

AI and Robotics in Futuristic Hospitals

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Messy galleries oil painted walls-stained bathrooms inefficient staff dim light and noise...

This is how we identify a typical Indian hospital. Hospital chains are indeed making their presence felt but for an average Indian branded healthcare is still a luxury. The scenario has to change. The 21st century marks the incoming of technology where everything is changing. Hospitals are no exception. However, the problem is with the strategic perspective.

A strategic framework for modern hospitals is missing.

This realization is important as healthcare is one of the basic needs of humankind and especially in India it is on the lowermost ranking on the priority list.

One needs to think and know about how strategy is important in making modern healthcare happen in India. The hospital of the future may look quite different than the hospital of today. Rapidly-evolving technologies and growing consumerism, along with demographic and economic changes, are expected to disrupt hospitals worldwide.

Already, a growing number of inpatient health care services are being pushed to the home and outpatient ambulatory facilities; however, many complex and very ill patients will continue to need acute inpatient services. With aging infrastructure in some countries and demand for more beds in others, hospital executives and governments should consider rethinking how to optimize inpatient and outpatient settings, how to best connect with consumers, and how to integrate digital technologies into traditional hospital services to truly create a health system without walls. The focus is on strategic management, the intelligent choice of investments, adopting the right technologies for treatment of patients, the resources for the hospitals, including the quality of personnel when high turnover and lack of right resources plague hospitals and jeopardise investments made in high tech investments.

Doctors and administrators of Hospitals are central to the Hospital leveraging the latest technologies and innovations in treatment of traditional diseases as well as the body blow to hospitals by pandemics like the Covid-19. Hospitals are better prepared for such challenges now than what they were a few years ago and the book could not have come at a better time when hospitals are grappling with the enormity of choice that has been made available to hospitals.

The digital strategy of hospitals needs to aim for higher levels of customer engagement more than what the rivals can do; especially when the health-chains from major hospitals are taking leverage of the digital technology to revamp their reward offerings. It is easier said than done. Still, it needs to be emphasized that offering Western style health is just not enough anymore. The digital version of the loyalty programs is a feature that can give the health retailer a greater chance to competitive advantage.

Arguably, the strategic management process at hospitals depends on how effectively it applies a mix of product-based system, visit-based system and a points-based system.

It is equally important to focus on what type of services are expected to keep the customers loyal. Strategic Management deals with planning, organizing and internalizing the rapid development of technologies not only in the diagnosis but in the treatment with highly sophisticated gene therapies giving targeted treatments to deadly diseases and improving health care and reducing the time spent in hospitals for recovery. The traditional Hospital is witnessing a change that is unprecedented. From Robotics Process automation, Digital supply change, Artificial Intelligence, the Internet of Things where machines will be talking to other machines and 3 D printing for surgeries are happening across the country.

Transparency is the key to talent management.

The organizations with a clear-cut statement on performance goals. The Hospital of the Future are believed to perform better than organizations with a weak statement of performance goals. ... Nurturing multiple talents is allowing modern day hospitals to develop and identify high potential individuals at different levels of nursing and to provide them opportunities in their specialty areas.

Technology has completely transformed the healthcare sector.

The advent of RAS (Robotic Assisted Surgery) has led to an exciting time as Surgeons can now perform new and complex procedures with ease.

The success of this assistance is witnessed across Specialties such as Spine Surgeries, Cranial, Orthopaedic, Urology, General Surgery, Gynaecology, Neurology, CVTS, GI among many others. Leveraging Technology with better utilization of human resources has helped the hospitals in achieving cost effectiveness while delivering good outcomes. Robotic Surgery enables Doctors to execute various types of surgeries with more precision and flexibility. The machine integrates advanced computer technology with the experience of the skilled surgeon and provides them with 10x magnified high-definition images of the body's intricate anatomy. The Surgeon makes use of the controls in the console to use the special surgical instruments that are smaller, manoeuvrable and more flexible than a normal human hand. The robot then replicates the surgeons hand movements while minimizing hand tremors thus allowing the surgeon to operate with enhanced precision, control and dexterity even during the most complex procedures.

As the RAS offers a minimally invasive surgery that results in smaller scars shorter hospital stays, less blood loss, less complications, faster recovery of patients it enhances the experience for both the surgeons and patients and is rapidly gaining momentum in the healthcare space. RAS can not only play an important role in training young medical professionals to become more efficient future surgeons but will also help enhance the healthcare infrastructure in Tier2&Tier3 hospitals.

With further progress in AI, machine learning and data analytics and medical devices Doctors are able to gather insights into patient's real time and personalize medicine.

With advances such as Telemedicine being widely implemented across the country patients in remote villages across the country can easily avail the expertise of the Doctors miles away.

More and more organizations are now looking forward to Leadership Competency Model for guiding their efforts towards talent management.

An array of IT Solutions, in the form of cloud computing, virtual medium, artificial intelligence, and data mining, give the healthcare facilities a great opportunity to enhance their operational efficiencies. Proper incorporation of modern IT Solutions into healthcare systems are found to be positively related to quality of care.

This is an investment that cuts down upon the redundant and unnecessary task and allows the care givers to focus on meaningful tasks. Technology can be seen as a potential solution to efficiency problems in modern hospitals.

The right technology not just reduces the cost but it also helps the hospitals in providing quality service. For example, virtual consultation video notifications, multi-language audio, two-way audio communication and high-definition video cameras make it easier to connect to patients. Predictability and rationality have long been the main stay of managerial perspective on modern hospitals. The Rising complexity with the business volatility and demand cycles has forced the hospitals to gear up for the future ahead. Quality of service is increasingly getting complicated because of the diversity of professionals, ambiguous objectives and multiple stakeholders.

Meyer et al (2016) have therefore said that strategic management is becoming useful in hospitals because they work as complex organisations and are driven by ambiguous and multiple objectives. In hospitals the actions and decisions come out of interpretive political and symbolic aspects more than mere rationalism.

Also, it is important to know that social capital, legitimacy, organisational knowledge and highly pluralistic context make hospitals a difficult terrain. In addition to the complexities of their external environment, they are internally as much complicated. The accumulation of various internal and external stock holders makes it challenging for the managers to fight the right balance between rational managerial models and institutional models.

Also, as social institutions hospitals constantly face a high level of exchange of information, domination, structures and complex interactions. In addition to an institutional-based view of

strategy, the hospitals should look for a strategy that acts as a central mediator between the institutional environment and organizational attributes.

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For example, virtual consultation video notifications, multi-language audio, two-way audio communication and high-definition video cameras make it easier to connect to patients. Remote nurses can possibly take care of all the vital signs of the patient and provide care based on patient's condition.

The future of the hospitals would depend on the level of ownership that each of its employees shows during. The right engagement strategies and proper environment planning would make sure that the employees contribute their hundred percent on care delivery.

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