

'IT is revolutionizing the healthcare industry slowly but steadily'

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1. Though IT has revolutionized almost all of the major sectors, Healthcare remains rather the poor user of IT, why?

According to the sixth edition of consulting firm Deloitte Touche Tohmatsu India Pvt. Ltd's 2016 predictions, the overall Indian healthcare market that is worth \$100 billion is expected to grow at a 23% CAGR (compound annual growth rate) to reach \$280 billion by 2020. The researchers at Deloitte believe that this growth will be accelerated by digital adoption.

The healthcare industry worldwide has been experiencing a transformation which is being shaped by information technology's key role. In India too, while the adoption has been slow, IT is increasingly making inroads into the industry. Digital evolution is changing the way doctors and patients interact, the way medical records are maintained and improving collaborative data exchange. IT is revolutionizing the healthcare industry slowly but steadily.

2. What are the challenges that the healthcare administrators face, and how IT services can help in solving these?

The healthcare industry is being dramatically impacted by the ongoing digital revolution. From the trillions of bytes of information created by electronic health records, to the patient's desire to have ready access to that information, healthcare is rapidly moving towards a digital-first environment where personalized medicine and the empowered patient is the norm. There are certain drivers in the industry that need specific IT solutions. Mentioned below are the drivers along with the challenges faced and solutions that BMC Software offers in each:

The Patient as Customer

Patients are demanding better access to their healthcare information. As a result, providers are deploying online portals that allow patients to manage appointments, securely access health records, and correspond with clinicians. Additionally, mobile apps provide ready access to a wealth of information, from hospital directions, to patient support groups, to the menu in the hospital cafeteria. The challenges faced in this is making provision development and production environments faster and also deploying digital services and applications to patients faster. BMC Software's Release Lifecycle Management provides agile application release automation that deploys application changes faster, at lower cost, and with fewer errors. Additionally,

Cloud Lifecycle Management orchestrates the agile delivery and ongoing management of secure and compliant IT services across private and public clouds, as well as legacy data center infrastructures.

Medical Records and Big Data

By 2020 the healthcare industry is projected to generate almost 25,000 petabytes of data.

As providers and insurers retrieve, analyze, and share information, efficiently managing big data will be critical, ultimately leading to better healthcare practices and improved patient outcomes. In this scenario, effectively managing Hadoop big data environments and simplifying batch processing becomes a challenge. BMC Software's Control-M for Hadoop simplifies and automates Hadoop application processing for faster batch-job implementation and more accurate analytics.

Cost-Effective Service Delivery

Healthcare IT organizations are expected to contain costs while delivering services 24x7x365. In spite of the disruptive changes taking place, healthcare IT organizations are still expected to contain costs while delivering services that are reliable, scalable, and highly available. Optimizing resource usage without compromising care is critical. Data Management Solutions for DB2® on z/OS® enable "zero outage" availability, support new unstructured data and reduce DB2 operating costs by redefining the way organizations perform DB2 database management.

Security and Compliance

Almost half of all security breaches in 2014 occurred in healthcare. With the increasing digitization of patient and clinical information, IT departments must remain vigilant to ensure systems are in compliance with security standards and policies. It is absolutely essential that companies have compliance with mandates and prevents unauthorized access to patient data. BladeLogic Server Automation helps IT rapidly remediate known vulnerabilities, and automate compliance checks for regulatory requirements.

3. How does of BMC Software's services boost hospitals' in-house operational efficiency?

BMC's Remedy Solution is one of the best tools to assist self-service, accelerate tracking and increase transparency which boosts overall efficiency of hospitals. A couple of examples can be quoted.

While a customer is in the hospital, Remedy MyIT can assist the customer to locate where a particular department, ward, cafeteria or section of the hospital is. These kind of self-service tools help customers find things without any hassle and help hospitals to manage customers without appointing additional manpower.

Also, we all know Incident Management can help increase operational efficiency of a hospital to a great extent. We noticed with some of our customers that people typically didn't get enough information when their tickets were created. As a result, there were a lot of email exchanges between the ticket originator and the tech support agent to capture all the relevant details. In addition, as there was no way to track tickets, sometimes they languished in the system for months. There was also no way to identify ownership of incidents and the support staff could not keep people up to date on ticket status. BMC Software's Remedyforce has eliminated all these problems. Today, when an originator creates a ticket, Remedyforce ensures that all the necessary information is filled in. It then tracks all incidents and incident owners through the entire resolution lifecycle. This helps the support staff know how long every ticket spends in the queue, who owns it and they can be kept up to date on the status.

4. How do you see role of M2M communications in the healthcare sector? Is of BMC Software leveraging this technology?

M2M Communication is helping hospitals capture events through a machine which can be transmitted through a network to an application and translated into actionable steps. BMC Software's Truesight solution can monitor the availability and communication of machines which are IP (Internet Protocol) and SNMP (Simple Network Management Protocol) enabled. This helps hospitals in M2M communication which can be a great boon in the industry to get real solutions to critical problems.

5. What are the most important trends you are witnessing in the healthcare systems and how is BMC Software adjusting to them?

As mentioned earlier, Healthcare industry is gradually moving towards treating patients as customers who are ever demanding and need access to their data at any given time and place. Healthcare providers are compelled to make information more accessible and interactive so that patients can take immediate action by making appointments, downloading health records or coordinating with clinicians. This involves deploying digital services and applications to patients faster. BMC Software is helping organizations deploy application changes faster with minimum error and lower costs.

6. Hospitals generate a huge amount of (patient) data, and with the help of IT, it can be analyzed to give much more insights. Do you offer healthcare analytics related services? Are healthcare administrators utilizing it? Is there any

need for such services in India?

We do offer services to manage data that is collected every day so that it can help insurers and doctors derive meaningful conclusions. This data in turn helps in better healthcare practices which improves outcomes for patients. We offer accurate analytics that help healthcare practitioners manage big data. Big Data and Analytics is changing the way diseases are diagnosed, monitored and treated.

Healthcare administrations have started utilizing analytics on a regular basis. We do see a need in India but the industry has not yet developed to adopt to this need. The need in India will arise only after hospitals are completely IT enabled and transformed digitally.

7. How do you think the digitization of the healthcare system will change the role of existing healthcare professionals?

Digitization is definitely changing the way healthcare professionals function. Electronic Health Record (EHR) system is one of the ways which is revolutionizing their role. EHR is making information readily available and accessible to the patient as well as the physician community. Through centralized data bases, doctors can access a list of the patient's condition without having to rely on the patient's memory alone. This helps reduce preventable errors and accidental procedures. This is also helping the healthcare community to connect and find better solution to critical cases.

8. Moving on to the future, what kind of IT services will come up for the healthcare industry, and how are your future plans aligned with those?

In India, we still do not treat our patients as customers. We see this as a big game changer in the Indian healthcare industry. While private players have started adopting to some of the digital services, a push from the government is required to help the healthcare industry in to the next phase of digitization. We see India moving towards this change and BMC Software as a company is poised to address this change in the industry. We have already invested in healthcare solutions and are well equipped to serve the digital transformation in the healthcare industry in India.