Healthcare Innovations, Health Needs And Emerging Market Issues- Assessment From Existing Literature

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Abstract:

Healthcare business is more complex like any business. The modernization of healthcare industry is not new. Healthcare industry is considered as huge market worldwide consisting, hospitals, pharmaceutical, health etc... There is a lot of optimism in the ability of healthcare to negotiate these markets, but they are very complex and treacherous to navigate. There is a market there now and the market is growing fast. This might need to make adjustments (in product and services) but these are real markets that deserve attention. There are opportunities to improve not just affordability but also access to medicines in a way that is sustainable and equitable. New Technology are affecting healthcare business and making very friendly environment. Other environment factors are also playing a big role in success. The stakeholder of healthcare industry is people from all segments whether it is rural or urban population. The population from different segments is now aware of about their health issues and condition. Life expectancy has increased worldwide and this is one of the big positive impression of dedication and concern of people regarding health.

Keywords: Healthcare Market, Innovations in Healthcare, Healthcare Business, Health Needs

Introduction:

The healthcare sector is rapidly evolving driven by new technologies, changing demographics, economic forces, competition, heightened patient expectations and legislative actions, the delivery of healthcare services in worldwide being transformed at a breathtaking pace. Decentralization of healthcare provider’s management is essential. Areas of significant change include care models, patients’ rights, and access to affordable healthcare. Hospitals and other healthcare entities are reinventing themselves in response to external. This have been seen that the emerging innovation in healthcare mainly in developing nation is offering insights on confronting its rising cost that is estimated at dollar seven trillion a year worldwide. Health care industry is consuming high share of income in developed and developing nations alike. Yet innovators in healthcare industry have found ways to deliver care effectively at significantly lower cost while improving access and increasing sustainable quality. Healthcare providers/ governments are uncovering patterns for raising productivity and leaders across health sectors whether it is public, private, and charitable should take notice. With the recent passage of health reform legislation in the many developed countries, for instance, tackling costs is imperative there, but it is also an important goal in every other part of the world.

Health and Hospitals:

Health: According to World Health Organization “health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” published in preamble of WHO constitution in 1946.
Hospital: As per general understating and meaning of hospital we understand that hospital is an institution for diagnosing and treating the sick or injured person, housing them during treatment, examining patients, and managing childbirth etc.. It is considered one of the safe places for patients. There are services which may be avail by patients in outpatients (who can leave after treatment), admitting them (in-patients), and come in for emergency care or are referred for services that are not available in a private doctor's office. Hospitals may be public (government-owned) or private (profit-making or not-for-profit). Hospital may also be general in nature, which generally accept all types of medical or surgical cases, or special (like children's hospitals, mental hospitals), and may limit service to a single type of patient or disease. However, general hospitals usually also have specialized departments available. Hospitals play very important and vital role in the health care system. They are health care institutions/healthcare providers that have an organized medical, nursing, paramedical and other professional staffs, and also have inpatient facilities, deliver medical, nursing and related services round the clock, seven days per week. Hospitals offer a wide range of services from mild to severe cases by using diagnostic and curative services in response to acute and chronic illness arising from diseases as well as injuries and genetic variances. It is well understood, doing the practice, hospitals generate essential information that may be used for research, education and management purpose.

Health Promotion and Health needs:

Fulfilling the health needs is one of the major challenges for all governments, new disease pattern needs proper awareness in society, for public health professionals, health promotion is major concern. By doing so, they educate the patients and their relatives and society as well at mass level. Health promotion is one of the core (major) dimensions of quality in hospital services, along with patient safety, patient satisfaction as well as clinical effectiveness. With the increase in chronic diseases, the provision of health promotion services has become an important factor for sustained health, quality of life and efficiency. Moreover, hospitals consume 40–70% of national health care expenditure and typically employ about 1–3% of the working population. As a working environment, hospitals are characterized by certain physical, chemical, biological and psychosocial risk factors. Many hospital staff argues that health promotion is not their function, but the concept goes much further than traditional health promotion. Hospitals are apparently not the main agents in health promotion, but as healthcare institutions with a large number of workers and service users, they can reach a large section of the population (personnel, patients and relatives), as centers of modern medicine, research and education that accumulate much knowledge and experience, they can influence professional practice in other centers and social groups, as producers of large amounts of waste, they can contribute to the reduction of environmental pollution and as large-scale consumers, they can favor healthy products and environmental safety, Nowadays many hospitals have dedicated health promotion department for this purpose.

Indian Healthcare Market at a Glance:

With a population of more than 1.2 billion people, the Indian healthcare and pharmaceutical market is forecast to grow at a Compound Annual Growth Rate (CAGR) of 15.1% (±4.0%) between 2011 and 2016, reaching USD23.3 billion by 2016 (IMS Health Market Prognosis 2012). And as India’s economy continues to develop, the government is starting to prioritize its healthcare sector.
Emerging Markets are not a homogenous group. They differ culturally, politically, economically, socially, geographically and even spiritually. Yet despite this they share some important attributes, which are outlined below.

