
THEORITICAL REVIEW OF QUALITY OF HEALTHCARE SERVICES IN INDIA

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ABSTRACT: Services play a major role in business and economic activities all over the world. The services sector in India continues to expand steadily and since 1991, it has been growing at an annual average rate of 9%. In the fifteen years between 2000 and 2015, services with a share of 52 per cent of GDP on an average have contributed 65 per cent to GDP growth. Healthcare industry is among the most rapidly growing services in the world economy, estimated at \$4 trillion yearly in the Organization for Economic Co-operation and Development countries alone. This sector has seen new and rapidly evolving forms that are spurred by as wide-ranging factors such as technology, changing demographics, costs, skills, growing private sector participation, natural endowments, culture and geography. The key objectives of an effective healthcare system are to enhance average life expectancy and to improve quality of life and productivity.

KEY WORDS: Organization, Healthcare

INTRODUCTION

The healthcare industry presents a very dynamic and uncertain environment. Continuous changes in technological, social, political, regulatory and economic contexts of healthcare delivery have made management of the organizations very challenging. Most countries including India, deliver healthcare services through a wide variety of network of public and private healthcare systems. It has emerged as one of the largest service sectors in India. Healthcare expenditure of a country is an important indicator of how well a country is equipped to meet the healthcare needs of its citizens. In 2014, national healthcare spending equaled about 5.2 per cent of GDP and it is expected to rise by 13-15 per cent per annum through 2000-15 (in rupee terms) and scale up to about 5.5 per cent of GDP by 2009 (IBEF, 2015). Other estimates suggest that by 2012, healthcare spending could contribute 8.5 per cent of GDP and employ around 9 million people (CII-McKinsey, 2012). Government share of the total expenditure is only 17%, and therefore out-of-pocket expenditure is as high as 83%. The private sector share is projected to be Rs 1600 billion, boosted by increasing penetration of health insurance. Health insurance is expected to generate a market spending of Rs 400 billion in healthcare services. However, India needs to add at least 80,000 beds each year to meet the growing demand for healthcare services, and to meet W.H.O. norms on beds- to-population ratio. India's public health investment was 0.9 per cent of GDP in 2011. Considering the needs of the people and the rising costs, the National Health Policy- 2012 set a goal to increase health expenditure by the Government from 0.9 to 2.0 per cent by the year 2010. The policy has further welcomed the participation of the private sector in all areas of healthcare activities - primary, secondary and tertiary in urban, rural and tribal areas (NHP, 2012). To bridge the demand-supply gap in healthcare services it is estimated that an investment of nearly Rs. 100,000 to Rs. 140,000 crore is required (CII-McKinsey, 2012).

The healthcare spending has been rising in many countries and the U.S. healthcare expenditure is the highest among the industrialized nations. In 1999, the U.S. spent about \$4000 per person annually on healthcare. The health expenses increased from 7.4 per cent of gross domestic product in 1970 to 13.6 per cent in 1996 and it is projected to reach 15.6 per cent by 2015 (Ginter et al., 2012). U.S. health expenditure is comparable with that of 9-10 per cent of Canada, France and Germany and 6-7 per cent of Japan and the U.K. (Tabish, 1998). The expenditure incurred by the U.K. government on the National Health Service in 1992 was twice of that in 1984 (Aggarwal and Zairi, 1997). Rising costs of medical care is a major concern for most healthcare systems. Gaucher and Coffey (1993) concluded that all forms

of new technology, ageing population, medical malpractice, over specialization, the cost of poor quality, rework and waste, errors, variation in practice due to lack of standards and absence of incentives to control costs have resulted in rising healthcare costs. Table 1 summarizes the market size and trends of Indian Healthcare Industry.

