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PHARMAECONOMICS

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ABSTRACT

This review paper emphasizes why pharmacoeconomics matters in healthcare systems and increases patient value through data-driven decision-making. Pharmacoeconomics helps healthcare providers in making medical treatment available at affordable prices and promotes rational use of drugs. Pharmacoeconomics has sown its seeds in countries having high poverty rates like South Sudan, DRC, and Madagascar. The whole system improves patient satisfaction and trust in the healthcare system.

INTRODUCTION

Pharmacoeconomics is the study of the economic impact of pharmaceuticals on both individuals and societies.

Pharmacoeconomics takes into account cost, benefits, and other factors such as compliance, adverse effects, and comparative effectiveness of pharmaceuticals. It is an important field for healthcare providers.

Additionally, Pharmacoeconomics can be defined as the study of the economy or finance of pharma products that are supplied to healthcare. The combination of these two fields can be used for analyzing new drugs in development, post-market marketing drugs, pricing, cost containment, and reimbursement policies among others.

Pharmacoeconomics is the study and research of the economic impacts a drug has on the healthcare system. The medical world has used pharmacoeconomics to determine how a given drug affects healthcare costs. Pharmacoeconomics can be used in many different ways. When drugs are first released, pharmacoeconomic research is done to figure out the cost-benefit analysis of those drugs. Pharmacoeconomic research can be used to see if a drug is worth using or not, or just for clarification or insight on how it would affect a certain population. It can also be used to find out which price would make a certain population more likely to use a certain drug (i.e.) seniors vs young adults). In 2000, the government of Tanzania prioritized sulphadoxine-pyrimethamine over chloroquine as first-line therapy for the treatment of uncomplicated malaria.

Pharmacoeconomics and the related field of outcomes research are used to assess the value of new drugs or interventions in medicine. These analyses are typically expressed as cost-benefit or cost-effectiveness ratios, which have been expressed as net monetary costs per quality-adjusted life year (QALY).

Pharmacoeconomics tries to answer questions like:

Do drugs work better than other therapies?

How do they compare to no treatment?

What are the risks and benefits?

What other treatments exist besides drugs?

What are the costs and benefits for society as a whole?

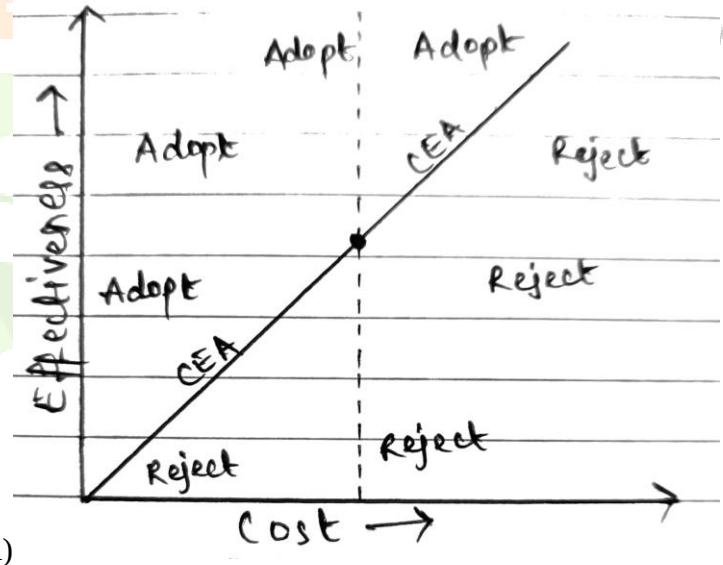
What is the cost of the medicine per additional year of quality-adjusted life?

Will a certain pharmacological therapy decision increase the patient's quality of life?

What are the patient outcomes of various treatment modalities?

The ultimate goal for pharmacoeconomic is to provide the best quality care at the lowest possible cost.

PHARMACOECONOMICS ANALYSIS OR STUDIES



COST-EFFECTIVE ANALYSIS (CEA)

Cost-effective analysis can be applied to health care programs where input will be in rupees and outcome will be stated in the health improvement unit for e.g., mmHg, cholesterol levels, symptom-free days [SFDs], years of life saved.

Incremental cost- effectiveness ratio (ICER) $= \frac{Cost\ A - Cost\ B}{Effect\ A - Effect\ B}$

COST EFFECTIVENESS	Lesser cost	Consistent cost	Greater cost
Lesser effectiveness	P Conduct ICER	Q	R Dominated
Consistent effectiveness	M	N Arbitrary	O
Greater effectiveness	X Dominant	Y	Z Conduct ICER

The above table epitomizes alternatives about effectiveness and cost, for comparing standard alternatives with new alternatives. O, R, Q; the lightly shaded cells represent cost - effective when the new alternative would not be considered cost-effective, that means, the standard alternative would dominate it, and Y, X, M represent the darkly shaded cells when the novel substitute would be considered cost-effective, that is, the dominant choice.

COST MINIMIZING ANALYSIS (CMA)

When assessed treatments (two or more than two) are proven to be similar in expressions of a particular result or consequence, then the costs concomitant with each treatment may be calculated, assessed, and weighed against.

COST BENEFIT ANALYSIS (CBA)

Cost-benefit analysis is usually used in economics, and also in health care. CBA is a risk-benefit analysis. In Cost benefit analysis quantifies both cost and benefits in fiscal terms. In CBA we can analyze whether the benefits of the program outweigh the cost of implementation.

$$Incremental\ net\ monetary\ benefit = (Benefit\ of\ A - Benefit\ of\ B) - (Cost\ of\ A - Cost\ of\ B)$$

RETURN ON INVESTMENT (ROI)- Return on investment measures the return on a project relative to the cost of project.

$$ROI = \frac{(Gain\ from\ investment - Cost\ of\ investment)}{Cost\ of\ investment} * 100$$

CONCLUSION

We can conclude that Pharmacoeconomics works in three-dimensional society, economy and health. Considering its benefits, the need for pharmacoeconomic is increasing day by day. This concept has made the health care system more affordable, safe and effective. Hence, it has improved overall trust in the health care system.

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