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## **How Data Analytics can help in Decision Making in Healthcare**

### **Why Analytics has Become an Integral Part of Healthcare**

There is a constant pressure on healthcare providers to improve their productivity and reduce healthcare costs which is skyrocketing in the US. In addition to that, the advancement of technology and other factors are compelling healthcare providers to adopt advanced communication and collaboration systems across their settings. Moreover, to gain competitive edge, improve quality care, engage patients and to enhance business prospects, these healthcare providers are adopting healthcare IT solutions such as EMR, EHR and HIE. Hence, the healthcare industry today is loaded with tons of data and numbers. The big question in front of these healthcare organizations is how to crunch these numbers and extract meaningful knowledge from health Big Data, identify and develop new decision models and how to manage Big Data. All these challenges seem to compel healthcare organizations to use data analytics in healthcare.

### **Role of Analytics**

Analytics is a tool or a set of methodologies that transform raw data into meaningful and useful information that is further used to enable healthcare organizations to have effective, strategic and operational insights for decision-making and set their future vision. With the advancement of technology and data analytics tools, healthcare

organizations can now easily manage colossal amount of digital data which is in the form of EMR/EHR, insurance records, pharmacy prescriptions, patient feedback and responses. These data comes from various sources such as, various care settings, sophisticated medical instruments and online health communities in raw and unstructured form. Hospitals and other healthcare settings struggle to manage these raw data on a regular basis and require extracting useful and meaningful knowledge out of it for right decision-making and value creation. Here, analytics play a very crucial role in separating the wheat from the chaff.

Healthcare organizations are increasingly using analytics to derive new insights from information. New methods of analytics are used to drive clinical and operational improvements to meet business challenges. Analytics in healthcare is unlocking ways where predictive analytics will enable organizations to see better future prospects, create better healthcare solutions, and enable organizations to access fraud detection and predict patient behavior.

### **Big Data Analytics and decision-making in healthcare**

Analytics has changed the whole scenario of business decision-making process. As in the past and still in most of the companies, big business decisions are taken on gut feelings or intuitions of the head honchos. But, due to the advancement of digital technologies and data analytics tools, organizations are able to store, analyze and transform terabytes of data into meaningful and relevant information easily.

The use of extracted information from colossal amount of data is a crucial process for any company and to improve this process, powerful tools and techniques are used which includes Big Data analytics.

There is a growing belief among companies that data analytics enable them to get a competitive edge and provides insights in decision-making process. Companies today are recognizing that quality decision-making depends upon the quality of information available to support their decisions, thus making the provision of quality information the key to gaining a competitive advantage.

Fundamentally, 'Big data analytics and decision making' is a term which refers to the process of scrutinizing big data assets in order to observe trends and derive insights for a rational approach for making right decisions. Acquiring or collecting information does not benefit company's decisions; it gets futile without analytics that further makes the information useful and meaningful. If companies want the available quality information to contribute to their performance, such information must be used to improve their decision-making.

Therefore, in today's business environment quality information is considered critical and one of the key determinants of quality decisions and actions. Right information has become a critical resource and an asset for companies' business processes that are actually based on information.

### **Analytics Improving Patient Care**

Patient centric data analytics and new HealthCare IT solutions together are providing greater insights to healthcare providers to improve patient care, cost optimization and better outcomes.

Big data analytics plays a crucial role in extracting and providing valuable information from colossal amount of data in healthcare to providers and decision-makers which is extremely important for formulating strategies, plans and crucial decisions.

From an EHR perspective, data analytics helps to capture data and convert it into meaningful and useful information and supports businesses to gain visibility and be able to change or modify their business model according to the industry requirements.

Analytics also saves time for doctors and physicians who are inundated with dozens of continuous inputs and readouts charting which is a significant challenge for them to pay attention to it. Analytics helps time-strapped doctors and physicians to monitor patient data easily in real time and thus enables them to invest more time in better patient care.

### **Roadblocks in Analytics Adoption**

Latest trends show that data analytics has lot of growth potential but there are some factors that inhibit its growth.

1. Lack of EMR
2. Lack of skilled professionals
3. Big costs for mid-sized companies to implement data analytics tools
4. Lack of enterprise collaboration
5. Other technology challenges

## **Benefits of using data analytics for hospitals**

When it comes to healthcare analytics, hospitals and health systems can benefit most from the information, here are some of its benefits:

1. Use analytics to help cut down on administrative costs.
2. Use analytics for clinical decision support.
3. Cut down on fraud and abuse
4. Use analytics for better care coordination.
5. Use analytics for improved patient wellness
6. Helps in detection in data duplication
7. One of the many benefits data analysis technology offers is the ability to analyze an entire population of data, as opposed to sampling.

## **Conclusion**

Using analytics to gain better insights can help adding value and achieving better outcomes for healthcare settings, such as new treatments and technologies. From managing small details to large processes, analytics can aid exploration of new avenues of growth and success; help design and plan policy and programs; improve service delivery and operations; enhance sustainability; mitigate risk; and provide a means for measuring and evaluating critical organizational data. It can expand access to healthcare, align pay with performance and help to cut down on increase in healthcare costs.

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### **ABOUT Saviance Technologies:**

Saviance is a **US based Healthcare IT Services provider** focusing on the newest technology **SMAC stack** – Social, Mobility, Analytics & Cloud. We provide innovative solutions & enable **meaningful use of IT** by designing **patient engagement portals, collaboration applications & actionable analytics** for wellness & population health. Incorporated in 1999 in the US, with over 15 years of excellent industry track record, Saviance offers services & solutions that enable enterprises to achieve critical objectives.

Saviance is a Gold Category Corporate Member with Healthcare Information Management Systems Society (**HIMSS**), **mHealth Alliance** and a **NJ-HITEC**

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