Table 1 Indian Healthcare Industry-Market Size & Trends

Type of Services	Share of Healthcare Delivery Market	Health Expenditure as Percent GDP	Expenditure Growth Forecast	Industry Growth Rate (Average)
Primary, Secondary and Tertiary Care		5.2%(Total)	US\$ 18.7 billion to around US\$ 45 billion by 2010(Total)	Estimated to grow from the current 13% annually to 15% in the next 4-5 years
Primary, Secondary and Tertiary Care (Public Sector)	37%	0.9%	Estimated to account for 25%	
Mostly Secondary and Tertiary (Private Sector)	63%	4.3%	Estimated to account for 75%	

Estimated Investments Needed In the Health Sector for the Next 10 Years

Investment	Amount (Rs. '000 Crore)
Secondary Beds	65-90
Tertiary Beds	30-40
Medical Colleges	2-3
Nursing Schools	2-3
Other Health Professionals	2-4
Total	100-140

Quality Management in Healthcare Organizations

'Quality' is the central theme of all healthcare systems and is exceedingly becoming important for survival of healthcare organizations. In healthcare industry today 'quality management' means not only patient recovery and satisfaction but also being cost effective for competitive advantage and survival. Quality in the context of healthcare services attains special significance due to the nature of the services which deals with life and death on a day-to-day basis. Chassin and Galvin (1998) have said that problems of healthcare quality are serious and extensive which occur in all healthcare delivery systems. The result is in terms of lost lives, reduced functioning and wasted resources. Quality in any sense is a comprehensive and multifaceted concept. Healthcare leaders are concerned about public accountability and consumerism that demand physical proof of efficiency and value. Quality has come to be recognized as a strategic tool for attaining operational efficiency and improved business performance (Jain and Gupta, 2014). Improving quality while reducing cost is not an easy task, but the organization's survival may depend on managers' ability to do so.

Fundamental approaches to managing quality at the organizational level can be broadly viewed under two categories namely, Quality Assurance and Total Quality Management (also referred to as Continuous Quality Improvement, CQI). Quality Assurance (QA) involves regular external inspections to ensure that

standards are being followed. The quality assurance mechanisms include different forms of external review such as accreditation, inspection, regulation, audit or external peer review (Potter et al., 1994; Walshe et al., 2011). BS 5750 and USA's Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation systems are examples of QA approaches. Another example is that of National Health Services (NHS) in England which uses the external review mechanisms very widely including medical training inspection, ISO 9000 quality management, external quality awards (such as 'Investors in People' and the Chartermark). Also, a number of accreditation schemes for many types of healthcare organizations exist (Walshe et al., 2011; Thomson and Hodgson, 1997). Accreditation is one of the most popular external mechanisms in healthcare. Further, accreditation as an external approach has been recommended as a mechanism of assuring the quality of private sector health services in low-income countries, especially where regulatory systems are weak (WHO, 1993). In India, Nandraj et al., (2011) examined the feasibility of introducing accreditation in Mumbai hospitals. The study demonstrated a provisional support of the hospital owners, professional bodies, government officials, consumer organizations and insurance/financial companies for accreditation. Presently India lacks proper accreditation mechanisms for hospitals and regulatory mechanisms are also quite weak. Though accreditation continues to be a very important mechanism of quality assurance, there is no consensus about standards or good practice and hence some conflicts between accreditation schemes do exist (Scrivens E., 1995, cited in Hurst, 1997). The primary focus in accreditation is predominantly medical profession based-care management activities or controlling of adverse events. Though data-driven improvements in accreditation are emphasized the evaluation requirements are relatively weak and benchmarking is lacking (Eggle and Halfon, 2013).

PRIVATE HEALTHCARE SECTOR IN INDIA

Nandraj et al (2011) have reported that 60-70 per cent of outpatient cases and 40-50 per cent of hospital in-patients are managed in the private for-profit sector. Since the Government has not yet made registering of private healthcare facilities mandatory, the scale of operations is not very clear. A total of 30,000 hospitals and 1,000,000 beds are estimated to be available (Ramani and Mavalankar, 2015). It is estimated that the private sector accounts for nearly 56 to 67 per cent of the total number of hospitals and 30 to 33 per cent of hospital beds (Phadke, 1993; Nandraj et al., 2011 and Ramani and Mavalankar, 2015). Private sector also accounts for over 60 per cent of the 5 million doctors in the country (Ramani and Mavalankar, 2015). It is one of the highest levels of direct doctor-to-patient or hospital-to-patient transactions in Asia.

