

Knowledge Management Systems in Healthcare Services Using Analytics

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Abstract:

In the modern world of healthcare there is a huge demand for advanced systems which can cater to the need of the patients and meet the standards in terms of support from various types of ailments. Today the concept of data management has changed from mere database stored in systems to that of active system which can help the doctors to work with advanced technologies and understand the pattern of changes in due course for remedial action. With reference to the Indian context of healthcare we find that there has been much such advancement with state of art technologies being implemented and pushed for better performance. In this paper we are going to discuss the predictive uses of analytics in healthcare which can promote better treatment facilities in area of healthcare.

Keywords: Data, analytics, predictive healthcare, insight and information

I. INTRODUCTION

The era of information technology has helped us to reach new heights and when we talk about its features in the field of healthcare, we find that revolution would be just a word which would not be enough to define the change. In a country like India the need for advanced health care is taking the centre stage which can propel our country to the next level. Though we have a long way in understanding the need for different therapies still we lack in terms of data management. The growing population combined with the complexities of diseases makes the situation even more alarming as we need to curb the outgrowing negativity and bring in a positive and healthy public life. Through this paper we are going to discuss some of the most important factors of analytics which would help the healthcare services in India to improve.

II. EVIDENCE BASED MEDICINE

Gone are the days when people used to believe what the doctor says at a face value. Today patients as well as doctors want to go in for strong medical research based decisions which would give them more predictive results. For example when we look at the disease called cancer; we find that in most of the cases the prediction or the analysis in many parts of India seems to be weaker as they do not have enough analytical models or predictive tools which can provide a deeper insight into the real cause of the disease. On the other hand when we compare this situation with modern hospitals having state of art technologies the results are much more focused because there are many scientific guidelines and clinical decision standards that are being followed. In this method one would be able to give more accurate predictions because this is just about case analysis but more from a root cause analysis background and every case (patient's record) would go through a channel or pattern of study with panel experts who would come with evidenced based approach to solve the situation. This is also relevant when it comes to lab tests since the results are counted to the utmost important lesson. EBM or evidence based medicine would help to reduce the errors and assumptions that lie around the medical fraternity in solving complex cases.

III. COST AND QUALITY ISSUES

On a comparative ground with developed nations, the medical costs in India might seem to be little cheaper or affordable but when compare of standard of living to the global context, the costs are too high for a common man. We find that the healthcare services in India are more complicated and go through lot of financial burden since the handling procedures and implementation are very tedious. From a traditional approach of just forming reports and monitoring the health of the patient we can use analytics which would help us in understanding the insights of patient behavior, treatment patterns, investment in infrastructure and occurrence of a particular disease. We understand the fact that too much of data will not be appreciated by the physicians and professionals but the fact remains that one would be able to deliver better standards of quality in looking towards the growing needs of modern healthcare. Apart of this when it comes to the management in terms of handling the business challenges we find that the usage of analytics can help in building a stronger base in creating a competitive edge and deliver more in demanding situations.

Revenue and growth cycle

Many professional organizations around the globe have switched to the big data mode to understand and differentiate growth patterns of their business. We still get confused by the factor called as data and insight, to be precise here, every company in this world is flooded with data of all kinds, but very few companies are able to make some sense out of the data and understand the usage pattern. Just to give a diverse example when we look at banking and insurance companies

they probably have the highest data rate usage as their customers are diverse and they look at every single call as their opportunity. This cannot be true when it comes to the medical field since one has to understand that we are trying to filter the “real” ones from the “callers” database. Analytics helps us to understand these issues where we can filter the best and leave the rest. It also helps in building global research products and gives guidance to the management in terms of getting revenue driven growth path. In the world of complex dynamics we find that top companies spend more money on research driven analytics to gain more from their clients. Healthcare organizations also need to look from a dynamic perspective where the organization can also understand the spending pattern of the patients, their understanding the multiple processes and how treatments can be customized accordingly. This would also improve the quality of health care delivery and clinical costs.

IV. DELIVERY OF HEALTHCARE

In case of healthcare delivery there is lot of frauds and investigation which keeps the healthcare organizations on a wrong foot note. The false claims lead to a lot of trouble and they create a lot pressure when it comes to delivery. The financial stress on these organizations goes up and they are unable to see that the patients get the true benefit of the insurance cover. When we see that multiple products coming up in the market to cover different situations we also see that the delivery of healthcare comes up with huge cost and all the facilities will not be easily available. For example in the case of critical care unit we find that the recommendations done by physicians mostly land up in a mess because the treatment could have probably been done in a simpler manner. The profiling of customers, retention becomes quite important because in the long run we are trying to build a customer centric approach in giving a quality oriented health care approach. When we take the case of preventive health care, regular checkups, we find that patients are more interested in just getting their cards ticked by the doctors rather than the recommendations. IBM came up with software to develop as an app to understand and make the recommendations more understandable in nature. When physicians give suggestions the medical records try to suggest something more critical where they need to diagnose and come with a exclusive feature that would cover the patient needs as per the case. Plus there is also a need to build a cover plan for recovery and complete cure from the ailment. The big data part would be able to analyze the treatment patterns and put across a solution which would help the patient and doctor to understand the nature of treatment in future.

V. CONCLUSION

For many healthcare companies it is the need of the hour to start thinking how are we going to take this moral stride of performance with ethical guidelines and build a strong model for future growth. In this way we are going to see that a great amount of performance enhancement and take the organization to the new level possible. In the coming years we are going to see that the growth of analytics will help to provide new platforms for development and it would also help us to build a strong and secure future for organizations. Preventive medication, readmissions and remote monitoring of healthcare facilities would start taking the centre stage in coming years where the organizations have to build in long term capabilities to deliver quality based healthcare solutions.

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