- **Economic and Demographic Growth**

  Emerging economies are characterized by high levels of GDP growth, relative to the US and Europe. Despite recent downgrading of forecasts by the IMF, emerging markets are still forecast to grow at 5.3% and 5.6% this year and next compared with 1.3% and 1.5% for the advanced economies [1]. The pace and nature of growth is much debated, however, as is its implication for inequality within major markets, such as China. Emerging markets are also typified by strong demographic growth with 97% of predicted global demographic growth taking place in Africa, Asia and Latin America.[2]

- **Urbanization**

  People are focusing to migrate from rural to urban areas nowadays. It may be due to the better facilities, health, education, water, electricity's etc… Urban growth, set to rise vertiginously in coming decades, is taking place fastest in emerging economies and is concentrated in informal slum settlements. This is highly significant for health. Cities offer chances to improve health, but also bring risks. Infectious diseases are exacerbated by poor, close-knit living conditions. Non-communicable diseases have burgeoned in cities as a result of more unhealthy lifestyles and exposure to pollution. And mental health disorders, violence and injury, including road accidents, are also much more common in cities.

- **Resource Limit and Climate Change**

  Vulnerability Growing affluence, demographic growth, and urbanization are generating unprecedented demand on limited natural resources and pose huge challenges to energy, food, and water security. Rising food and energy prices have a greater impact in emerging markets because a greater percentage of household income is spent on food and transport. [3] These challenges will be exacerbated by climate change which poses an as yet un-quantified threat to economic growth.[4] Health impacts are likely to include increased risks of vector and water-borne diseases; increased
mortality due to hot weather; increased morbidity from allergens and respiratory disease; and the health impacts of constraints on water, sanitation and food.

- Growing Middle Class

Emerging markets have seen a huge increase in the number of people who have moved from a subsistence lifestyle to one that offers them a job, access to housing, healthcare and educational opportunities, as well as income for discretionary expenditure. The OECD (Organization for Economic Co-operation and Development) calculates the number of middle class people to be 1.8bn, which could rise to 3.2bn by 2020 and 4.9bn to 2030, with virtually all that growth occurring in Asia (Fig. 1). [5]

People at the lower end of the income scale have less job security and are highly vulnerable to slipping back into poverty at times of economic downturn, or in the face of environmental or social shocks.

Role of Information Technology in Healthcare

Information technology has transformed the way care is delivered and how healthcare organizations interact with the community in current time. The information technology boon is expected to continue as healthcare reform regulation aimed at reducing paperwork and lowering administrative costs becomes fully effective. New technologies are coming up with more innovations and features like CT scan, MRI, Gama Knife, Robotic Surgery, Organ Transplant, Bypass Surgery, Color Doppler, Colored and 3D Ultrasound, Automatics X-Ray. The health data management is also very much important. Electronic health records made very easy life for doctors to prescribe and see the past history of illness if any.

Environmental Exposures

Hospitals, being comprised of inpatient and outpatient facilities, labs and pharmacies, represent nearly the full spectrum of environmental exposures faced by healthcare organizations. Hospitals house a wide variety of hazardous materials used for diagnosis, treatment and cleaning.

![The expansion of the Middle Class](image)

**Fig.1. Growth occurring in Different Countries**
Increased Life Expectancy due to reform of health:

India's life expectancy has increased from 58.5 years in 1990 to 66.4 years in 2013. While this is a significant increase, both Pakistan and Bangladesh have slightly better life expectancy. Among the BRICS countries, only South Africa has a lower expectancy at 56.9 years, primarily due to the HIV/AIDS epidemic. China's life expectancy is 75.3 years. The average for the whole world is 70.8 years, while among the developed countries with very high human development levels, it is 80.2 years.[14]

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<th>Life Expectancy in Years</th>
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<td>Men</td>
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- Average lifespan went up from 48 in 1980 to 62 in 2000
- Improvement attributed to better diet and immunization

(Life Expectancy Rate- India, Source: UNDP Report)

Technology affecting healthcare:

Nowadays every single family is affected with technology in a good or bad way. Similarly it happens also in society and industry whether it is product or service (public/private), from transportation, communication, and security, banking to healthcare etc. they all relies on technology in one way or another and all are exposed with technology revolution. But nowhere is this huge impact more apparent than in the field of medicine and healthcare. Technological advances are transforming the way healthcare is being delivered. Modern technology has changed the structure and organization of the complete medical field. From extensive adoption of electronic medical records system, to advances in bio-medical engineering and technology, modern healthcare and its delivery methods are changing at an ever increasing rate.

