

Editorial

Pharmacoeconomics: An Effective Tool for Prioritization in Iran Healthcare System

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There is a general consensus among scientists and most politicians that any investment in improving health status of any society will bring fruitful returns in both short and long term development plans. Today “healthy humans” are the most precious asset of societies and therefore have been the focus of most national and international development strategies. However, most of the time decision makers are faced with the fixed budget problem, where they have to decide how to allocate or ration resources between patient groups and/or preventive measures. Managing health sector is one of the major challenges of today’s most governments around the globe.

Traditionally, licensing of drugs has been solely based on quality, safety and efficacy. However, faced with increasing healthcare costs, nowadays many countries especially developed countries also require evidence of cost effectiveness to convince decision makers to include the proposed medicines in their national medicinal list. This may cause more efficient pricing of the medicines. Despite scarce resources available in the health sector, every day decision makers are facing new demands in this sector. New interventions, including new medicines, are being developed for many conditions that have previously had no treatment. Most of the time price of new drugs are higher than that of the drug they replace. Some of these medicines, including lifestyle drugs such as erectile dysfunction and anti-obesity drugs, may not have even justified reasons for inclusion in the national health system.

In conventional clinical models, the argument seems to be the choice of patient that will be switched to the new therapy, which is determined solely on clinical terms. There seems to be limited appreciation of the fact that ultimately who is going to be switched from one therapy to another, which will be determined by the cost and budget considerations. Therefore, in recent decades decision makers in healthcare system have realized the importance of prioritization in health sector. Although, it is true that developed countries have substantially more resources available in their health sector, ironically these countries are more advanced in prioritization in their healthcare system and therefore in recent decades health technology assessment (HTA) has been extensively used by policy makers in developed countries. HTA has been defined as a form of policy research that systemically examines the short and long term consequences, in term of health outcomes and resources useage of the application of a health technology or a set of related technologies. HTA is a multidisciplinary activity which systemically evaluates the effect of a technology on health, on the availability and distribution of resources and on other aspects of health system performance such as equity and responsiveness. It is now clear that interventions once thought to be beneficial, in the light of more careful evaluation, turned to be at least of no benefit or at worst harmful to the system.

Resources, even in rich societies, are limited and there are always unlimited competing demands on these limited and scarce resources. Therefore, decision makers have to “choose” among the priorities. With each choice comes a cost associated with it and therefore the used resources cannot be used for other choices. That is why there is always an “opportunity cost” associated with the decisions.

Today, pharmacoeconomics can be used as a tool of management, which could be applied to strategic and operational decisions about pharmaceutical development, production and consumption of medicines. Pharmacoeconomics could provide direction for allocation of limited resources in healthcare system. The basic idea behind pharmacoeconomic analysis is relatively simple as it seeks

to identify, measure and value their costs and outcomes simultaneously.

Healthcare professionals often feel instinctively uncomfortable about putting a financial value on human suffering. However, the function of money is quite simply to allow society to compare the value of totally different commodities.

Pharmacoeconomics uses economic approaches applied to pharmaceuticals to guide the use of limited resources to yield maximum value to patients, healthcare payers and society in general. Cost-effectiveness studies are of utmost importance to justify expenditure in all fields of healthcare. However, the term “cost-effectiveness” is often used generally and it should be mentioned that in fact there are several types of pharmacoeconomic evaluation which could be used in different settings. The most commonly used pharmacoeconomic analyses are as follows:

1. Cost-of-illness-analyses consider the costs of a given disease without considering the outcome.
2. Cost-minimizing-analyses compare the costs of interventions that provide the same outcomes, with the ultimate aim of identifying the cheapest option.
3. Cost-effectiveness-analyses involve the comparison of cost per standard unit of effectiveness for two or more interventions, that provide varying outcomes.
4. Cost-utility-analyses aim to compare the cost per quality adjusted life year (QALY) for two or more interventions, that provide varying outcomes.
5. Cost-benefit-analyses compare the costs and benefits of two or more interventions that provide varying outcomes using monetary terms as comparison tools. This method compares clinical effects of alternative therapies from mortality and morbidity point of view to their net costs.

Despite reasonable enforcement of regulations in production, importation and distribution of medicines in Iran, prescription and consumption of medicines are not appropriate. This is partly due to the unanimous and non-targeted governmental subsidies for imported medicines. However, lack of a universal and efficient insurance system has also caused a drastic rise in out-of-pocket payments by patients in recent years. In the other hand, inappropriate allocation of the limited resources has also worsened the situation. Therefore, it is expected that the use of pharmacoeconomics by decision makers in Iran’s health sector could provide an appropriate prioritization of resources, at least in the public sector.

Although, like any other specialty implementation of pharmacoeconomics depends mainly on availability of local expertise, this is more crucial for this discipline. Despite the existing clinical data, economic factors influencing pharmacoeconomic analyses of medicines cannot be extrapolated from studies performed in other settings and these parameters have to be estimated locally. In fact, it is a local knowledge and the studies conducted in other countries studies may not be valid for our country.

Pharmacoeconomics is by its very nature interdisciplinary. It draws together elements from a range of disciplines including economics, decision theory, biostatistics, information science, pharmacy, medicine, management and law. Therefore, establishing a graduate training discipline is an essential component of implementing pharmacoeconomics and its integration in Iran’s healthcare system. Faculties of pharmacy and economics should closely work together to train interested and eligible students from both economy and pharmacy disciplines in order to furnish Iran’s health sector with urgently needed pharmacoeconomic experts. Prioritization in most of the developing countries’ healthcare system is very much ignored and wastage of limited resources available is a major challenge. Therefore, even the application of early stages of pharmacoeconomic analyses would greatly improve the rational allocation of resources. It seems that even the use of cost minimizing analyses in the current situation of Iran’s pharmaceutical market will create great savings for Iran’s health system.

The majority of those working in the area of pharmacoeconomics would see their principal role as a source of providing information on comparative therapy evaluations regarding drug procurement. However, pharmacoeconomics is also facing threats, which may compromise the quality of conclusions driven from its outputs. The problem of quality and related biases in pharmacoeconomic studies which

are funded by the pharmaceutical industry are major concerns.

It should also be acknowledged that pharmacoeconomics has its own limitations and above all it is vital to mention that pharmacoeconomics is not a “quick fix” to all difficulties and shortages in the healthcare system. However, it will provide a valuable tool for policy makers to make the most appropriate decisions for their most prior subjects in health sectors. Although pharmacoeconomics is able to provide comparative data on costs and effects of different interventions, it is the national health decision makers who will ultimately have to make decisions that recognize the spending resources on a certain disease or risk group. This could in turn decrease the resources available to treat other disease or patient groups Iran healthcare sector will look forward to welcome graduates of first post graduate pharmacoeconomics discipline started 2008, in coming years to share their experience with national decision makers for proper allocation of limited available resources. I am confident that graduates of this new discipline in Iran will greatly improve future of prioritization in healthcare sector.

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