The private health care sector in India is very complex and highly heterogeneous. Despite an increasing interest in this sector by analysts in the recent past and the commissioning of several special studies, private health care still remains under-researched and therefore poorly understood. Overall, the health sector in India is characterized by a mixed ownership pattern, many types of providers, and by different systems of medicine. The evidence also suggests that about 60 percent of private hospitals are owned by one individual, usually a practicing doctor. These are classified as sole-proprietorship hospitals. A substantial number of private hospitals have a partnership model of organization, and a very few belong to the "corporate, public limited" category or the "trust hospital" (equivalent of nonprofit) category. The size of the sole-proprietorship and partnership categories is likely to vary across states, but there are very few corporate, public limited hospitals in any of the states (Muraleedharan, 1999). If we also consider stand-alone clinics that provide only outpatient services, the sole-proprietorship category is likely to constitute more than 80 percent of the private sector. Most sole-proprietorship hospitals, usually called nursing homes, have no more than 10 beds. Their services range from simple treatments to sophisticated operations. The provision of laboratory and diagnostic services and blood banks is usually limited to urban and semi-urban areas (Nandraj and Duggal 1996).

The government after considering the country's healthcare capacity and its limited sources has allowed the private players to provide services. Some of the noteworthy policy initiatives in the healthcare sector in India are:

- The Government liberalized entry norms for private players in healthcare sector in the 1980s

including land allocation at subsidized rates.

- The health insurance market was opened for private competition in April 2000.
- A number of tariff and non-tariff incentives are set up by the Government in order to stimulate market to allow more number of hospitals to offer necessary care. E.g. reduction in import and customs duty on medical equipment and conferring of infrastructure status to health care industry.
- The National Health Policy (2012) has envisaged increasing funding over the next ten years and it has welcomed private participation in primary, secondary and tertiary care.
- India has given commitment under the GATTs agreement, allowing foreign equity up to a limit of 51% for investment in the hospital sector. This has been increased to 74% and up to 100% subject to approval by the Ministry of Commerce and Industry. Since liberalization in 1991, a number of foreign partnerships are seen among Indian health sector. For instance, Apollo-Glencoe Hospitals Ltd., is a 50:50 joint-venture set up between Apollo Hospitals Ltd and Parkway Group of Singapore. Max Healthcare and Singapore General Hospital (SGH) have entered into collaboration for medical practice, research, training and education in healthcare services.

Further growth in the private sector is envisioned with the National Health Policy's (2012) provision for private sector participation in primary, secondary and tertiary care. NHP also aims to widen the extent and coverage of care to people. The private health sector is responding well to meet the healthcare needs. To bridge the demand-supply gap in health care services investment of nearly Rs. 100, 000 to Rs. 140, 000 crore is required according to CII-McKinsey (2012). The market is estimated to grow from US \$ 18.7 billion to around US \$ 45 billion- equivalent to 8.5 per cent of GDP in 2012. The private health care accounts for 75 per cent of the total healthcare expenditure. There is corporatization of private health sector and in the past two decades, a number of Indian private companies have set up nearly 150 hospitals and large clinics such Apollo, Wockhardt, Max, Fortis and Escorts. They represent rapidly growing state-of-the-art facility hospitals with tertiary care and super speciality areas. Corporate presence is growing in diagnostic services, which include premier players like SRL-Ranbaxy, Metropolis Health Services and Dr. Lal's Pathlabs (Ernst and Young, 2013). A number of Centers of Excellence have come up in the last 10-15 years in India in the speciality areas of eye, cardiac and cancer care with technological and professional excellence. Aravind Eye Hospital in south India, the single largest provider of eye surgery in the world, is an outstanding example of performance excellence. It performed 1.2 million outpatients and 183,000 cataract surgeries in 1998. This hospital has a high productivity with a gross margin of about 40 per cent despite the fact that 70 per cent of the patients pay minimal charges or almost nothing and the hospital does not depend on donations. The management and performance excellence of the hospital is of great interest to practicing managers and case study of Aravind Eye Hospital is taught by Harvard Business School.

