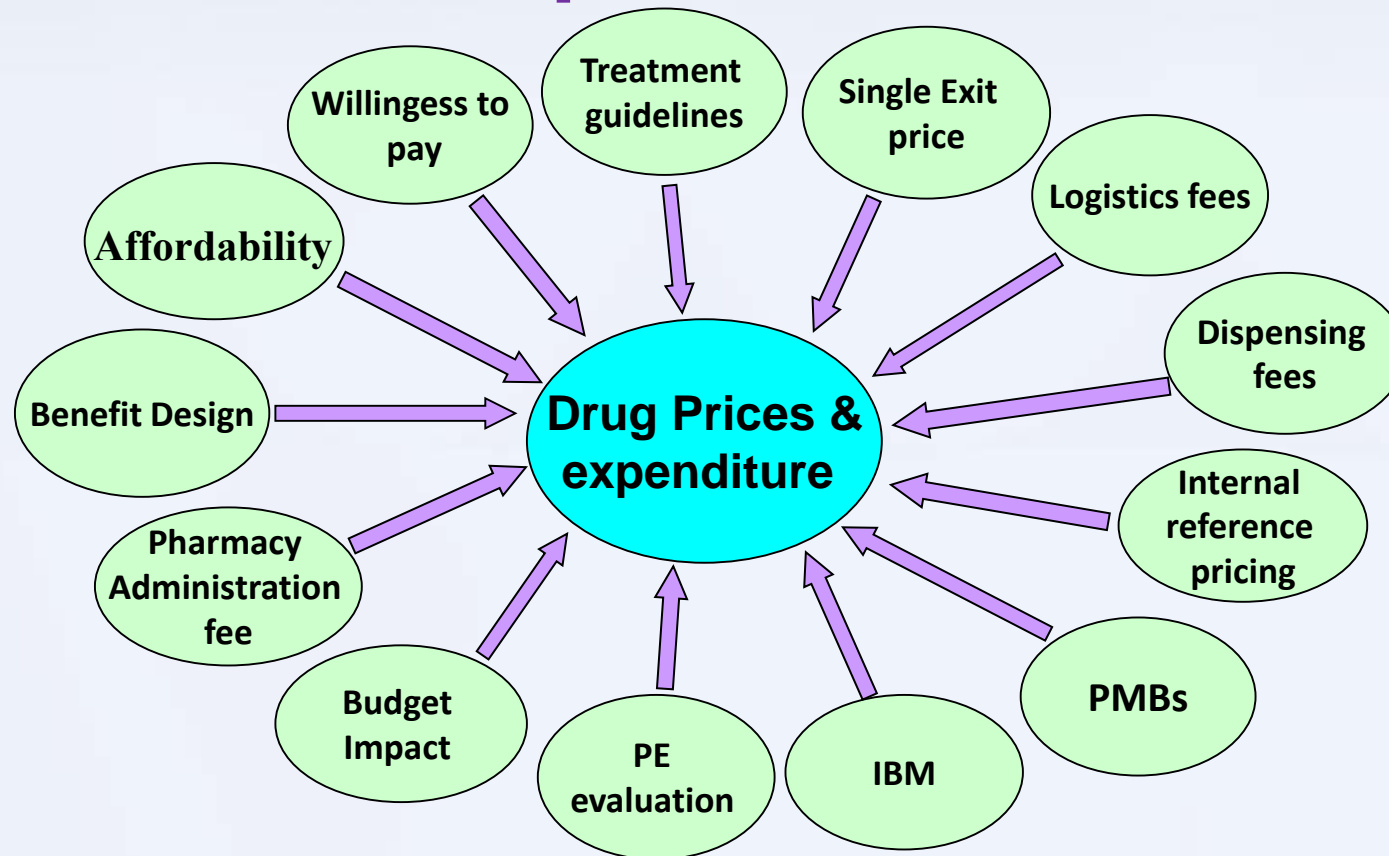
Why Pharmaco-economics? (contd)

- A cost-effective drug may become cost-ineffective is used irrationally.
- Economic evaluation can provide information for decision makers concerning:
 - Pricing
 - Selection of therapy for clinical protocols
 - Developing formularies
 - Reimbursement of drugs

