A Theoretical study on "EMERGING TRENDS IN HEALTHCARE SECTOR"

Short Communication

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Citation of the Article

ABSTRACT

For the past two decades, healthcare costs have shoot up to too expensive levels in India and almost all the countries in the World Availability, accessibility and affordability of medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment, as an imperative component of healthcare sector.

Here Right to health for every human being has been influential issue for discussions and debates among healthcare planners, providers and other stakeholder, where in the one hand growing population chiefly growing urbanization and because of Lifestyle related disorders are in the pipe line, And in other hand health treatment becoming very expensive to human being. At this moment how the Healthcare sector will address Right to health for every human being.

For addressing above fretfulness have a fleeting look at healthcare sector prospects and emerging trends for give a better service than ever before to healthcare consumers. In this article we try to limelight on those emerging trends of Healthcare sector.

INTRODUCTION

The healthcare sector provides a variety of services to support the healthcare needs of a community or individuals. The healthcare sector classifies the different products it offers by sector. Hospitals and healthcare systems are continually changing their service offerings, and responding to various internal and external forces including reimbursement issues, advances in technology, and shifts in the populations they serve. A universally agreed-upon classification of sectors does not exist, so a Non-exhaustive but inclusive and simplified classification of broad sectors will be used in this exploration. The key industries of healthcare sector can be broadly classified into following four sub-segments.

- ❖ Health care services and facilities (Hospitals, Nursing and residential care facilities, Ambulatory health care services, Medical Practitioners & Healthcare Professionals)

- ❖ Medical devices, equipment, and hospital supplies manufacturers (Medical devices, equipment, and hospital supplies manufacturers)

- ❖ Medical insurance, medical services and managed care (Medical insurance, medical services and managed care)

- ❖ Pharmaceuticals & Related Segment

All the developed, developing countries and its healthcare sector need to touch the each and every opportunity from among sub segments of healthcare sector by that healthcare will reach its obligations of Right to health for every human being etc.

Emerging trends in Healthcare Sector:

Monitored from the past two years in the Healthcare sector have been marked with dramatic changes. Most of the existing players in the Healthcare sector and its Industries announced huge expansion plans, many large companies with no or very little existence in healthcare delivery declared that they would be putting in huge investments in Healthcare Delivery.

It might one of the economical advantages for Healthcare sector to reach its responsibilities. But even tough Healthcare sector have an extensive look on recent emerging trends in Healthcare sector. We will try to lime light on those Trends one by one.

More Emphasis on safety and quality at Hospitals:

Hospitals are holy places, at this place need to give prominence on tidiness and safety. for driving better healthcare services, six parameters that include quality, safety, effectiveness, patient centeredness, timeliness, efficiency, and equities are play a vital role.

"Patient safety is improving the system by learning where people fail and not by holding people accountable for failure"-John R Clarke

'Safety' When we talk about patient safety, we mean prevention of destruction to patients while receiving Treatment. It is about eliminating preventable medical mistakes, guarding against the impact of human errors, establishing systems to safeguard patients.

challenges in patient safety is lack of systems in hospitals and lack of awareness and realisation of its importance among the healthcare providers, no scientific data base is available and lack of dedicating funding for promoting patient safety also one of the main cause.

Occupational safety is another thing People don't talk about occupational safety. We are very particular about the people who work in healthcare organization and in nursing jobs. Nursing job environment is the most dangerous job. We have problem about exposures to blood borne pathogens which is very significant for people who work in healthcare environment.

'Quality' in healthcare has been very recent phenomenon in most of the countries. The quality in health care means saving life of the patient and continuous improvement in treatment and its methods. Quality is an attitude, if we don't have that attitude we will never have 'Quality'. Accreditation is very important it's like passing a test. We get to have a degree but that is only a degree, it does not give you a stamp of high quality.

Why quality in healthcare is still a farfetched concept in most of the countries. Might the demand supply ratio control the quality? Demand still is huge and supply is very limited and with these circumstances you can't build quality. This is a very simple market phenomenon but we think these days 83 percent expenditure in healthcare is coming from the private sector. So hopefully in the next five years the demand and supply issue should be appropriate when supply of quality healthcare will increase.   India needs a healthcare system that can meet the demand of over a billion people. Each year 39 million people are pushed into poverty because of their inability to meet healthcare costs.

At the end we would like to say that patient safety, quality and staff safety, quality is a global concern. All our efforts need to be made to reduce the risks of error, not plan quick fix solutions. But gradually implement a mantra in healthcare is to be redesign, transform and innovate.