HEALTH INSURANCE IN INDIA

Utilization of private healthcare of nearly about 60-70 per cent for outpatient and nearly 50 per cent for in-patient services as mentioned above brings up an important issue of affordability on one hand and equity on the other. The fact is that the poor people get private healthcare services at a higher cost. The financing of health services is predominantly private, through out-of-pocket spending by households on a fee-for-service basis. Studies in Maharashtra State reveal that, on an average, households spend Rs. 500 per capita per annum privately on health (Madhiwala et al., 1999; Nandraj et al., 1998). Private households spend about four to five times as much as the government on health services (Duggal et al., 1995). This private spending works out to between 4 and 5 percent of gross domestic product (GDP).

In India, hospital industry predominantly operates on a cash and carry basis where hardly any credit sales are done except in large public undertakings and corporate houses. It is the top 10 to 20 per cent of the population who can afford the services of corporate hospitals, that is nearly 200 million people. The escalating costs of modern healthcare and lack of funds among the poor make affordability issues even more crucial. Health insurance is one viable option to address the issues of affordability. There are five forms of insurance: private insurance, social insurance, employer-provided cover; community insurance schemes and government health spend. Only 3-4 per cent of our population is insured and only about 2.5

million people are covered under voluntary medical insurance. Since the opening up of insurance including health to private companies in the year 2000, it has grown by 100 per cent in the last two years.

Further, estimates indicate that an insured base of 30 million in 2015 will grow to 160 million by 2010 which is less than 15 per cent of the population. During 2013, health insurance premium in India crossed the US \$ 22 million mark, the highest in the non-life category insurance.

The India Health Report has pointed out that as the private sector is unregulated, its cost, quality and distributions are not guided by national health goals. "The poor are then forced into a situation where they have to pay for private health care they cannot afford. Their deprivation and vulnerabilities makes them ill more easily and illness makes them poor", it said. Only 10% have some form of insurance in health. Healthcare costs are prohibitive to most Indians. World Bank concluded that the hospitalized Indian spends more than half of his total annual expenditures on buying health care. More than 40% of the hospitalized people borrow money or sell assets to cover the expenses. The study also suggested that out-of-pocket medical costs alone might push 2.2% of the population below the poverty line in one year (Jain, 2014). Non Governmental Organizations (NGOs) and community-based organizations offer a number of health insurance schemes for the poor and vulnerable groups to meet the high cost of healthcare. E.g. schemes like Yeshasvini, Arogya Bhagya, Yojana, and Arogya Bhadrata address the affordability of health care needs of rural farmers and other groups of people.

The voluntary health insurance schemes are expanding rapidly. Insurance companies have to deal with unregulated healthcare providers who work in an environment where there are no standards or quality benchmarks or treatment protocols and where highly variable billing systems and significant price variations exist across providers. As insurance intermediaries such as third party administrators (TPA) are emerging and are bound to play a key role in facilitating the managed healthcare system, the Insurance Regulatory and Development Authority (IRDA) has come up with regulatory guidelines for TPAs and insurance companies. However, health insurance schemes and programmes may not be very effective without addressing the issues of quality of healthcare delivery and ease of availability and access to services.

MEDICAL TOURISM

Medical tourism has gained momentum in India over the past few years. This trend is underpinned by India's low-cost advantage and the emergence of new high-quality healthcare service providers. India is witnessing a surge of patients from developed countries as well as from countries in Africa and South and West Asia that lack adequate healthcare infrastructure. The emergence of low-cost, high value specialist medical care territories in India has been noteworthy. For instance, New Delhi has emerged as a prime destination for cardiac care. Similarly, Chennai has established a niche for quality eye care, while Kerala and Karnataka have emerged as hubs for state-of-the-art ayurvedic healing. These "medical hotspots" are beginning to witness an influx of health tourists from non-traditional geographies. Among others, foreign health travelers to India comprise a large number of Non Resident Indians (NRIs) (Srinate, 2014).

