

IT Special



'IT Improves Clinical Outcomes Phenomenally'

Satish Kini
Chief Mentor, 21st Century Health

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Healthcare Hi(gh)way to IT

Rolling out a unique solution for healthcare providers, Apollo Hospitals and IBM have developed a national health data network called as 'Apollo Health Hiway'

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Indian healthcare is witnessing a metamorphosis, with the onset of newer, better IT applications as well as a broadening focus and increased investment in technology by hospitals.

IT 'Clicks' Healthcare



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In the rapid digitisation phase of healthcare, one company that is marching ahead in providing and implementing healthcare IT solutions is 21st Century Health. The company aims to introduce innovative concepts and designs for healthcare facilities, efficient and patient sensitive re-engineered processes for patient management, cost-effective processes for materials and facilities management. **Satish Kini**, Chief Mentor, 21st Century Health, in a tete-a-tete with **Express Healthcare** on the phenomenal opportunities that exist for IT in healthcare. Excerpts:

IT solutions for healthcare are generally associated with HIS, EMR and PACS. What are the newer technological trends do you witness for IT in healthcare?

Segregating applications as HIS, EMR and PACS in one hospital is an outdated approach to look at IT deployment in healthcare. In the 80s and early 90s when IT systems were not online, we used to have standalone applications such as FA, AR, AP, order-processing and invoicing, sales analysis and then inventory and purchase.

The next big step was Materials Requirement Planning (MRP) system which linked materials and production processes. This further developed into Manufacturing Resource Planning (MRP II) till finally in early 90s we saw the emergence of Enterprise Resources Planning (ERP) software which linked the enterprise into one end-to-end system from sales booking and forecasting to materials, production, quality and delivery to invoicing, AR, AP, FA and financial analysis. By late 90s we saw the evolving of Customer Relationship Management (CRM) and Business Intelligence (BI). Today, healthcare is at least 15 years behind other industries and businesses in its utilisation of Information and Communications Technology (ICT). In India, Hospitals are still at the level of looking at HIS, EMR and PACS as three independent systems. HIS is still used primarily for patient administration, accounts and materials while EMR and

PACS, which are really more mission critical clinical applications are more talked of than implemented or used. To extract the full advantage as well as get back the return on its investment done on IT hospitals in India in addition to basic HIS should implement mission critical clinical modules for labs management, EMR combined with evidenced based treatment protocols in wards, ICUs and OTs, iEMR with advanced imaging systems beyond PACS ie, not only for radiology but for cardiology, OT imaging, patient monitoring and ECGs. This will help hospitals to truly improve quality and outcome of treatments, reduce errors and increase transparency and accountability.

Our 'nidaan teleradiology portal' has proved to be a great boon for hospitals plagued by perennial shortage of good radiologists. For emergency reporting, teleradiology is also a boon for radiologists who can now report XRays, CT scans and MRI scans conveniently from their homes at odd hours of the day or night. Tele-radiology is also indispensable for public health programmes which try to reach out to remote rural places through mobile clinics. Other important new age IT applications which we believe can significantly transform healthcare, are portals for insurance claims from our partners like healthsprint and use of Q terminals, signage and kiosks for self-service from our partners Intellvision Limited.

Moreover, with more and more corporates entering the healthcare services, having an enterprise wide system across a chain of hospitals, clinics, diagnostic labs has become another major opportunity for professional healthcare IT players like us.

How does IT improve clinical outcomes? Please cite examples.

IT improves clinical outcomes phenomenally. The list of innovative use of ICT in healthcare are endless and applications are limited only by our imagination to deploy them. By providing fast, correct and precise patient EMR

(subjective or objective) to clinician at point of treatment or service, similar information when sought on phone or on handwritten records can result in errors due to non availability/ misunderstanding/ misinterpretation. EMR with evidence based treatment protocols help to prevent over or under treatment of patients. Alerts to clinicians about patient's allergy to drugs being prescribed or even drug-to-drug reactions can prevent serious errors in treatment. Alarms can be used by nurs-

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ing and paramedics to administer medicines or procedures. IT can also provide clinicians with quick and correct recall of relevant case studies and analysis of similar cases. Imaging systems can provide images simultaneously to different experts in a hospital for quick diagnosis or second opinions, use of teleradiology can similarly enable quick diagnosis and treatment overcoming time and space barriers. Use of bar coding helps in tracking of blood samples in labs and in automatic interfacing with equipment resulting in accuracy and faster turn around time. Utilising RFID/ barcoded tags for patient tracking helps to ensure that correct medicines are administered to patients at right time. RFID can help track availability of mobile medical equipment like ECG machines, XRay machines, ventilators etc. It can also be used to track availability of life saving drugs.

What would be the key drivers of IT in the healthcare industry?

With health insurance growing at a rapid pace in the country and becoming a very influential, knowledgeable and cost-conscious payer for healthcare services, the need for more accountability,

transparency and following evidence-based treatment protocols is one big factor driving the adoption. The second big factor is the increasing interest amongst corporate groups to receive accreditations. This is forcing hospitals to adopt best practices as per norms. Of course automation make hospitals more productive and also more cost-effective and therefore not automating the hospitals ends up with the hospital losing business to more better quality hospitals who provide better services at same or lower prices and yet are profitable. The third important factor is the high-end hospitals targeting medical tourism. JCI/JCAHO certification and following globally accepted practices in advanced countries are important factors to adopt good integrated Hospital Management Information Systems (HMIS) systems. Automation also helps them to give direct access to foreign patients doctors through telemedicine as well as their insurance companies which increases their confidence in such hospitals.

Presumably, the maintenance of systems is more costly than implementing. How far is this rationale true? Is cost a deterrent for hospitals implementing IT?

This is not true. However, what is true and should be planned is that hospitals must strategise to budget 20-25 per cent of its revenues as one-time investment every year towards replacement and maintenance cost. If the hospital volumes are growing fast then a fraction of that growth percentage should be added for the growth part too. Where many hospital management go wrong is that they try to buy IT solutions like they buy medical equipment which usually have three to 10 per cent annual maintenance. IT hardware gets obsolete in just three to four years while software solutions undergo almost 100 per cent change in five to six years, but having said that software companies usually provide free upgrades as well.

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