Benefits of Technological Innovation in Healthcare

Technology helps to develop new standards for healthcare quality and quality of services. No doubt, healthcare technology is crucial to people’s health and improved quality of life. It also contributes huge budgets to the economy. There are many benefits that innovative and modern technology brings to the table when it comes to healthcare. The extensive adoption of managing electronic health records has resulted in important savings and reducing in health care costs as well as improved patient health and safety as well satisfaction. At many healthcare providers, patient files are being kept in databases that can be accessed from anywhere in the facility. By using e-health software, all the data related to patients are easily available to all authorized person including doctors, nurses and other Para medical staffs. Nowadays due to technological innovation and adaptation of technology by many healthcare providers has opened the door to more non-invasive procedures. Diagnostics services have never been easier before and more accurate like current time, especially due to advancements in areas like MRI, CT Scan, 3D Ultrasound and of course Nuclear medicine. It is visible that numerous methods of imaging basically allow technicians and physicians, specialist surgeon to examine a patient’s analysis without needing invasive procedures to form a diagnosis. In Minimally invasive surgeries especially within the disciplines of cardiovascular and thoracic surgery it has also become more common in recent years due to changes in lifestyle of people and junk food habits. The advancement and innovation of better medical machine and more advanced technology have allowed
surgeons to perform procedures in minimally invasive ways that just wasn’t possible a few years back [7].

For the remote area, telemedicine technology has emerged as best tools. the concept of telemedicine emerged nearly four decades ago, when thinker physicians grouped up with technologists to research with use of telecommunications technology to support remote patient care or service association [8][9]. Propelled by long-standing problems in contemporary health care in such areas as service access, quality and costs, recent information and health informatics, bio- informatics technology advancements have engineered a strong resurgence of telemedicine around the globe, which is designated the second generation of telemedicine [10].

The Impact of Medical Technology on Healthcare Today:

In recent days health and medical technology is more advanced as well as more effective and it is also considered that in many cases, more costly than ever before. Furthermore there is an ever changing and high demand for high quality technology diagnostic and therapeutic health care facilities and their availability may come into conflict with medical necessity, social justice and cost effectiveness. There is increasing burden on health care resources that is driving more clear and public decisions regarding the better use of these available resources. The complexity of modern technology and its high marginal cost suggest to us that reviews of new technologies are no longer sufficient. [11] In developing a new health care technology, it is important to recognize its potential impact which is really beneficial for all. The important question would be whether the new technology provides information that was not previously available and the new information may result in the treatment of a common and otherwise serious disease. Technology assessment helps physician and other specialized doctors by determining which technologies are most appropriate to benefit the patient, allowing the physician and other specialized doctors to recommend a sensible course of action. Technology assessment should encourage avoiding uncertainty of new technology, causing the clinician to be more rigorous about accepting the latest creation. It will considerably contribute to better utilization of the minimum health care resources. [12]

Systematic arrangement & competition with value

Healthcare industry have full of innovation as compare to other industry. The majority of technology used in healthcare is recently developed as advanced technology. This field never suffers from a lack of innovative skill or expertise. Competition as it has been historically organized in most healthcare systems around the world has not really been aligned with value. What it takes to be successful for a provider is not tightly connected to what it takes to be successful for the patient. ” To align provider and patient needs, many scientist proposed a multipoint agenda encouraging providers to create integrated practice units organized around the needs of patients rather than specialized providers, and measure outcomes “over the cycle of care,” applying the lessons learned at specific sites to larger geographic regions.

“Healthcare industry has more than its share of very complex questions. How can we reduce costs and increase value, improve patients’ experiences and outcomes, speed the translation of research into therapies and cures, make healthcare something that people can have access around the world? This is helping healthcare providers to understand the basic outcomes. [13]

Improving coordination to provide health

In a system with so many moving parts, it can be difficult to coordinate the multiple touch points of a patient’s experience within a more coherent approach to create or sustain wellness. It is important for healthcare providers to make great coordination with all stakeholders to foster the health. Government has to think to decentralize the services and facility as well as management.
Decentralization of Health to reduce cost

The dynamics of decentralization will allow lower-cost caregivers to offer more sophisticated things. This is what will happen, and it needs to happen. Decentralization of care delivery will and must occur in cycle with a decentralization of the innovative process more broadly. Like centralized providers, the traditional avenues of innovation may be too narrow, unnecessarily restricting the universe of possibilities. The involvement of all stakeholders is required. By opening door for untapped talent, it might discover innovations that would otherwise be overlooked by the usual professionals. Decentralization would result in a scattering of the very data necessary to effectively coordinate care.

Making consumerism work

• Putting patients first: Every organization must reconceive the way care delivery is organized if it is to be truly consumer oriented. “The patient is the most important person at healthcare provider facilities, and it’s a duty of providers to satisfy them.

Conclusion:

Technological advancement in healthcare is playing a vital role to get greater success. People awareness regarding health has emerged nowadays that has been leads to the greater increase in life expectancy. According to study, Healthcare is one of the biggest industries in the world and this is one of the demanding industries targeting all class of population. The big challenges faced by healthcare providers to manage specific task. To prevent fragmentation, successful implementation of new initiatives and technological advancement will require more sophisticated means of gathering and distributing information, regardless of where care is delivered. Most of the researcher agreed that for decentralized approaches to succeed, all parties- from patients and providers to payers and suppliers- would need access to data that measure the quality as well as the cost of care.

References and websites:

7. Reference from American Institute of Medical and Science Education
13. Reports of Imperatives Addressing Healthcare’s Innovation Challenge 5 by Oxford business school and oxford medical school
14. Life expectancy in India goes up by 7.9 years since 1990: UNDP report