

Welcome to the TECH FUTURE!

There has been ever increasing deployment of Information Technology (IT) in healthcare arena. However, the healthcare expenditure on such infrastructure continues to remain minimal. Here, we provide a review of some automation solutions to assist better healthcare delivery.

The healthcare sector in India is currently experiencing a steady growth because of increase in life expectancy, higher income levels, greater reach of health insurance, and growing lifestyle-related diseases. The industry is at an inflection point and is poised for rapid growth in the medium term. The Indian healthcare industry is expected to grow to \$ 280 billion by 2020 from a base of \$ 79 billion in 2012. The average Compound Annual Growth Rate (CAGR) for 2012-20 has been estimated at 21 per cent. India's healthcare related expenditure is still amongst the lowest globally. Hence, there exists significant challenges that need to be addressed to fulfill the stated goal for healthcare for every citizen by 2020. The challenges include:

- **Accessibility:** Inadequate access to healthcare delivery has been a key issue with the Indian healthcare system. Though most Indians, especially rural population, depend on public health infrastructure, which is inefficient and inadequate too. With low investments in medical infrastructure, including

devices and automation, the access to healthcare is inadequate or absent in rural India.

- **Affordability:** Since most of the country's population cannot afford to pay for healthcare, providers in turn pay careful attention to costs. Due to this we are yet to see any large scale initiatives in automating the diagnostic care, and follow-up processes.
- **Fragmentation:** The Indian healthcare industry is highly fragmented and dominated by many private players with low market share. Absence of any major player with a pan-India presence means low automation and integration of systems and online collaboration.
- **Quality of care:** Inequitable quality of care, along with non-availability doctors in rural India, is a major challenge faced by the Indian healthcare industry. This is partially fuelled by the demand-supply gap that exists with respect to doctors and trained medical professionals.

Similarly, Indian healthcare providers today are facing two major challenges - one, in providing healthcare solution to all and other to grow the industry faster enough. These two challenges are

interlinked with each other and cannot be solved independently. At a macro level, these challenges are caused by:

- A huge demand and supply gap in health infrastructure, skilled doctors, healthcare providers and basic medicines.
- Resource constraints both financial and workforce, to develop the required infrastructure to provide healthcare for all.
- Inefficiencies in healthcare operations due to low automation and isolated systems.

Solutions at hand

Many of these challenges can be solved by increasing the automation of diagnostics, care, and collaboration processes. Though the usage of IT solutions for healthcare industry in India is not very high, the help of private sector investments in healthcare and increase in the use of modern diagnostic and treatment solutions, the healthcare providers and associated service providers like health insurers are adopting information technology at a much faster pace than earlier. Indian technology solution providers need to develop innovative solutions to seize this opportunity and create a strong healthcare technology industry. Few areas which have



Photo courtesy: Allen Calsoff Labs

a higher potential of IT investment related to automation are:

- Hospital Management Systems, customised to meet the needs of Indian hospitals.
- Telemedicine systems for providing care to remote hospitals and primary health centers where trained or specialised doctors are not available.
- Patient health record portals for storing and sharing patient health record among different stakeholders such as patients, hospitals, clinics and physicians.
- Laboratory Information Management System (LIMS) for pharmaceutical and biotechnology companies for accelerating R&D activities.

Indian healthcare providers both big and small, have an opportunity to use the disruptive technologies like cloud & mobility and change the way healthcare is provided in our country. This will create a sustainable competitive advantage in market place. Let us understand how usage of technology and higher level of automation can help healthcare providers in solving these challenges:

- A cloud-based telemedicine system that can be accessed over a low cost tablet can go a long way in increasing the access to healthcare. This will enable people in remote areas to reach out to expert doctors at a much lower cost. Since, cloud based solutions are generally delivered on a 'pay-per-use' model, it creates less strain on the existing financial resources, and optimises the use of skilled human resources.
- A cloud based patient health record portal, accessible on a tablet, can increase operational efficiencies and reduce the diagnostic costs. A cloud based healthcare information system integrated with patient health record portal can increase operational efficiencies in any hospital by manifolds without creating a dent on financial resources of the hospital. Similarly, a cloud based LIMS can reduce the cost of drug discovery, which will result in low cost medicine availability.
- SMS based information system can take care of reminders, health information, report access, and mobile payments.
- Cloud based accounting framework can

help small and medium sized hospitals to manage entire billing, inventory, store management, customer management, and laboratory management related operations at a much lower fixed cost and total cost of ownership.

Hence, disrupting technologies like cloud and mobility will be the major drivers in changing the face of Indian healthcare industry. Software as a Service (SaaS) or cloud based solutions eliminate the need of fixed costs in the form of IT infrastructure and converts the complete IT application cost to a variable cost. It is imperative that healthcare providers demonstrate agility, and out-of-the-box thinking capabilities to innovate IT strategies that are functional and cost effective to contribute to this growth journey. **MM**

(somenath.nag@calsoftlabs.com)



Somenath Nag
Director –
Business Development
and Marketing,
ALTEN Calsoft Labs