

Introduction to Healthcare Economics Management

INTRODUCTION

The enormous healthcare expenses and the high demand for healthcare services are growing at rapid speed has become a huge challenge for any nation to provide efficient care to all the population with limited resources which is a Herculean task. This has necessitated for policymakers to focus on health coverage of population by applying various methods and carrying research to know more about the mechanism for higher cost, and other related intricacies, that need to be established and suitably addressed. Unless and until, the problems existing in the system are clearly known, any action will not be adequate to provide the best possible healthcare to entire population with the limited finance and this is a global phenomenon.

Complexities of Healthcare System

In healthcare system, there are many complexities such as infrastructure, finance, highly trained human resource, dealing with complex health and modern technologies, sophisticated medical instruments for diagnostic and therapeutic purposes. Medicines are another issue and the patient or customer, is most complex entity to deal with. The medical field is dynamic, with highly qualified trained personnel such as doctors, nurses, paramedical and allied support service staff engages at primary, secondary and tertiary care level work to deal with curative, preventive, rehabilitative, promotive and palliative aspects. Another aspect is the political system, economical status, living environment, culture, race, religion, and inherent habits are contributing factors for healthcare programs. One has to understand all aspects, and then appropriate steps could be initiated to accomplish the set objectives.

Healthcare in Technologically Advanced Nations

It has been observed, that technologically advanced countries have developed better healthcare systems with advent of technology has brought new methods and techniques to deal with most complicated cases much faster, with less risk and good quality care, however with exorbitant cost. To have efficient method of processing the healthcare cases, by applying case mix studies, classifying the diseases and procedures to work out the actual efforts and services used to convert into financial terms to be of value to fix healthcare charges and to settle reimbursement cases from the insurance agencies and third party payers.

Despite, these nations have an excellent healthcare policies, strategies, adequate finance, infrastructure, experienced healthcare professionals, are also experiencing health economical issues such as huge health cost due to technology and other infrastructure, highly qualified human resource, hence, all the population with varied economic strata cannot have easy access of health, the complications are insured, non-insured, prospective payments, reimbursement and over prescription of drugs and ill effects, medical errors, acquiring nosocomial infections, mortality, patient falls and other adverse effects are hampering efficient healthcare delivery to all inhabitants alike.

And also there is a hidden discrimination in awarding the returns for the work performed by different healthcare teams. For some services, such as for diagnosis tests, medications, surgical procedures, therapies rendered by physicians, therapists, and other paramedics, the charge are estimated and carried out, while for some vital staff such as nursing and other who spend much time in the care of patients with enormous responsibilities are rewarded much less and considered least important.

The developing countries: The developing countries with huge population to serve, financial constraints coupled with many other economical, social, cultural and other inherited issues, endeavor is to provide effective quantitative and qualitative healthcare services to all the inhabitants alike have tremendous problems to deal with effectively. This topic on health economics should address most of the issues of both technologically advanced and less privileged nations. With this objective, this book has been written to encompass all possible aspects to come out with reasonably appropriate solutions to have better healthcare to all alike.

Need for Health Economics Research

It has become crucial to conduct health economics research to promote and understand how the healthcare providers, healthcare system, insurance and payers and the patient behavior and value of new methods endeavor. Research on this topic, can provide insight into what products and services are essential and beneficial or valueless. And regular market conditions that are applicable for healthcare economics, e.g. studies of the effects of benefits or losses that influences on healthcare delivery. Careful studies of diagnosis, course of treatment for curative cases, and approaches for preventive measures that can optimum their impact on health well-being. The technologies and methods that proved good could be applied, and those showed negative results, need modification or avoiding applying those methods. The scope of health economics portrays explanation of the nature of health economics. It has an important role in healthcare decision making and provides an overview of the structure of sub-discipline of health economics.

Health Reforms

Nevertheless, healthcare reform is, and has been a hot issue for some time and is likely to remain so until there has been additional progress in resolving some of the basic issues that have been mentioned. Citizens and especially affluent are conscious of, and troubled by, the flaws with the system of providing healthcare and healthcare reform is often on the minds of those who work in healthcare and for the government. It is likely that healthcare researchers, policy makers, decision makers, as well as the general public who are taxpayers and consumers will continue to **seek improvements**

in healthcare and that, in doing so; they may approach for assistance in identifying and retrieving healthcare expenditure and related data. To that end it is important to take a closer look at **major funders** of the healthcare system and at some of the data available.