Technology:
To improve efficiency, Technology like Medical devices, equipment will offer comprehensive clinical and financial solutions that will enable better decisions and outcomes for both industries and consumers. In the coming decade the healthcare sector is expected to witness greater deployment and poised to embrace cloud computing in a big way. Very cost-effective cloud-based solutions are

expected to drive increased adoption of tools such as telemedicine, Tele radiology, hospital information systems (HIS) hospital management information systems HMIS and electronic medical records EMRs. And the growing popularity of digitalization in hospitals, market penetration of picture archiving and communication systems (PACS) is likely to increase further in the coming years. Cloud computing is not only Cost-effective but It will bring easy accessibility irrespective of geographical location, fewer errors, and fast response in times of emergencies, patient convenience etc.

BIGDATA: Gathering the data of a customer it has to save and secure at one best place where it will be resulting deep data analysis of information on healthcare consumers and it will provide valuable insights necessary for improve patient care or consumer health. New Medical devices, equipment placed at front office, it will gather the whole data & manage application management. By that we will analysis data of patient information, tracking the patient, patient records and patient monitoring. But for this we have to designee Centralized Telephone Based Appointment System too. When a patient schedules the appointment, the system generates an SMS automatically. And Video conferencing system plays a major role in medical consultation, treatment, meetings, trainings and demonstration of live surgeries.

Telemedicine: Using medical devices and treat consumers by Two-way video, email, smart phones, wireless tools, and other forms of telecommunications technology called telemedicine. The Rise of telemedicine as a low-cost alternative for many routine types of nonemergency health services it works well for treating common conditions such as colds, flu, pink eye, and Sprains. More easily manages patient care for chronic illnesses that require daily monitoring and interventions only. This system not using by many countries up to the mark, it has to utilize treat people at tribal palaces by all countries.

Automatic speech recognition: We are trying to leverage the potential of automatic speech recognition. Here, technology like Voice Interface Systems can act as an alternative input modality to existing system. If we apply the conventional input modality systems like voice Interface, where automatically speech converted to text and get suppose to the database. There are special context where doctors need an area to fit in descriptive text. Core technology is the Automatic Speech Recognition if we skip the technology part, the Automatic Speech Recognition (ASR) is being formulated as a supervise pattern. There are two parameters 1) Word Accuracy or Word Error Rate and 2) Response Time. So what is the essential ingredient for that? It is the data. So if there is the facility you can plug in to ease the flow of data and given such technologies which can positively play role then it should be appreciated. So the greater goal is to promote wider adoption of electronic health record with the use of ergonomic technologies.

India Technology to become a Core Function: Technology will be a game changer in the manner in which healthcare services will be delivered in India. The private sector will be the major driving force behind technology adoption in the Indian healthcare segment. To optimize costs and effectively manage operations, IT solutions will become an integral part of process management, patient care and the management information system (MIS) in hospitals. With the health insurance sector poised for major growth in the coming decade, increasing demand from this sector for more efficient systems for storage and retrieval of information will put pressure on hospitals and other healthcare providers to imbibe technology to modernize existing infrastructure.

However, the road to greater technology adoption is not going to be without its share of challenges. Currently, the IT budget for Indian hospitals does not exceed 10% of their revenues, substantially lower than allocation on IT in hospitals in the West. Moreover, despite the long-term gains in efficiencies and costs that can be achieved, the initial high capital investments may act as impediments for organizations looking to invest in advanced technology products and services. Further, lack of in-house IT expertise, lack of standards, reluctance and resistance of staff, inadequate support from the IT vendors, etc are some of the bottlenecks that will have to be effectively dealt with in this direction.

Medical insurance, medical services and managed care This segment deals with the players that provide medical insurance or different types of services to either patients or other medical sector players. The term managed care or managed health care is used to describe a variety of techniques intended to reduce the cost of providing health benefits and improve the quality of care for organizations that use those techniques or provide them as services to other organizations.

Health insurance: Health insurance is a type of insurance coverage that pays for medical and surgical expenses incurred by the insured. Health insurance can reimburse the insured for expenses incurred from illness or injury, or pay the care provider directly. In the recent past, Health insurance regulates a lot of activities in terms of number of committees that have been formed to standardize health insurance parameters, formats, guidelines for making a new health insurance policy for consumer satisfaction. These changes not only restricted to one country but in the whole world. Keep in a mind of customer. Health insurance policies, formats, guidelines, should not copy and do not seek to implement from one country to another country because certain kinds of demography, and customers may not be suitable for another country and for another hospital obviously. Why because if we look at the ground reality even till today we have large population of consumers who are not clear on what are the rights under healthcare or in health insurances.

