

Indian healthcare on the cusp of a digital transformation



Preface



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In a rapidly changing world where physical and virtual environments are converging and where close to 45% of the 7 billion population is already searching, surfing, chatting, exchanging and leveraging the World Wide Web, the ever-changing role of digital technology in improving the way businesses operate, grow and scale is quite evident.¹ Digital technology seems to have clearly disrupted healthcare by changing the way care delivery models provide outcomes, harnessing data to drive decisions and automating processes so that they keep up with the pace of business. India's digital connectivity is expected to grow from 15% in 2014 to 80% access in 2034, with rural Internet users increasing by 58% annually.² This trend can drive the adoption of telemedicine and other digital technologies, thereby increasing access to healthcare. With this growing digitally literate population, India has set the stage for the next wave of digital disruption and investments in healthcare in the world.

The Telemedicon 2016 conference in Bengaluru is that stage for India. Over 800 top business leaders from around the world will gather to gain a deeper perspective on the practices and possibilities of digital health and thus, drive the vision of creating innovative and digital solutions for current healthcare problems. This conference is set to be the largest till date and in a departure from previous years, the trade show will be open to end consumers/patients. PwC is delighted to be associated with the conference as the knowledge partner. I hope you will find this publication useful and informative as it will set the foundation for a digital framework for solving healthcare problems in India and the world.

1 World Economic Forum. (2016). 4 billion people still don't have internet access. Here's how to connect them. Retrieved from <https://www.weforum.org/agenda/2016/05/4-billion-people-still-don-t-have-internet-access-here-s-how-to-connect-them/>

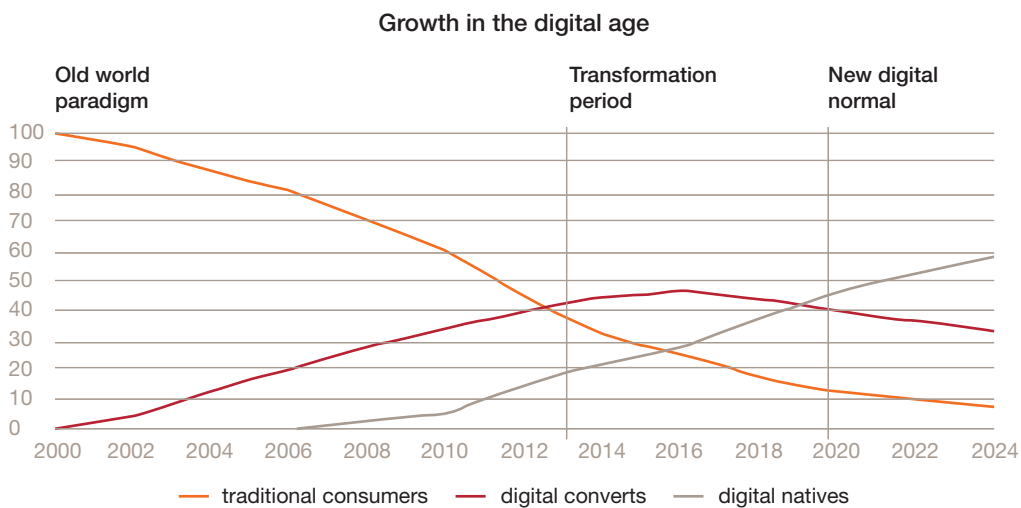
2 PwC. (2014). Future of India: The winning leap. Retrieved from <https://www.pwc.in/assets/pdfs/future-of-india/future-of-india-the-winning-leap.pdf>

Global digital revolution

Digital technology has led to a global revolution. The world is becoming increasingly more connected and is able to solve more and more complex societal problems

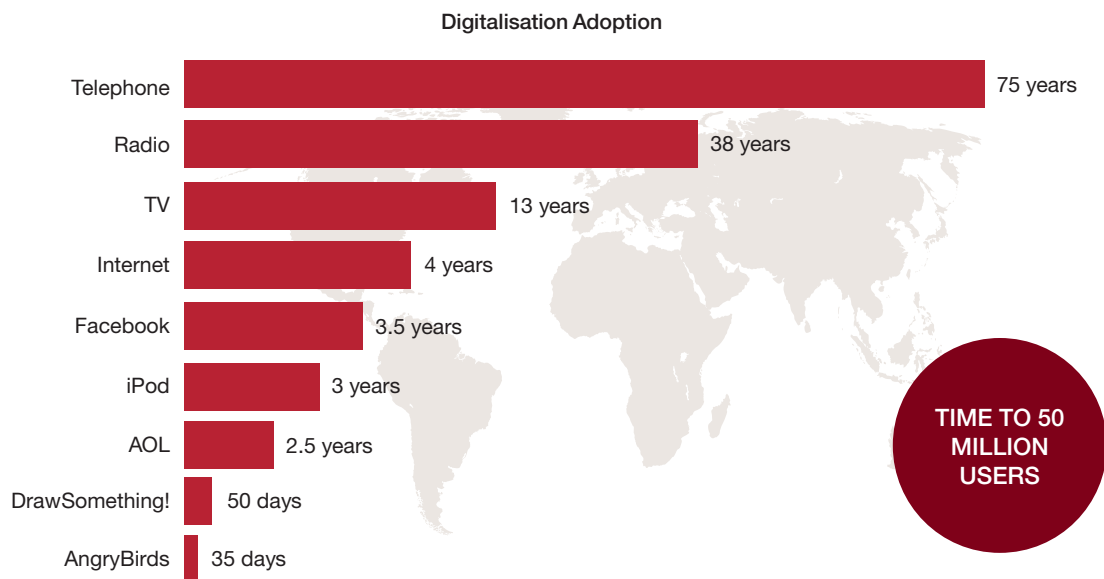
through increased collaboration and information sharing. Technologies ranging from the most common smartphones to clinical advancements in 3D printing have