Making use of the facilities and services the country has and by leveraging the brand equity of Indian healthcare professionals across the globe, it is estimated that a huge inflow of foreign tourists will avail treatment in India. A number of state-of-the-art hospitals in the country such as Escorts Heart Institute and Research Center (EIHRC) in New Delhi, Apollo Group of Hospitals, Wockhardt and Breach Candy in Mumbai, Manipal Hospital and Narayana Hrudayalaya in Bangalore are treating a growing number of foreign patients. Medical tourism is gaining importance for the following reasons:

- India's medical capabilities and medical professional expertise is very well established.
- Poor quality of medical attention in our neighboring countries, e.g. Bangladesh citizens seeking medical attention in Indian hospitals.
- Cost factors such as rising costs of medical care in some other countries. E.g. High costs of care in the U.S. and U.K. and availability of quality care at lesser cost in India than their own country such as South Africa.
- Long waiting times (ranging from 6 to 18 months) of medical care especially for elective procedures for patients registered with their country's national health insurance such as in NHS of UK. This combined with very high costs of private health insurance makes India an attractive designation for

treatment.

- The possibilities of combining health, treatment and tourism have given an extra dimension for the attractiveness of the niche market

The growth in medical/health tourism is expected to reach Rs. 270, 000 crore by 2012 as per PHDCCI estimates (The Hindu, 2014). Another estimate is that the medical tourism market in India is worth US \$ 333 million and expected to grow over US \$ 2 billion by 2012 (CII-McKinsey Study, 2012). Tax and other incentives for private groups for setting up hospitals with 100 or more beds have given a boost to the growth of the industry. However, PHDCCI study has noted that European countries especially Great Britain did not want to refer their patients to India as the hospitals lack proper accreditation such as those given by JCAHO. Lack of accreditation and standards in terms of quality, non-availability of rates of healthcare procedures, absence of hospital grading system and far from perfect insurance sector in the country are pointed out to be major obstacles in the growth of medical tourism.

QUALITY OF INDIAN HEALTHCARE SERVICES

Ramani and Mavalankar (2015) have reported that the problem of poor quality in health sector is quite prevalent and the utilization of the public health infrastructure is low. Several policy and management constraints continue to render the system ineffective. In case of public health system, the problems of non-availability of staff, weak referral system, recurrent funding shortfalls, lack of accountability for quality of care and poor logistics management of supply of medicines and drugs are the major concerns which have been repeatedly documented in the past several years. Lack of efficiency and optimization of available resources are common in many units/centers. Many central and state level healthcare schemes are redundant or under-financed. States have not framed comprehensive health policies that guarantee adequate healthcare to all citizens. Accountability and data quality is highly questionable. People in general have a preference the private sector and the Government facilities are used more often for in-patients.

Various studies have also pointed out the poor quality of care provided in the private sector. A number of problems of diagnostic and treatment practices such as use of inadequate facilities and equipment; over-prescribing, subjecting patients to unnecessary investigations and interventions, charging patients exorbitantly, using unethical and irrational practices, and failing to provide information to patients are well documented. Despite the poor quality of the care, the majority of people still choose to use the private health sector, probably because of its accessibility in terms of distance and timing, private providers' responsiveness to patients, and because of relatively poor quality of services in the public sector (Bhat 1999; Nandraj 1994; Nandraj and Duggal 1996; Phadke et al, 1995; Uplekar et al., 1998; Yesudian 1994). Most hospitals have no proper patient records retrieval system. Financial performance data are not easy to obtain. A general perception is that better quality care is available only in large city hospitals.

Studies have shown that there is an abundance of medical equipment and technology in urban areas compared with rural areas, leading to excess capacities (Jesani and Anantharam 1993). Such an influx of technology may have led to irrational use of medical equipment and services, though this has not been systematically analyzed in India. In many hospitals, doctors are under pressure to see that the beds are occupied all the time and the equipment is utilized fully. In India, with its dominant private health sector and relatively weak government oversight, there is a need to develop self-regulatory systems that involve the various stakeholders.