In India health insurance covers only about a fifth of the population. Un-organised private sector accounts for almost 80 percent of outpatient healthcare.

And another part we talk about Information Technology in health insurance, we use IT in almost all the levels like online empanelment, biometric enrolment, smart card, de-duplication, electronic pre authorisation, claims approval & payment, call centers, electronic patient records, cloud computing, and monitoring field functionaries through video surveillance etc. All these things are there but we have further scope to move in where we can use IT for developing a protocol. The main purpose is that necessary message reaches the public. They should know where to get treatment, when to get treatment and how to get treatment. Finally we want to say insurance is here. By these new amendments health insurance will help to healthcare sector.

Medical Tourism:

"By 2020, Medical Tourism, Leisure Tourism, is going to create 10-48 Million jobs."

Medical tourism is the term commonly used to describe people travelling outside their home country for medical treatment. This treatment may span the full range of medical services, but most commonly includes dental care, cosmetic surgery, elective surgery, and fertility treatment. Patients may pursue medical care abroad for a variety of reasons. There has been a shift towards patients from richer, more developed nations travelling to less developed countries to access health services, largely driven by the low-cost treatments availability. Or receive a procedure or therapy not available in their country of residence.

The global growth in the flow of patients and health professionals as well as medical technology, capital funding and regulatory regimes across national borders has given rise to new patterns of consumption and production of healthcare services over recent decades. A significant new element of a growing trade in healthcare has involved the movement of patients across borders in the pursuit of medical treatment and health, a phenomenon commonly termed medical tourism. It is one of the new emerging Trend came in to picture, and it is great boon for the healthcare sector. If we encourage and concentrate on this area it will become added an advantage health care economy development and will give a hand to unemployment.

To accomplish these aspirations all the countries have to deliberate on medical tourism and make its surroundings good transportation establishing appropriate airports, Roads as well as establish government hospitals or if government not in a position establish at least give chance to private players by providing land and other tax related exemptions. Or it has chance of public private partnership too. Whatever the chances are there for development has to utilize and establish moderate infrastructure including all healthcare services.

Today we are experiencing both qualitative and quantitative shifts in patient mobility, as people travel from richer to less-developed countries in order to access health services. Such shift is mostly driven by the relative low-cost of treatments in less developed nations, the availability of inexpensive flights and increased marketing and online consumer information about the availability of medical services will help to travellers.

The Indian medical tourism industry is pegged at US$ 3 billion per annum, with tourist arrivals estimated at 230,000. The Indian medical tourism industry is expected to reach US$ 6 billion by 2018, with the number of people arriving in the country for medical treatment set to double over the next four years. With greater number of hospitals getting accredited and receiving recognition, and greater awareness on the need to develop their quality to meet international standards.

Now India's competitive advantage lies in its large pool of well-trained medical professionals. India is also cost competitive compared to its peers in Asia and Western countries. The cost of surgery in India is about one-tenth of that in the US or Western Europe. Even this competitive advantage is also going to change as soon as in India.

Pharmaceuticals & Related Segment:

The Industry is expected to growth led by aging population, changing life styles, hectic daily activities unhealthy eating habits, increasing incidence of chronic diseases across the global population providing growth opportunity for global players.

The global pharmaceuticals are very complex, highly fragile, and vulnerable to critical global risks. It had turnover of $875 billion in 2010 with an average annual growth rate of 6.5% during for the past five years. It estimated to $ 1.226.0 billion by 2018. Worldwide pharmaceutical R&D spend is forecasting at $149bn in 2018 growing at an average annual rate of 1.4% between 2013 and 2018.

Because of new innovations industry is in dangerous situation the main thing it is over regulated industry because make sure products are safe. Along with this from the latest innovations a few companies are slow to adopt innovations. If it the situation going on industry going to vanish soon.

Precision medicine is an approach that integrates clinical and molecular information to understand the biological basis of disease. This information can be obtained by converting DNA into data through a process called genome sequencing. Researchers can use this data to identify specific gene abnormalities, or biomarkers, to understand which types of patients a drug will be most effective for, and who is likely to experience severe side-effects. This can aid in the development of new targeted therapies and the repurposing of existing drugs.