driven this trend and continue to evolve over time. As a result, digital-oriented consumers have already outnumbered traditional consumers as shown in the graph below³:



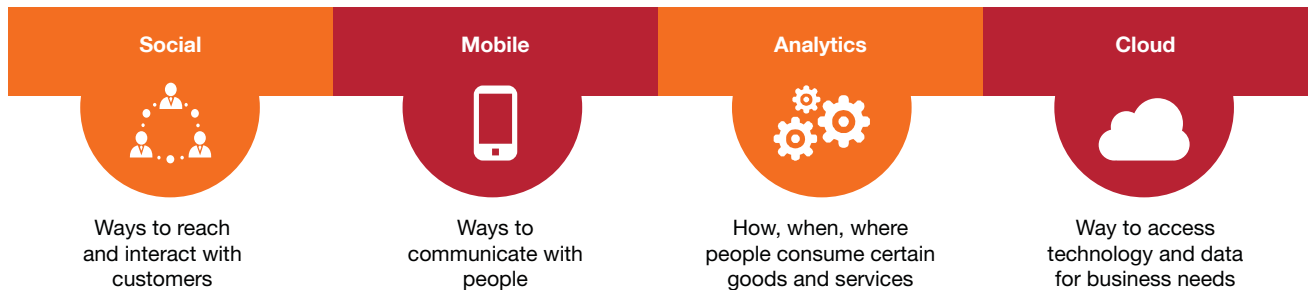
Source: PwC analysis

If we compare speed of adoption of technologies, it took the telephone 75 years to reach 50 million users, whereas Facebook achieved the same number of users in only 3.5 years.



Source: PwC analysis

As a result, even business models are changing. Companies are increasingly looking towards integrating the SMAC model and a digital mindset, as this will enable them to uncover new value drivers.



Source: SearchCIO

Each of the SMAC components can enhance consumer engagement with the company, but all components together can positively disrupt consumer engagement with the company.⁴ A company can interact

with its customers (social) through a medium (mobile) and input and store the data from that interaction into the (cloud) and use an (analytics) tool to derive insights for creating the right consumer

offerings. This upcoming business model has now created a new role within companies, called the Chief Digital Officer, who will lead and work with all departments in the company to create its digital strategy.⁵

There are many digital technologies within and outside this model; some of the major ones include:

1. **Social media:** It helps brands engage with customers, be on top of current trends, test new products and services, build brand equity and gain customer insights.⁶
 - For example, a US telecom provider uses Twitter to address customer complaints with its service.

Each day, more text messages are sent than the population of the planet; each minute, almost a day's worth of video is uploaded to YouTube; and, each month, more than two billion photos get posted on Facebook.⁷

Forrester predicts by 2020, wearables will be central to healthcare, business and personal systems.¹⁰

2. **Wearables:** These are technologies that consumers can wear, such as watches, that can collect/interpret data about the consumer. These have progressed from being mere fitness fashion watches to tracking people's health, such as heart rate and BP, and have even helped them manage their health better.⁸
 - For example, a technology provider is working with a pharmaceutical company to create a digital contact lens to measure blood glucose levels.⁹

4 SearchCIO. (2014) SMAC (social, mobile, analytics and cloud). Retrieved from <http://searchcio.techtarget.com/definition/SMAC-social-mobile-analytics-and-cloud>
 5 PwC. (2015). Adapt, disrupt, transform, disappear: The 2015 Chief Digital Officer Study. Retrieved from <http://www.strategyand.pwc.com/reports/chief-digital-officer-study>
 6 PwC. (2015). Healthcare: A digital divide? Retrieved from <http://www.pwc.com/gx/en/industries/healthcare/publications/digital-divide.html>
 7 PwC. (2013). Through the looking glass: What successful businesses find in India. Retrieved from <http://www.pwc.com/gx/en/services/advisory/consulting/india-market-entry-expansion.html>