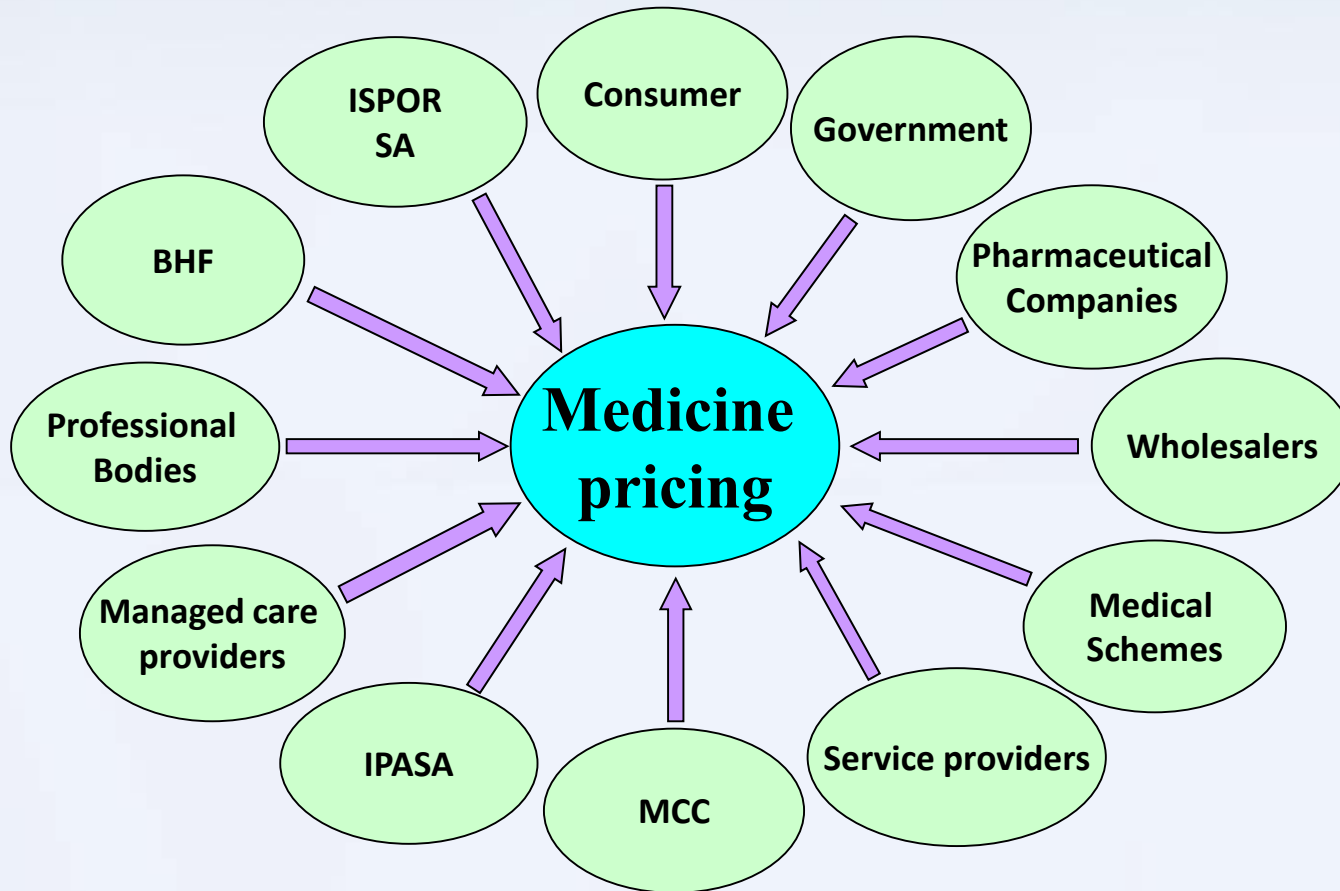
Why pharmaco-economics? (contd)

- It is not primarily about saving money, it is about how to spend money.
- Allows for different perspectives to be taken into account.
- Allows for systematic analysis and measurement and reduces uncertainty surrounding the order of magnitude.

Factors Influencing Medicine Prices and Expenditure



Stakeholders



Regulations relating to a transparent pricing system for medicines and scheduled substances (30 April 2004)

Section 14 (5):

DG may request in writing:

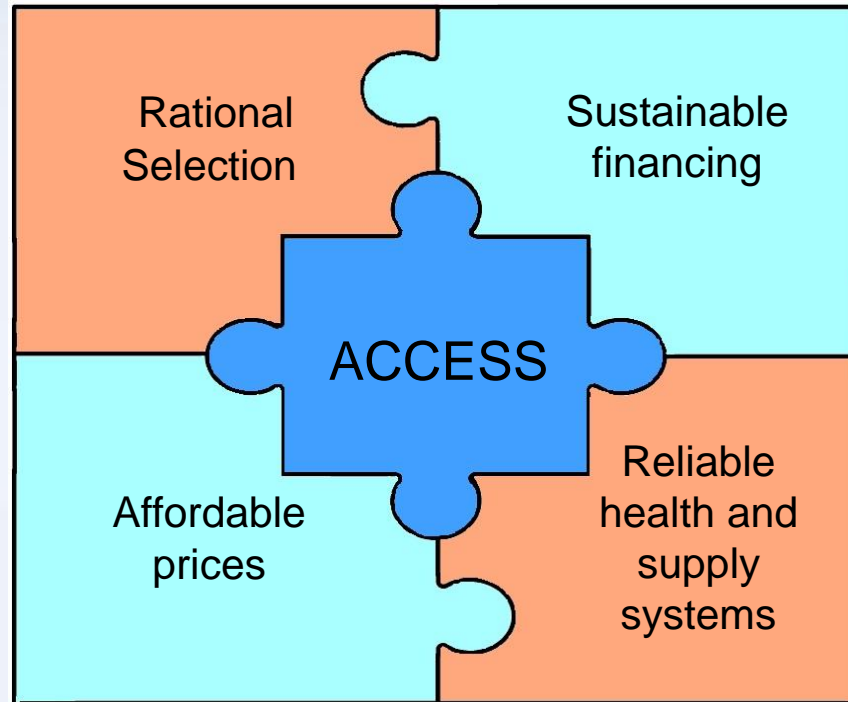
Details as to the comparative efficacy, safety and **cost effectiveness** of the medicine or Scheduled substance **relative to that of other medicines** or Scheduled substances in the same therapeutic class compiled in a manner consistent with guidelines published by the Director-General in the Gazette from time to time.