Health Economics

It is a branch of economics concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health. In other words: Health economics is a branch of economics concerned with the formal comparison of costs and consequences of healthcare. Health economics is devoted to the subject of how healthcare resources are allocated and utilized. As per the **World Bank**, the Health economics is the study of how scarce resources are allocated among alternative uses for the care of sickness and the promotion, maintenance and improvement of health, including the study of how healthcare and health-related services, their costs and benefits, and health itself is distributed among individuals and groups in society. Whereas economics is the study of how individuals and societies choose to allocate scarce productive resources among competing alternative uses and to distribute the products from these uses among members of the society.

The healthcare cost is the actual costs of providing services related to the delivery of healthcare, including the costs of procedures, therapies, and medications. The difference between health and expenditure, that refers to the amount of money paid for the services, and from fees, which refers to the amount charged, regardless of cost. As regards to health expenditure that is the amounts spent by individuals, groups, nations, or private or public organizations for total healthcare and/or its various components. These amounts may or may not be equivalent to the actual costs (Healthcare costs) and may or may not be shared among the patient, insurers, and/or employers.

Medical Economics

Often used synonymously with health economics, medical economics, according to Culyer, is the branch of economics concerned with the application of economic theory to phenomena and problems associated typically with the second and third health market outlined above. Typically, however, it pertains to cost-benefit analysis of pharmaceutical products and cost-effectiveness of various medical treatments. Medical economics often uses mathematical model to synthesize data from biostatistics and epidemiology for support of medical decision making, both for individuals and for wider health policy.

Health Insurance

Given that illness is unpredictable and that everyone's future health status is uncertain, demand for healthcare is also uncertain. The institutional response to this uncertainty is the development of insurance mechanisms whereby covered individuals make regular payments to some risk-pooling agency in return for guarantees of some form of reimbursement in the event of illness. This agency might be a public body or a private firm, the payments might be premiums or taxes, and the benefits might be indemnities (fixed cash payments) varying across illness events, reimbursement of all

or part of actual healthcare expenditure, or direct provision (public or private) of services as needed (Evans WN, 2006).

Application of Technology for Hospitals

With the long-term vision and impact of technology application for hospitals will significantly help in view of huge increase in the number of customers who will need to be served, the healthcare industry will achieve increased quality of care results, consistent quality between rural and urban providers, accountability for outcomes, and accurate measures of success. All this may be accomplished with lower costs provided a timely implementation of apt technology. The driving force behind these advances is the development of open, interoperable, yet secure systems. The systems will provide the medical community to integrate diverse information and business systems as well as the data necessary to support continuous quality improvement. Through enhanced user interfaces, the real needs of the healthcare providers will be met from prenatal to geriatrics that includes inpatient care, preventive care, improving long-term and home care.

Network Infrastructure

A hospital's network with IT infrastructure, that helps in connecting between providers and patients within a single hospital, or between hospitals or at the state or nationwide health information network allows providers to better coordinate care and retrieve data across a wide spectrum.

In the process of reforms to force hospitals to find new ways to cut costs and increase effectiveness, due to ineffective plan to run the business, end up incurring extra expenditure. An estimated "\$5 billion is lost annually in the implantable device supply chain as a result of waste, inefficiency and lack of visibility" states Bruce Johnson, CEO of GHX, a leading healthcare supply chain management software/services company. Getting a better grip on managing a healthcare organization's supply and demand will save huge money to the organization while also increasing positive patient care. "The supply chain is the second largest and fastest growing expense for healthcare providers; with only labor costing most providers more".

Cost Analysis (CA): The **cost analysis** is a comparative cost of alternative interventions or programs. The CA does not include consequences. Cost analysis involves the systematic collection and assessment of costs associated with an intervention in terms of national currencies, e.g. US \$ or Japan Yen or Indian ₹. When a patient visits for care, each episode depends upon the type of case and services required are calculated in terms of unit price or unit cost. Cost analysis can be conducted independently, but to have more clarity, need to be associated with cost economic analysis (CEA), cost utility analysis (CUA), and cost benefit analysis (CBA). Cost analysis takes into account the costs incurred to develop and implement an intervention, including direct costs, indirect costs, and intangible costs. Generally, the direct costs signify the value of resources used specifically for the intrusion. These costs can be classified as medical or non-medical. The direct medical costs include costs such as clinical examinations, consultations, diagnostic tests and medications. Direct non-medical costs which are associated with training, the cost of advertising, mass media campaign, etc. Indirect costs include the resources that are lost by a person his/her time by involving in

interference of any work, measures as lost wages or lost leisure time for that particular period of time. This time loss can be considered as 'unit of time losses to measure economic value. Suffering pain, or grief with interference, can be considered as intangible costs, are not included in economic assessment, as they are difficult to measure and work out a price.