It is evident from the above discussion that there are many different quality issues involved in healthcare sector. Hospitals are complex organizations with multiple services offered and it important to involve everyone in managing quality. In general, the areas of productivity and efficiency are very crucial to health care delivery systems. Berman and Eliya (1993) have highlighted the role of Government policies in influencing the development of private services in developing countries. They have said that the

quality aspects of technical care are least likely to be guaranteed through market forces. Since technical quality is least subject to evaluation by consumers, licensing and regulation are most important

mechanisms. Even when such regulations exist, enforcement has not been effective. The authors have suggested that the licensing of facilities can be made contingent up on suitable levels of quality of basic amenities, staffing, and service. Quality in terms of clinical outcomes is much more difficult to assess and regulate. The lack of an effective healthcare system in India is now jarring, especially in non-urban areas,

where there is a high incidence of infectious, communicable diseases and high infant mortality. Despite huge investments over many years, Indian public sector health infrastructure is neither adequate and well managed nor sensitive. They have concluded that the role of Government is essential to ensure a minimum baseline service of healthcare through regulation and accreditation.

REGULATION OF HEALTHCARE SERVICES IN INDIA

Medical training regulation, professional standards, rules for hospital waste management, clinical laboratory accreditation and consumer protect act are described here.

- Medical training regulation is quite well established in India. Medical Council of India (MCI) is a statutory body, concerning the quality of medical education and for ensuring an environment conducive to learning in the teaching hospitals. In practice it is reportedly inactive and ineffective in curbing irrational practices and malpractices (Phadke, 1993). Accreditation of hospitals by National Board of Examinations by the Government of India (Ministry of Health and Family Welfare) for conducting post-graduate and fellowship programmes in super speciality areas is mandated.
- One way of ensuring high level of technical quality of care is through setting standards and monitoring by professional associations. Indian Medical Association (IMA) is a voluntary body for setting professional standards and for licensing & registering of medical and surgical professionals. However, IMA does not mandate renewal of registrations based on continuing medical education (CME) credits for professionals which is a standard practice in many countries. Comparing CME requirements from across the world, U.S.A. has the most stringent requirement with their state medical boards requiring from 12 hours (state of Alabama) to 50 hours (several states) of CME per year for license re-registration. Austria has CME certificate over a 3-year cycle, made mandatory since 2011. Netherlands has introduced re-registration with a 5-year interval required from 2013. Annual revalidation system of all licensed practitioners was made mandatory in Dec 2014, but is now under review in the UK. In India, MCI has proposed an annual continuing education (CME) but government favours registration by every 5 years. The doctors' opinions are divided on this and the cost of revalidation is a contentious issue (Mukherjee, 2015).
- Hospital waste management and proper disposal of biomedical waste is not only important for keeping the hospital employees, patients, patient families etc safe, it is also a major environmental and community safety issue. GOI Gazette notification of Bio-Medical Waste Management and Handling rules of 1998 established a deadline for hospitals having 500 beds and above to have waste treatment in place by 30th June 2000. Many hospitals, especially the large ones, have begun to implement the waste management programmes. The State and the Central Pollution Control Boards are a part of the regulatory authority in terms of implementation.

HOSPITAL ACCREDITATION IN INDIA

There are no accreditation schemes for hospitals in India and in the recent past a number of people including Government have taken a serious note of the matter. Nandraj et al. (2011) studied the stakeholder responses towards hospitals in Mumbai in India. Hospital owners, hospital administrators, professional associations, consumer organizations, insurance & financial companies and government officials were included in the study. Quantitative and qualitative data were collected using survey method and interviews to elicit views on the introduction of accreditation and its contents. The study indicated a high level of support for the classical features of accreditation: voluntary participation, periodic assessment by health professionals, and the introduction of quality assurance measures and provision of assistance to hospitals to meet the standards. The study showed that there was a preference for graded rather than a minimum standards-based approach to assessing hospital performance. Based on their

research, Nandraj and others have initiated hospital accreditation for Mumbai city hospitals. This "Health Care Accreditation Council" would formulate and evolve standards for the wards, labour room, operation theatre, essential drugs, waiting area or reception room, consulting room, pantry, medical records and waste management for smaller hospitals. Accreditation body is in the process of being registered under Section 25A of the Companies Act in Mumbai city.