International approach to medicine pricing policies and intervention WHO/ HAI

Intervention	Implemented in SA
External reference pricing	No
The role of health insurance in the cost-effective use of medicines	Yes
The regulation of mark-ups in the pharmaceutical supply chain	No
Competition policy	Yes
Sales tax on medicines (exempted)	No
Promoting the use of generic medicines	Yes
Cost-plus pricing	No
Pharmacoeconomic analysis	No
Tariffs on medicines	Yes – SEP, API, LF, Dispensing fees, Reg 9

- National treatment guidelines
- National EML
- Rational use of EML

- Price information
- Price competition
- Bulk procurement
- Generic policies
- Equitable pricing
- Reduction or elimination of duties and taxes
- Local production of assured quality

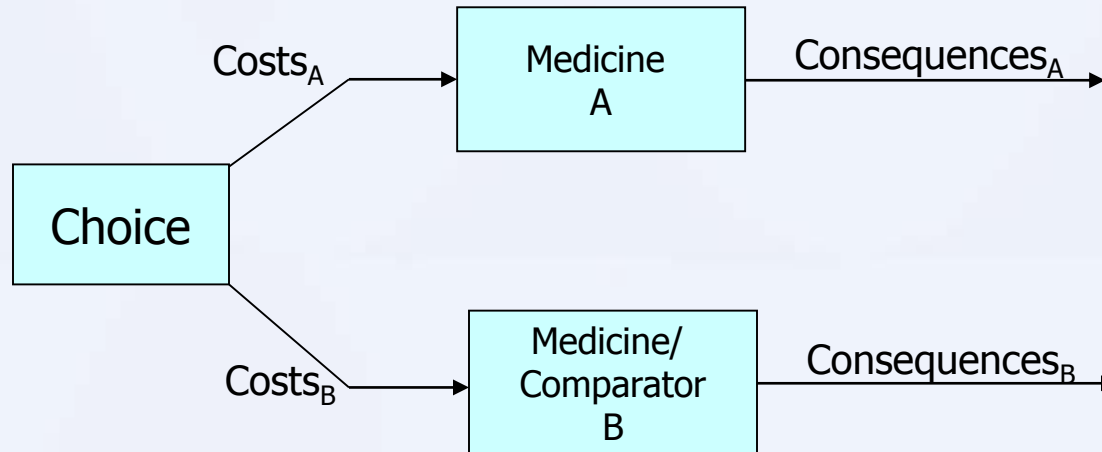


- Increased public funding
- Out-of-pocket spending
- Cost sharing with patients
- Donor assistance
- Donation of medicines

- Health sector development
- Public-private-NGO mix
- Regulatory control
- Procurement co-operatives
- Traditional and complementary medicines

WHO framework for access to essential medicines

Economic Evaluation always involves a comparative analysis of alternative courses of action



Cost-effectiveness

- R100 Drug A $\longrightarrow \downarrow 10 \text{ mmHg}$
- R 200 Drug C $\longrightarrow \downarrow 20 \text{ mmHg}$

- ICER: $\frac{R200 - R100}{20 - 10 \text{ mmHg}} = R100 / 10 \text{ mmHg}$
= R 10 per 1 mmHg decrease in blood pressure

Economic comparison of four fictitious statins

Drug	Yearly cost	% reduction in total cholesterol	Cost-effectiveness ratio
A	R 2000	30%	R 66
B	R 4000	40%	R 100
C	R 6000	45%	R 133
D	R 10 000	25%	R 400

Fictitious statins

A vs B:

$$\text{ICER} = \frac{\text{R}4000 - \text{R}2000}{0.4 - 0.3} = \text{R}20\,000/\text{year}/\text{point reduction}$$

A vs C:

$$\text{ICER} = \frac{\text{R}6000 - \text{R}2000}{0.45 - 0.3} = \text{R}26\,666/\text{year}/\text{point reduction}$$

Option D – exclude – most expensive and least effective.

If patient takes these drugs for 20 years – the cost difference would be R 400 000 and R 533 320 respectively for each point reduction.

Consider:

Is the reduction in cholesterol levels worth the additional expenses?

Clinical significance – Decrease morbidity and mortality.

Questions

- Do you think that we allocate scarce resources wisely, fairly and efficiently?
- Are we ready to ration more extensively?

Thank you

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