Economic Evaluation in Public Health Decision Making

There is a great deal of interest in determining the economic impact of health promotion and disease prevention. Despite the inconsistencies in the methods employed in many published, peer-reviewed economic evaluation studies to date, researchers have applied methods of economic evaluation to virtually all areas of public health the number of economic studies has increased over time, the opportunity to summarize and compare economic information to inform public health decision making has increased as well. One of the goals of the community guide is to help decision makers and other stakeholders to use resources wisely through careful assessment of the value of public health prevention interventions.

Economic evaluations provide explicit descriptions of the costs and consequences of different courses of action in public health. They also provide a framework for thinking about costs, benefits, and the structure of a decision. Although these evaluations have limitations that need to be assessed carefully, they are nonetheless a useful tool for public health decision making. Systematic reviews of economic evaluations contribute to that goal by summarizing a body of economic evidence, adjusting economic data to facilitate study comparisons, raising awareness of the limitations and applicability of the existing evidence, and guiding a research agenda for future economic evaluations of public health prevention programs. By summarizing and interpreting economic studies, systematic reviews make economic information available in a more useful and accessible form. The real value of economic information is that it can improve the efficiency of public health programs, furthering the public health mission by making the greatest possible improvement in the health of a population using available resources.

Economic Values for the Registered Nurse Services in Deciding the Staff Pattern

It has become necessity to recognize the economic value of the registered nurse services in deciding for staff pattern. In order to quantify the economic value of professional nursing, information gathering started from different sources, e.g. literature on the relationship between nurse staffing levels and nursing-sensitive patient outcomes in acute care hospitals. Using hospital discharge data to estimate incidence and cost of these patient outcomes together with productivity measures and the economic implications have changed in registered nurse staffing levels. The data used for medical and surgical patients in federal acute care hospitals was the information collected from a literature review, and hospital discharge data from the 2005 Nationwide Sample. Special attention was bestowed on information related to patient nosocomial complications, healthcare expenditures, and national productivity. It is observed that as nursing staffing levels increased, patient risk of nosocomial complications and hospital length of stay decreases, resulting in medical cost savings, improved national

productivity, and lives saved. Though the conclusion is not a complete one, only some portion of the services that professional nurses provide can be quantified in pecuniary terms, however, the partial estimates of economic value presented illustrate the economic value to society of improved quality of care achieved through staffing levels.

Nursing Sensitive Quality Indicators

Of late, the research linking hospital nurse staffing issues and adverse patient outcomes has become a hot discussion and sought the attention of those both inside and outside of healthcare. The studies carried out during the '90s and the early 2000s, when there was acute shortage of nursing personnel and nurses were not easily found to be recruited. Those who were in the job have to shoulder heavy load of patient care and other administrative duties that brought the attention of authorities of understaffing in units, frustration and job dissatisfaction. The studies indicated that the outcome of under staff have indirectly associated with increased mortality, that has caught the attention of media and public became interested in the conclusion of studies. It was also realized not only increase mortality, the quality of care would not be as expected with less ratio of patients and the nursing staff. All this has lead to undertake studies on different indicators that could relate to the quality of care.

Patient or Consumer of Health should know about Healthcare Quality

Most patients or consumer of health users or people would probably define quality as receiving the best care possible for one's illness or condition at par with state or national international standards. It would certainly include the avoidance of errors or mistakes. And for many, it also includes the entire experience of receiving care-including respectful treatment by medical professionals and clear answers to their question and inquest.

Monitoring Quality of Care

Many organizations are interested in monitoring the quality of care provided by hospitals and medical groups, including central or federal and state agencies, employer coalitions, and health plans. They use this information to ensure that patients receive care that is safe and effective. It is expected that each licensed clinic and physicians, hospital or healthcare institution, and organizations to provide best quality care services to the patients at par with established standards.

Nursing Economics

The scientific application of principles of care to prevention of illness and care during illness. Feeding an infant at the breast; tending and caring for a child. The provision of various levels of preparation, of services essential to or helpful in the promotion, maintenance, and restoration of health and well-being in prevention of illness, as of infants, of sick and injured, or of others for any reason unable to provide such services for them. The profession of a nurse is to serve the sick and injured with best of her/his ability to bring back to normalcy or minimize the sufferings and utmost care for safety of a patient. The practice in which a nurse assists "the individual patient, sick or injured, in the performance of activities that contributing to health or its recovery (or to a peaceful death) that he/she would perform unaided if he/she had the necessary strength, will or knowledge to help the patient gain independence as rapidly as possible.