At the national level, the Ministry of Health under the aegis of Quality Council of India has set up the National Accreditation Board of Hospitals and Healthcare Providers (NABH). It is developing accreditation mechanisms for hospitals and recommendations to facilitate Quality Management in organizations. The projected activities such as licensing, regulation and enforcement, technical and consumer information dissemination, management of technical competencies, technical and financial supports for updating standards and certification schemes for hospitals are being considered. The Quality Council of India is considering the options for Quality Assurance, Clinical Standards, Quality Systems and Physical Standards for hospitals.

CONCLUSION

This paper examined the issues and trends of quality of services of Indian healthcare sector. Quality of many public and private healthcare services is rather questionable and some state government reforms are starting to address the issues of quality. At the same time, major high-tech hospitals, many of them private are providing high quality of care and are well known for superior quality of medical professionals. Many of these large hospitals are setting a number of quality systems in place, obtaining ISO certification and hospital rating by commercial agencies, improving infrastructure, and technological capabilities etc in order to improve the quality of services. Industry leaders are showing a keen interest in the achieving high quality through applications of TQM principles.

REFERENCES

1. Agarwal, S (2012): Health Policy: New Perspectives, The National Medical Journal of India, Vol. 15, No 4.
2. Al-Shammari, M (1999): A Multi-Criteria Data Envelopment Analysis Model for Measuring the Productive Efficiency of Hospitals, International Journal of Operations and Production Management, Vol. 19, No. 9, pp. 879-890.
3. Baggott, R (2014): Health and Healthcare in Britain, 3 edition (New York: Palgrave Macmillan).
4. Baker, P (2009): On the Relationship between Economic Growth and Health Improvement: Some Lessons for Health Conscious Developing Countries, Radical Statistics, Issue 98.
5. Baru, R (2013): Privatization of Health Services: A South Asian perspective, Economic & Political Weekly, Vol 38, No 42.
6. Casanovas, Berta Rivera and Luis Currais (2013): Health and Economic Growth: Findings and Policy Implications (US: Merck Foundation).
7. Kaushik K.R., Bansal K.K. (2012) "Foreign direct investment in Indian retail sector pros and cons " International Journal of Emerging Research in Management & Technology Vol. 1(1)
8. Ghuman, B and Mehta, A (2009): Health Services in India; Problems and Prospects, International Conference on the Asian Social Protection in Comparative Perspective at National University of Singapore, 7-9 January.
9. Coppola, M (2013): Correlates of Military Medical Treatment Facility (MTF) Performance: Measuring Technical Efficiency with the Structural Adaptation to Regain Fit (SARFIT) model and Data Envelopment Analysis (DEA), A doctoral dissertation for a PhD in Health Service Organizations and Research, Virginia Commonwealth University, Richmond, Virginia.
10. Health Spending in India (2011): European Union Health Official Development Assistance and Aid Effectiveness, Country Briefing 6, December, German Foundation for World Population, Germany.
11. Herrera, S and Pang, G (2015): Efficiency of Public Spending in Developing Countries: An Efficiency Frontier Approach, Vol. 1, 2 & 3, World Bank Research Working Paper No 3645 (Washington DC: World Bank Publications).
12. Kirigia, Mensah, Mwikisa, Asbu, Zere, Emrouznejad, Makoudode, Patrick, Hounnankan and Athanase (2010): Technical Efficiency of Zone Hospitals in Benin, African Health Monitor Journal, Vol 12, pp 30-39.
13. Masiye, F (2007): Investigating Health System Performance: An Application of Data Envelopment Analysis to Zambian Hospitals, BMC Health Services Research, 7:58.
14. Trujillo, L (2008): Infrastructure: A Naive Look at Levels, Outcomes, and Efficiency, World Bank Policy Research working paper 4219, (Washington DC: World Bank Publications).