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Imaging news from Siemens Healthineers

Issue 09 | July 2016

What's trending in Healthcare?



This is my first address to all of you through *iConnect* and coincidentally it also happens to be the second anniversary issue.

While a lot has changed in the diagnostic imaging industry, we at Siemens also incorporated a big change. We have a new brand name – Siemens Healthineers. It is unique and bold. It exemplifies our pioneering

spirit and engineering expertise in the healthcare industry. It also best describes the organization and the people accompanying, serving and inspiring you, the people behind outstanding products and solutions.

I would also like to use this opportunity to share one more exciting news. Last month, Siemens Healthineers was awarded the **Symbol of Excellence** in the category of Medical Devices and Equipment at The **Best Healthcare Brands 2016** held by ET Edge, an **Economic Times Initiative**. On behalf of Siemens Healthineers, we are very thankful to all our customers for trusting us as their partners, leading us to receive such accolades.

Being the innovation leaders, we always strived towards providing value to our customers. With this thought,

we presented the global healthcare trends in our first anniversary of *iConnect*. In our second anniversary edition, we present you five trends that will be witnessed in the Indian healthcare industry in the coming years. These are...

- Standardization of quality of care
- Technology as growth driver
- Healthcare industry to be the employment booster
- Structures in Transition
- Integration of diagnosis and therapy

In this edition, we have briefly touched upon these five trends. We hope, it will be an interesting read for you.

Best Regards,

Vivek Kanade
Executive Director,
Siemens Healthcare Private Limited

Trend I: Standardization of quality of care

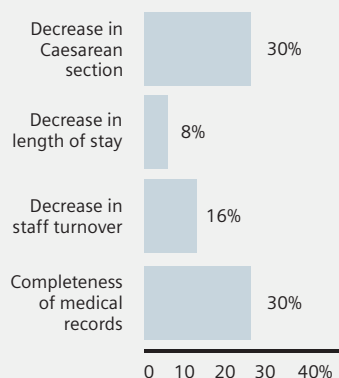
Accreditation of healthcare institutes is seeking attention in India primarily to standardize their protocols and enhance the quality of patient care. Quality of care is also essential in managing patient expectations. However, accreditation in

India is still limited. Nearly <1% of hospitals were accredited in India as of 2014¹. Standardization in quality of care is expected to grow in India and will be observed as one of the trends.

Minimum quality care: Quality is essential to managing patient expectations but accreditation across India is limited.

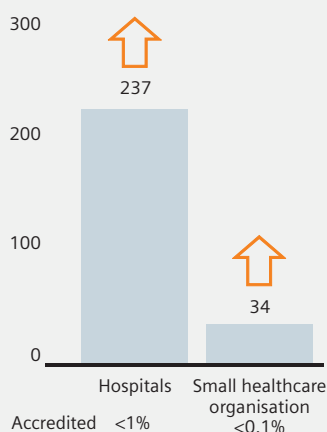
Accredited hospitals perform better than competitors

% difference in JCI-accredited vs. other hospitals



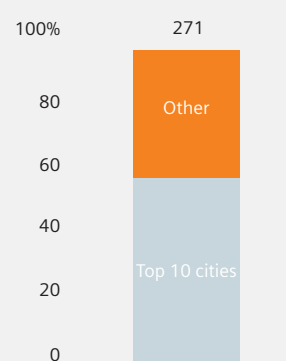
Negligible penetration in India

Number of organisations NABH accredited, as of Oct. 2014



Majority of accredited in metro, Tier-I cities

Number of organisations NABH accredited, as of Oct. 2014



Notes: Performance of JCI (Joint Commission International) hospitals evaluated by comparing them with control hospitals; sample hospitals taken from Jordan and Spain; small healthcare organisations are those with fewer than 50 beds; NABH is the National Accreditation Board for Hospitals and Healthcare Providers
Source: Nathealth

Trend II: Technology will drive the growth

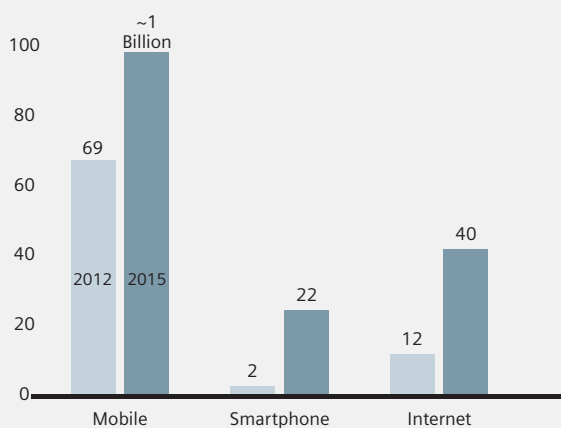
Technology trends like IT enabled services, telemedicine, local for local R&D and manufacturing, mobile and wearable technology, etc. are likely to shape the future of healthcare in India.¹ Forecasts predict that Brazil, Russia, India, China and Indonesia will be the sources of the most dynamic growth in digital consumption. The number of Internet

users in India is expected to reach 402 million by December 2015, registering a growth of 49 per cent over last year according to a report by Internet and Mobile Association of India (IAMAI). According to the latest report from TRAI, the number of mobile phone subscribers in India has almost touched the billion figure mark.

