

## India can lead in Big Data analytics: Philips

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The symposium was delivered by Mr M R Srinivas Prasad, CEO, Philips Innovation Campus, Bangalore; and Mr J Vijayananda, senior director, analytics healthcare, Philips.

Mr Srinivas held that the Indian healthcare is at an inflection point. "Healthcare is one of the biggest challenges in India, both from infrastructure and population or disease management perspective. It (India) has the potential to lead the rest of the world. 8 percent of our GDP comes from IT, and 10 percent from the automobile sector. The US spends most of its GDP towards healthcare," he revealed.

He believes that technology adoption has always been driven by challenges. "The Indian healthcare industry is poised at this point," he said.

There is an increase in the rise of diseases like cardiovascular diseases (CVDs), diabetes, hypertension, respiratory disorders and obesity in India.

"10 percent of Indian population is going to be afflicted by these diseases. That's about 120 million people," Mr Srinivas opined.

Currently, in India, 86 percent of the population pays its treatment costs out-of-pocket, and only 14 percent of them have healthcare insurance.

"Hence, we have millions of households going bankrupt due to exorbitant costs involved in treating diseases," he commented.

Managing diseases calls for screening and diagnosing them early. "There is a belief that healthcare access in rural areas are

much lesser than their urban counterparts. That's not true. Affordability is much higher than availability," pointed Mr Srinivas.

There are two critical questions that need to be answered while dealing with predicting diseases and increasing healthcare access in rural areas: How can predictability help without compromising on the treatment quality at lower costs? How can rural population have the same access to healthcare that is available in big metros?

Here, Big Data can play a major role in addressing critical bottlenecks including unavailability of infrastructure, paucity of resources like medical professionals, and chronic diseases.

Known for having lesser number of hospitals, India has only 500-600 intensivists, Mr Srinivas said.

If Big Data is used to predict diseases, then the Data needs to be managed efficiently. By applying suitable advanced algorithms, Big Data can be used to make decision and take necessary action.

Another speaker, Mr Vijayananda, said that there are two aspects to Big Data analytics: Big Data and Analytics.

"Big data has 4 aspects defined by 4 V's. Volume of the data, velocity in terms of rate at which data is received, veracity and consistency of the data and the variety of data," he educated.

The Analytics part deals with derivation of value with the available data including descriptive analytics, diagnostic analytics, operational analytics, predictive analytics and prescriptive analytics.

"Using big data, the workflow efficiency in hospitals can be improvised, along with improvement in the efficiency of devices, minimizing patient readmissions, carrying out Cohort Analysis and population management," Mr Vijayananda observed.

At the same time, Mr Srinivas remarked, "India can be a leader in big data analytics and lead other countries. When there is paucity of resources, it has to be ensured that the system becomes efficient. There is a lot of thrust on health in the 12th five-year-plan and the current government has also laid much emphasis."

Currently, US, China, the UK, India and Japan are said to be thriving markets in Big Data analytics.

As a trend, there are lots of start-ups coming up in the Big Data analytics ecosystem. "Awareness now is a lot better than what it was in terms of adopting new technologies," Mr Srinivas highlighted.

Big Data and using real-time analytics decision-making has been the biggest advances ever since we started using the computers, he stated.

In Big Data, experts believe that the major challenges are unstructured data, shortage of data scientists, interoperability, and data security and privacy.

"Big Data is a technology and real-time decision-making will help address problems in terms of making hospitals efficient and enabling clinicians make better decisions with better treatment outcomes," expressed Mr Srinivas.

"It is not an easy road. But it is an opportunity for India to take the lead. As we create more awareness, and more people are informed, we will see more revolution, and hence we are witnessing more start-ups in this area. In the last couple of years, the number of start-ups focusing on data science and analytics have increased. And they are serving mostly the developed markets because the market here is still nascent and the government has to provide good support," Mr Srinivas noted.

According to Philips, the company is talking to the government and stakeholders since it believes the country needs to harness the potential of Big Data, especially with the onset of CVDs.

"In the coming years, 70 percent of the global CVDs is going to be from India. It is already late now, we need to do something," Mr Srinivas urged.