

## Patients leading healthcare revolution

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In spite of unimaginable growth achieved in a matter of few years, analysts have predicted that this is indeed only the beginning of digital healthcare disruption. It has been said that driven by the results of health exchanges and other care delivery trials, novel models of care will multiply in the APAC region.

According to the 2014 Accenture Digital Consumer Tech Survey, 52 percent of consumers are interested in buying wearable health trackers. Entrepreneurs on the other hand are harnessing wireless technology to create innovative services.

**Jack Young**  
**Manager, Qualcomm Life Fund**

*"At-home monitoring and diagnostic or test devices that we are familiar with, such as blood pressure cuff, glucose meter, thermometer, are available in a wireless connection version; new-to-market type of portable devices such as EKG monitor, multi-function testers are introduced to be tethered with smartphone; moreover companion apps are designed to guide and inform the users and relay selected information to their caretakers and family members. Beyond devices, sensors and Apps that mobilize the data, we are witnessing innovations in the value chain from data organizing, data analyzing, to tools encouraging behavior changes using incentives, gamification or personalized coaching. We can safely envision that solutions based on these technology advancements will lead to better outcomes and lower cost."*

The overall trends that have ruled the roost through the last year are cloud technologies that have provided essential infrastructure required for access of on-demand healthcare data at point-of-care. Analytics and Big Data technologies provided the real-time views, as well as deep insights required to create a sustainable system, as it moves from a reactive to

a prescriptive phase.

Telehealth is soon becoming the norm for regional and remote consultations, the need for specialist fly-in staff that can cost a lot per visit has been dramatically reduced. Further, it has been predicted that this stream of digital health would address the gap in health outcomes between indigenous and non-indigenous communities, which in large part has been caused by a lack of access to healthcare resources for otherwise preventable diseases.

A report from Research and Markets predicted in August 2013 that the global telemedicine market will grow at a compounded annual growth rate of 18.9 percent from 2012 to 2016, primarily due to an increase in remote patient telemonitoring and strategic partnerships among vendors.

Telemedicine in itself has witnessed a major branching out. Today evolved forms of this industry include services like teleophthalmology, teleradiology, telecardiology, teleneurology, teledermatology, telepsychiatry and telepathology amongst others.

According to a recent Healthcare Access Study conducted by IMS Health, 70 percent of the health care infrastructure in India (doctors, beds, nurses, etc) is concentrated in urban areas where 30 percent of the population lives. Nearly 31 percent of the rural population has to travel over 30 km to access medical treatment.

Various state governments of Punjab, Tamil Nadu, Gujarat, Kerala and others in the Indian subcontinent have implemented telemedicine programs to improve health care services for the rural population. The ministry of health and family welfare, too, has launched the integrated disease surveillance program network with help of the Indian Space Research Organization. India has 1.6 million beds for a population of 1.2 billion. This translates to 1.3 beds per 1000 people. China is closest to India with 2.8 per 1000, the US average is 3.6, while the global average is 4.8 per 1000 and countries such as Japan are sitting at 6 beds per 1000 population.

#### **Never too crowded at CLOUD**

It has been said that this year we may collect more data about the human body than in all the history of medicine so far. SINTEF claimed that 90 percent of the world's data has been generated in just the last two years.

Today, across various countries, automatically transmitted or patient-supplied data is helping in reducing the cost of collecting data. The added advantage is that all the data can be monitored more regularly.

Even as the big organizations are making the transition towards IT look like it is smooth and swift, many are seriously looking towards cloud computing for solutions. Cloud offers flexible storage facilities for ever-increasing clinical data and solves the challenge involving access and sharing of this data across various systems and geographies without significant costs and infrastructure investment.

Research firm IDC states that the cloud presents strong opportunities for healthcare providers to create efficiencies, flexibility, and agility while increasing service levels for applications.

As per a latest Intel survey of 12,000 patients across eight countries, about 84 percent of people are willing to share personal healthcare information to lower costs to the system, and 72 percent are willing to see a doctor by video conference for a non-urgent appointment.

Big data analytics harness individual information for public health, safety and research, while remote monitoring devices, telemedicine, electronic health records and interoperability enable the right care, anywhere. All of this technology and data ultimately result in low-cost wellness and high-value healthcare.

*"Healthcare industry is second in terms of investments planned during 2014-15 for Big Data."*

**\*Gartner**

#### **Rick Valencia**

##### **General Manager, Qualcomm Life**

*"Health care is in the early stages of major disruption. The disruptor is the health consumer or patient and the means of disruption is the power and pervasiveness of digital technologies, especially the mobile network. There is a massive wave of venture investment and innovation underway in health sensors that will exist on us, around us and even in us. Biometric and other health readings taken from those sensors, sent to the cloud where they can be analyzed and made actionable and presented back to health consumers on computing devices like smartphones and tablets will empower consumers to better understand their health. Information empowered health consumers will drive changes to the system unlike any we've seen in our lifetimes. They'll take more personal responsibility for their health. They'll keep themselves healthier. They'll make decisions about their health, health insurance, health providers, health procedures, etc. This will change the system in ways*

*we can't completely imagine today; in the same way digital technology has revolutionized so many other industries."*