Nursing Intellectual Capital Theory

Increased demands for healthcare coupled with its rising costs have led to a keen interest to understand how nursing professional knowledge and skills influences on the quality of care administered to hospitalized patients. This has lead Chritine L. Covell, PhD, RN and Souraya Sidani, PhD to make a study and present intellectual capital theory in the context of its application to and impact on nursing research and practice.

Nursing Intellectual Capital

Hence, the nursing intellectual capital theory was initiated to assess whether there was any difference in the patient care outcomes while administrative, clinical decision making and also any impact on continuing professional growth. The studies having indicated that there is a difference, in relationship between nursing knowledge and outcomes in the quality of services rendered and professional development. This challenging move has effected several changes in registered nursing staffing pattern, in order to keep patients safe and from adverse effects and to achieve the best patient care.

The application of intellectual capital theory at all the organization levels, as a knowledge stocks for business performance to enhance the individual and group quality service. It is obvious to have intellectual capital; the organizations need to invest in learning and hiring or retaining those characteristic employees. With the help of social networks among employees, the innovation, learning by increasing the efficiency by dissemination of information and cost of transaction can be minimized with encouraged cooperative behavior of the staff.

Hospital Cost with Nursing Cost Offset

The exorbitant cost for healthcare throughout globe has been a hard discussion for every one especially, the healthcare developers, managers and providers. The main person who bears this burden is the patient. There is much evidence in industry directions, endeavor to find decisions how to contain cost in healthcare. When we look into other intricacies, there is one most important but largely unrecognized and/or unacknowledged negative impacts on nurse workforce who are directly involved in providing in quality care and safety of patients. Nevertheless, payment reforms that focus on producing higher quality care and/or that bring more resources to support nursing care are fascinating opportunities that deserve attention, study, and potential advocacy by nurses. Hospital prospective payment system (PPS) practiced in some of the countries that have been under research with respect to its effects on the nurse workforce and patient safety.

The advantages and impact of PP system has been significant as in US, inpatient hospital days fell by 51 million annually between 1981 and 1987 as a result of PPS incentives for shorter hospital stays. This scenario, a large numbers of new registered nurse (RN) graduates and huge reductions in inpatient days was consistent with nurse surplus rather than shortage, but soon hospitals nationwide were reporting high RN vacancy rates.

Concluding Thoughts

It is motivating to note that hospital charges increased an astounding \$59 billion in the United States in just one year between 2004 and 2005 (Modern Healthcare, 2007), and operating margins the public is concerned about patient safety, and the remains a problem. The burnout scores for bedside nurses in US hospitals are among the highest recorded shortage, nurses spend considerable time on tasks that of non-nursing functions, which do not require their special expertise, thereby, the nursing care required is left undone. The majority of nurses conveyed that management attaches less importance to the problems that they identify in care at the bedside (Aiken et al., 2001). That nurses in countries with differently organized healthcare and different provider financial incentives report remarkably similar problems in hospital care, suggests that modest payment reforms may be weak instruments to bring about enduring improvements in quality and to retain a qualified nurse workforce (Aiken, Clawrke, and Sloane, 2002).

The healthcare growing bureaucracy has to realize that financial incentives are not the only way to bring about change. Political advocacy is one route to change, as represented by California's mandated hospital nurse staffing ratio legislation and Pennsylvania's health reform plan that builds on access to advanced practice nurses (Aiken, 2007). Thus, nursing should place a high priority on increasing the number of nurse researchers with the knowledge and skill to conduct rigorous studies on the impact of public policies on nursing.

In market economies, financial incentives are important in shaping healthcare. Further development of the subfield of nursing economics could provide a stronger scientific basis for influencing policy decisions that impact the nurse workforce and the quality of nursing care. But it is instructive that countries with centrally controlled healthcare systems have shortcomings in their hospitals that are similar to those in countries with market economies, and even in market economies, there are examples of influential noneconomic drivers of policy and cultural changes in healthcare. Nursing profession would be best positioned to influence the future shape of healthcare if it combines its quest for holistic and patient centered care with science-based advocacy and evidence-based skepticism about any kind of reform that does not fundamentally change the organization and culture of healthcare.

Reduced nurse turnover produces substantial savings to hospitals when all the costs of replacing nurses are considered, including recruitment, overtime, and use of supplement agency nurses (Jones, 2004, 2005). Thus, nursing should place a high priority on increasing the number of nurse researchers with the knowledge and skill to conduct rigorous studies on the impact of public policies on nursing.