JURY'S SPECIAL MENTION AWARD

Ayushman Baruah

Ayushman Baruah won the PoleStar Award for his article, 'Healthcare industry prescribing a dose of technology', which appeared in InformationWeek, dated October 2012.

Ayushman is a Bangalore-based business and IT journalist with about six years of experience. He is currently working as the Principal Correspondent of InformationWeek (India) where he is responsible for writing news, views and features in technology and the business value of technology. Ayushman tracks IT services and emerging technologies such as cloud, mobility, big data, and social media and has written several trend-setting stories around them. He is globally well exposed as he has covered technology summits and conferences both at the national and international level.

A post-graduate in Communications from Commits Institute of Journalism and Mass Communication (Bangalore), Ayushman has earlier worked with reputed publications such as The Financial Express (The Indian Express Ltd) and The Shillong Times. He is also an NSE-certified capital market professional (NCCMP) which gives him an edge in business reporting. An active inter-college debater during his academic years, he takes special interest in speaking at conferences and moderating panel discussions. Besides, Ayushman is a firm believer that good journalism is good business.

Healthcare industry prescribing a dose of technology

Ayushman Baruah

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Healthcare, pharma and life sciences companies are increasingly adopting technology to optimize cost and ensure better health services

Some years ago, a patient at the operation theatre would be enraged, irritated or at the least nervous if the doctor was seen fiddling with his mobile device. Things have changed much since then and patients have begun to accept technology/mobile devices as an aid rather than a distracting element. Today, both hospitals and doctors make profound use of technology at every move.

The Indian healthcare sector is expected to reach USD 100 billion by 2015 from the current USD 65 billion, growing at around 20 percent a year, according to rating agency Fitch. Given the huge metamorphosis, competition and fast growth the industry is going through, healthcare providers and pharma companies are increasingly investing in IT to improve the quality and delivery of patient care.

"Video conferencing is becoming an important tool in the healthcare ICT portfolio to deliver care more effectively and efficiently. It has become an important tool within a wider portfolio of tele-health services, and is being used in a range of different healthcare settings and for a multitude of different purposes," says Deepak Braganza, Country Manager, LifeSize India & South Asia.

The telemedicine centre of Nanavati Hospital, the largest telemedicine service provider in Western India, is an example of how a hospital has used video conferencing and communication technology based on ISDN/ broadband/satellitebased connectivity. Using this technology, the hospital provides teleconsultation and tele-education in India through its network of 34 peripheral rural centers in India and in 45 African countries through its international network.

"Since inception in 2006, the center has provided over 4,000 teleconsultations and over 100 CME (Continuing Medical Education) programmes to doctors and paramedics in rural India and Africa. With over 4,000 teleconsultations and 500 treatments, the hospital has till date saved approximately over Rs 1 crore in travel and consultation fees, stay and treatment of patients," says Dr Pavan Kumar, Head-Department of Telemedicine, Nanavati Hospital.

Consider the case of Bangalore-based specialty pharmaceutical company Allergan India, a joint venture between Allergan Inc and Piramal Healthcare that commence commercial operations in 1996. Given that India is a vast country with varying geography, the company was facing a big challenge in meeting the needs of their customers and employees, for which, it was looking at innovative ways of making customers and employees meet virtually with a first-hand feel of virtual presence during the meetings.

To achieve this, the company embarked on an IT project called virtual connect where 7 primary locations namely Bangalore, Chennai, Hyderabad, Mumbai, Kolkata, Lucknow and Delhi were connected through hardware equipment, and other locations through third-party connectivity. The new system handled calls from other VC equipment, VoIP calls, calls from software-based solutions, and multi-party calls.

With the new VC system in place, Allergan India has benefitted in many areas, such as HR recruitment, product launches, campaigns and employee sales review meetings. For example, earlier the HR had to invite candidates from multiple locations to Bangalore for interviews and the travel charges would be reimbursed to the candidate.

Now, the candidate can walk into the Allergan zonal office, connect VC to Allergan Bangalore, and interview can happen in 30 minutes at no cost. This has saved the company approximately Rs 20 lakh per annum, says KT Rajan, CIO, Allergan India.

Max Healthcare which has been at the forefront of delivering healthcare services in Delhi-NCR has moved to an Electronic Health Records (EHR) system from their existing Hospital Information System (HIS). The group implemented an open source EHR system, WorldVistA, with the goals of minimizing the need for paper records, allowing order entry by the doctors in the system itself, and enabling easy access to patient records.