India has the backbone to support digital health growth

Increase in mobile penetration with smartphones growth increased at 23% y-o-y (Source: The Hindu)

Penetration of digital resources in India



Notes: Penetration is defined as the number of users divided by population
Source: Nathealth

Digital health enables solutions across the healthcare value chain

Awareness → Diagnosis → Treatment → Follow-up

Telemedicine

- Tele-consultations
- Doctor on call
- Tele-radiology centres
- e-ICUs

Remote patient monitoring

- Self-testing and basic treatment at home
- Tracking and monitoring of health-related data

Lifestyle management

- Education tools
- Reminders for diet and medication
- Mobile systems to track compliance
- Mobile applications and wearable technology

Trend III: Healthcare will be the employment booster

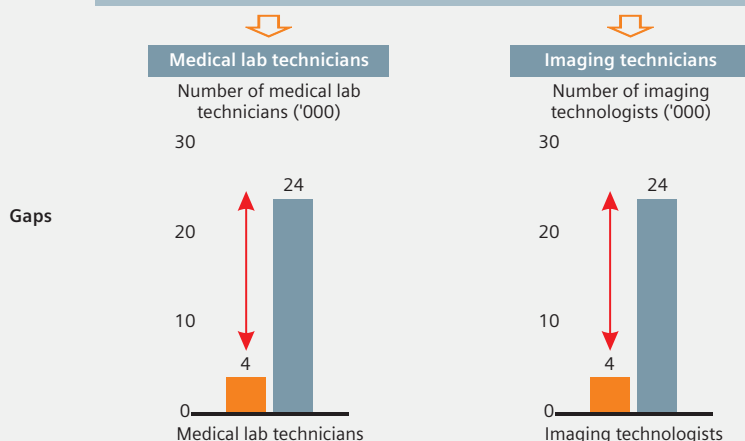
Despite producing massive numbers of health professionals, the number of doctors with recognized medical qualifications under the Medical Council of India (MCI) Act and registered with state medical councils was only 0.9/1000 inhabitants in 2010². The number of nurses is also 0.9/1000 inhabitants in India². Healthcare services are

expected to generate demand for 1.5 million to 20 million new jobs for doctors, nurses and allied health professional by 2025¹. There are a few technical roles like laboratory and diagnostic imaging technicians, which need immediate attention, because there is an increase in the penetration of imaging and laboratory devices.

Increase supply: Urgent need to fill gaps in these "mission-critical" roles

Trends

- Increased usage, penetration and growth for medical devices and technology
- Increased complexity of healthcare technology, especially for use in imaging



Notes: Demand of AHPs is based on US Bureau of Labor Statistics on per '000 population basis; statistics in the charts refer to the year 2012
Source: Nathealth

Trend IV: Structures in Transition

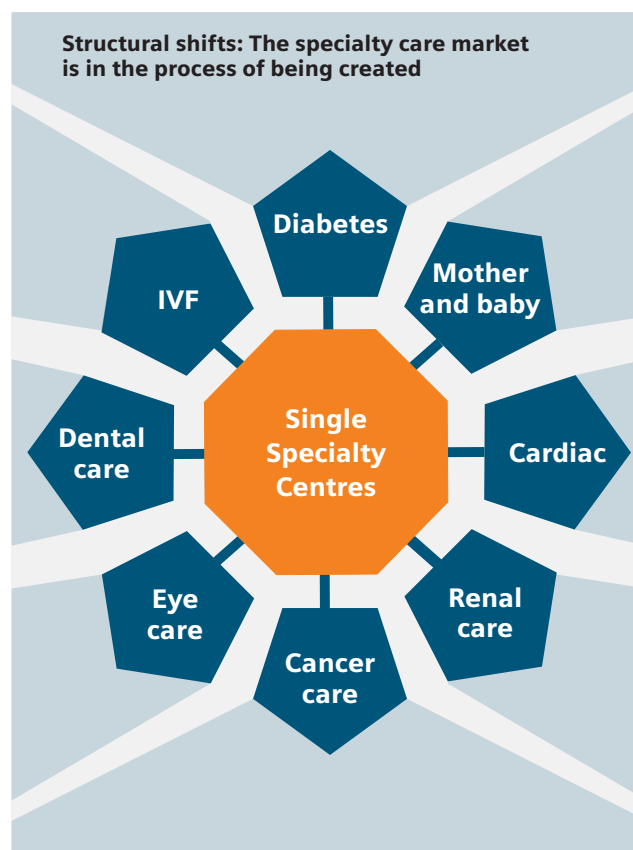
Consolidation, integration, and specialization are typical industry buzzwords. They have also become international healthcare buzzwords and key concepts for driving and shaping changes in health systems.