Digital or augmented virtual reality: Now we have description of drug and its side effects on paper but very soon devices like Google glasses, digital contact lenses will get more information in the form of digital virtual information about drugs. And recently the first 3D printed drug to be approved by the FDA. It makes the oral medication through a three dimensional printing process, which builds the pill by spreading layers of the drug on top of one another until the right dose is reached.

Nanotechnology: It refers to microscopic technology that is of the scale of between 1 to 100 nanometers (a sheet of newspaper is about 100,000 nanometers thick). Due to their microscopic size, Nano particles can easily travel around the human body in the blood stream. Nanoparticles are usually composed of biological-based Nano machines or simple material nanostructures which have already been shown to assist in the delivery of anti cancer drugs and to reduce toxicity.

Nanobots: Medical researchers are also investigating the potential to use microscopic robots called nanobots, which can be preprogrammed to perform tasks inside the human body. Nonobots consumed in the form of a pill or injection could even seek out and destroy cancer cells or perform surgical tasks internally.

Artificial intelligence: Computers with learning capabilities, such as IBM Watson, are capable of digesting and interpreting millions of pages of scientific literature and data to assist pharmaceutical companies in development of new drugs and repurposing of existing ones. Watson has demonstrated the ability to discover previously unknown connections between diseases and as it continues to learn, it can modify its recommendations based on new information.

All countries need to help pharmaceutical R&D and other dependent companies because without Pharmaceutical industry the healthcare sector would potentially be handicapped.

Research and development (R&D):

Research and development (R&D) on science and technology is an imperative aspect. Where formulate new drugs, new diagnosis methods, will help to healthcare for good treatment.

Investment on R&D occupies a prime position in global expenditure. Governments recognize R&D as a crucial investment for a nation's progress, international competitiveness, and public benefit. As a result, R&D intensity the percentage of GDP that is invested on R&D is highly discussed in international circles as it provides a broad picture of a country's economic strength and future growth.

The recently released report by "The International Association of Scientific, Technical and Medical Publishers (STM)", an international trade association organized and run for the benefit of scholarly, scientific, technical, medical and professional publishers, provides detailed information and projections regarding the global R&D expenditure.

Global expenditure on R&D will continue to grow

Globally, the spending on R&D has shown a consistent growth. In the last 13 years, the expenditure went up from $522 billion in 1996 to $1.3 trillion in 2009. The STM report states that the R&D expenditure for 2014 was an estimated $1.6 trillion. Unsurprisingly, three major economic regions comprising North America, the European Union (EU), and Asia are responsible for up to 92% of the global spending on R&D. Overall, the average proportion of national GDP spent on R&D was about 1.7% in 2010, and this drift to invest more on R&D is likely to continue given the emphasis nations are placing on knowledge expansion and innovation. The forerunners in this trend are the US, which is planning to invest 2% of GDP in R&D; and EU, which is targeting 3%. Other nations including the developing ones are equally set to invest more in R&D.

Academia and industry will both fund R&D

While the R&D expenditure is majorly funded by industry, academia is also central to funding since research papers originate from academic authors. The industry funds about 66% of R&D costs in the US, 54% in the EU (ranging from 45% in the UK to 70% in Germany), and between 60% and 64% in China, Singapore, and Taiwan. On the other hand, in the US, the academia bears 70% of the R&D expenditure and funds an estimated 18% of the basic research. Another interesting insight that in the US, life sciences receives about 60% of funding as opposed to medical research that receives only 55%.

The fields of science and research will continue to expand and grow in the coming years with the support from both academia and industry. Moreover, R&D is likely to gain more prominence in all countries across the globe in the coming years, particularly in emerging economies such as China and Brazil. Therefore, in an age that is signified by data and knowledge expansion, R&D will spearhead global progress.

Conclusion: Light at the End of the Tunnel

The healthcare sector and its industries is confronted with many Emerging trends, unlike any other emerging sector, government and the private players has to pitch in to address those emerging core trends like Hospitals Infrastructure, safety and quality ,Human resource, Education, Technology, Finance, Health Insurance policies and etc.,

First when better understand of safety and quality, patients care and service, those patients will be the direct loyal consumers of healthcare. Second Proposing, piloting, advocating and finally adopting the emerging Technological administrative information systems will help in delivers appropriate care to all customers.

The vision of Right to Health for every human being, the government has to help and encourage Private players to invest in Pharmaceuticals, Health Insurance, R&D and other healthcare sector related industries. By that health care will find success and always be embrace with emerging trends of healthcare system.

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