The system was hosted on a private cloud and was interfaced with laboratory, radiology and pharmacy to allow real-time access to any patient record. The system included Computerized Patient Record System (CPRS) for documenting, ordering, reporting and viewing of clinical information. Apart from this, Bar Code Medication Administration (BCMA) was implemented along with unit dose dispensing policy to track and reduce waste, returns and medication errors. An health system for accessing laboratory reports and radiology images was also implemented for improving turnaround times of starting care plans.

Today, Max Healthcare facilities catering to 1,000 beds have gone live using the system and all the patients admitted have their records on the system. Till date, the system has approximately processed data of 104,130 patient-days across the facilities that are live with 3,123,900 pharmacy orders, 2,603,250 laboratory orders, 520,650 radiology orders and 312,390 bedside procedures.

TABLETS & SOCIAL MEDIA

Physicians have also realized the importance of technology as it helps them make decisions that are better informed and offer patients with more personalized care. Not surprisingly, today doctors use iPads and smartphones that enable them to work more efficiently. There are numerous iPad applications available in the market that is used for different purposes.

"Smartphone apps have been helping doctors a lot to fine tune their practice. Epocrates app is an invaluable tool to help review drug dosages, interactions, and adverse effects. These apps regularly update and provide with warnings if any new adverse effect is reported or if any drug has been withdrawn. There are other apps that provide doctors with medical calculators to calculate important patient parameters like body-mass index, creatinine clearance, anion gap, etc, which enable critical patient bed-side decisions," says Dr Sanjay Gogoi, Senior Consultant, Kidney and Urology Institute, Medanta, a super-speciality hospital in Gurgaon. "Micromedex from Thomson Reuters also provide similar information and is free. The Apple app store is full of specialty specific apps which are invaluable and cardiologists and intensivists regularly use them."

Pharma companies too are conducting trials with tablets. For instance Cipla is now testing the yet unreleased Windows Surface tablet (Windows 8 RT) and plans to deploy it for its field force of medical representatives in India.

Social media such as LinkedIn and Twitter has also helped doctors to form clinical groups for instantly sharing important inputs regarding patient care. Today, inside the operation theatre, most procedures are being documented with videos and clinical photographs, and these go a long way in improving treatment outcome. "Advances in video technology have brought 3D imaging for laparoscopic procedures wherein during surgery, the surgeon and his team sport high tech glasses to view 3D images in large format LCD panels. Dedicated video recorders are increasingly used to record high quality videos for data-keeping and forpresentations," says Medanta's Dr Gogoi.

TACKLING DATA DELUGE

Market research firm Ovum expects the global IT-related spending in the life sciences sector to grow modestly during the next five years to reach USD 37 billion in 2016. In the short term, Ovum expects this IT spending to increase faster than the rate of total revenue growth for the sector, due to a series of large-scale IT initiatives and changes in the industry's structure. Interestingly, the research firm predicts that by 2015, most of these initiatives would have been completed and there could be negligible IT spending growth in the fifth year of the forecast. By this time, the industry will be reaping the benefits of cloud based delivery methods, systems simplification and centralization.

According to Ovum, the emerging markets, particularly the Asia-Pacific region will drive IT spending through 2016. An increasing amount of R&D and manufacturing is being sourced primarily from India and China. Asia-Pacific countries are rapidly becoming centers for life sciences innovation as well as contract manufacturing. In addition, more clinical trials are being conducted in the region to take advantage of lower costs and large "drug-naive" patient populations.

Life sciences companies are currently facing a daunting "data deluge" produced by experimental runs in this industry, which they need to optimize, manage, transfer, store and protect. Such challenges have led to companies such as BT to set up BT for Life Sciences R&D, the first cloud service designed to enable collaboration within the life sciences industry. The new service is designed to allow customers to comply with the industry's stringent security, regulatory and compliance requirements. The platform will allow participating groups to securely upload documents, share results and communicate via IM, voice, video or chat to analyze results.

To ensure faster data transfer, BT is working with Aspera, provider of nextgeneration data transport technologies, to integrate their innovative file transfer technology into the cloud service. "Aspera's patented fasp protocol eliminates the fundamental bottlenecks of conventional file transfer technologies and provides highspeed, reliable end-to-end transport over public and private networks fully utilizing available bandwidth, independent of network delays and is able to deal with extreme packet loss," BT said in a statement.

CONCLUSION

Though the healthcare sector has traditionally seen lower levels of IT investment and adoption, the trend is fast changing. Today, healthcare providers are increasingly turning to IT as they are operating in a competitive environment, each one trying to offer the best possible quality of patient care. This has in fact driven the emergence and growth of sophisticated telemedicine centers, mobile health services, EHRs and medical apps. The life sciences sector, Ovum suggests, will be investing a great deal in technology over the next few years until they begin reaping the benefits of cloud, systems simplification and centralization.