Consolidation allows all players in healthcare systems, providers in particular, to benefit from integration, specialization, big(ger) data and increased patient attraction. Providers consolidate through mergers and acquisitions, collaborations, as well as franchising and certification models. Integration helps avoid redundant tests or administrative tasks and reduces the risk of errors due to information gaps, about incompatible drugs and allergies, for example.

Healthcare executives have found that specialization can help improve workflows and cut back on errors or oversights. Care paths and workflows can be optimized for a specific disease condition, such as stroke or acute myocardial infarction. And of course, this works best with a specialized team. By specializing on patients with a certain medical condition, clinicians and non-clinicians are more aware of costs per services and how they affect the total fee of the care cycle.

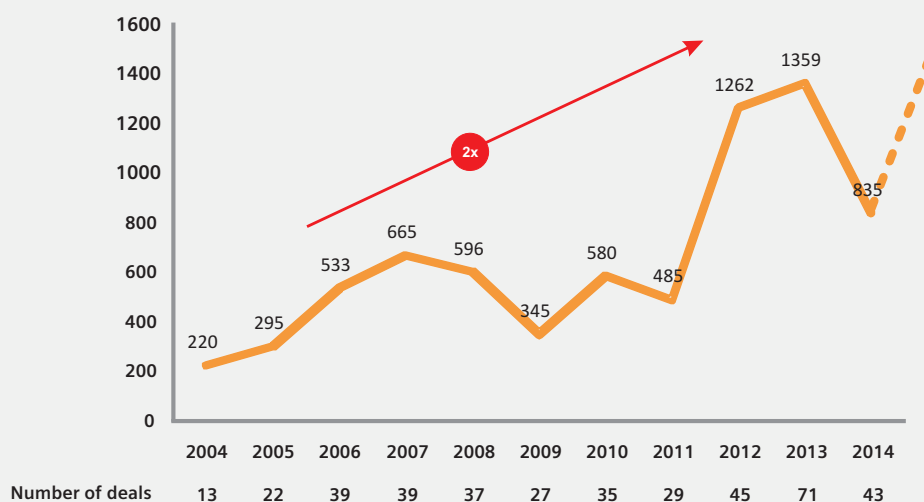
Funding was one of the biggest constraints in transition of structures. However, surge in VC/PE investments in the recent years has overcome this issue.

Structural shifts: The specialty care market is in the process of being created



The surge of VC/PE investments* in recent year has eased funding constraints on growth

Annual VC/PE investments in India's healthcare (\$M)



Notes: VC/PE is venture capital/private equity; H1 is the first half of the year

Source: Nathealth

* in the areas of Delivery, Pharma, Medical devices, Labs, Biotech and Others

Trend V: Integration of diagnosis and therapy

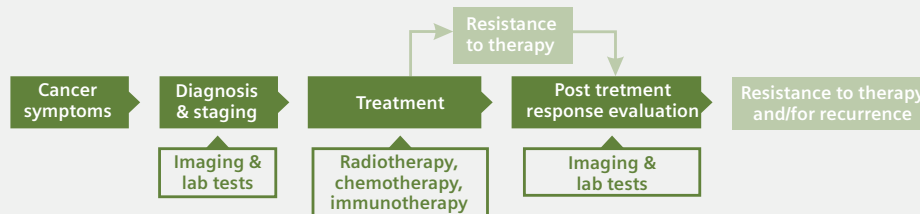
Non-communicable diseases are estimated to account for 53% of all deaths in India². It is estimated that NCDs will cost India \$6.2 trillion by 2030¹.

Improved imaging and laboratory tests support more accurate diagnosis and more appropriate, less invasive treatments.

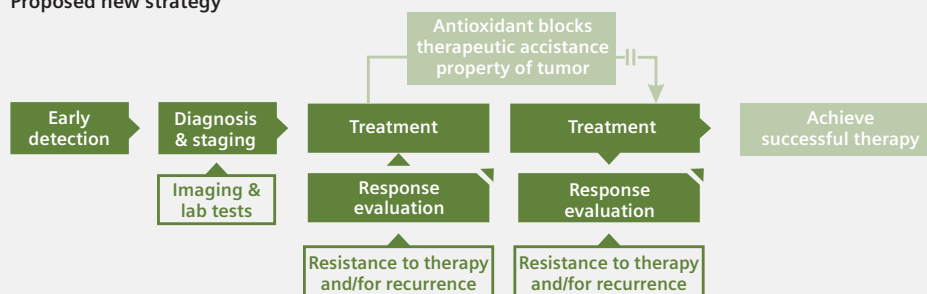
Real-time dynamic therapy management³

The current therapeutic strategy used in the clinic compared to the proposed hypothetical model which can potentially improve the clinical outcome of various therapies for treating tumors of different sub-types.

Current strategy



Proposed new strategy



Source: ¹Nathealth, ²World Health Organization, ³Siemens Healthcare (Basis: *Theranostics* 2013; 3(6): 437-447. doi:10.7150)

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