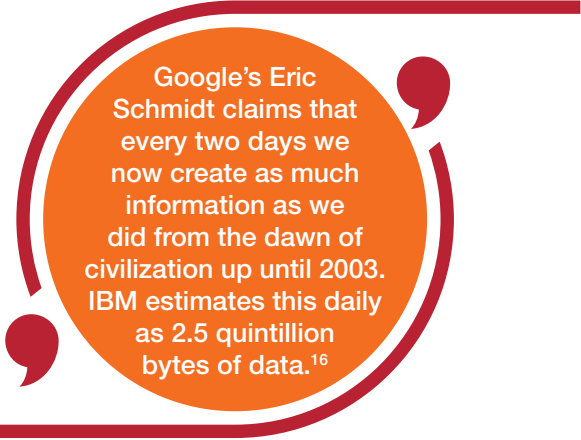
Global mobile data traffic in 2014 was 2.5 billion GB – 30x larger than all of the traffic on the Internet back in 2000.¹³

3. **Mobile apps:** With over one-fourth of the world in possession of a smartphone, apps are the new engagement tool to connect consumers to the world around them, including various companies and their services.¹¹

- For example, a technology provider launched an app that measures body metrics such as BP, heart rate, and statistics on diet and exercise, and stores this information on a cloud platform.¹²

4. **Cloud/big data:** Big data comprises data sets which are generally beyond the capability of an organisation to capture, analyse and process. The cloud is being used to store all this data and replace siloed proprietary systems. This data is then put through business intelligence systems that use different types of analytical models to derive important customer insights and actions.¹⁴ More and more data is being collected and analysed to anticipate market shifts, improve business processes, and create personalised customer experiences.

- For example, Singapore rolled out a National Electronic Health Record (NEHR) system in 2011, which allows patient healthcare records to be shared across the entire healthcare system.¹⁵



Google's Eric Schmidt claims that every two days we now create as much information as we did from the dawn of civilization up until 2003. IBM estimates this daily as 2.5 quintillion bytes of data.¹⁶

Digital adoption is being driven by:

- Greater connectivity and collaboration
- Increased accessibility to information and services
- Personalisation of products and services

Consumers expect companies to use these new business models and these digital technologies to provide a better overall customer experience.

8 Infosys. (2015). Digital healthcare ecosystem. Retrieved from <https://www.infosys.com/digital/white-papers/Documents/digital-healthcare-ecosystem.pdf>

9 <https://www.linkedin.com/pulse/10-surprising-companies-you-didnt-expect-embrace-mesk%C3%B3-md-phd?trk=v-feed>

10 PwC analysis

11 PwC. (2015). Adapt, disrupt, transform, disappear: The 2015 Chief Digital Officer Study. Retrieved from <http://www.strategyand.pwc.com/reports/chief-digital-officer-study>

12 PwC analysis

13 PwC. (2015). Adapt, disrupt, transform, disappear: The 2015 Chief Digital Officer Study. Retrieved from <http://www.strategyand.pwc.com/reports/chief-digital-officer-study>

14 PwC. (2013). Through the looking glass: What successful businesses find in India. Retrieved from <http://www.pwc.com/gx/en/services/advisory/consulting/india-market-entry-expansion.html>

15 PwC. (2016). The digital healthcare leap. Retrieved from <http://www.pwc.com/gx/en/issues/high-growth-markets/assets/the-digital-healthcare-leap.pdf>

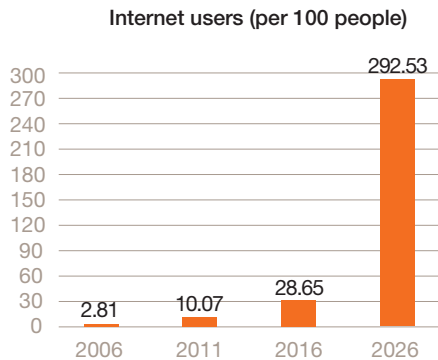
16 PwC analysis

Introduction to India's digital opportunity

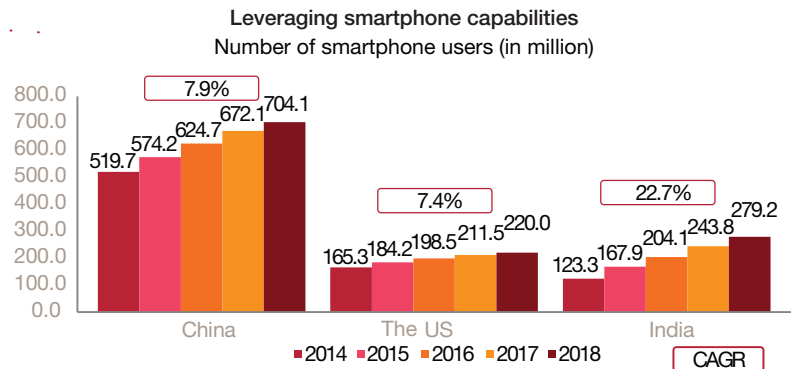
India is also witnessing this revolution, aided by its growing smartphone and Internet penetration. The usage

of smartphones and the Internet continues to increase YoY in India, currently at a 20–30% CAGR.¹⁷

Some studies predict that India's smartphone population will surpass that of the US in the next few years.¹⁸

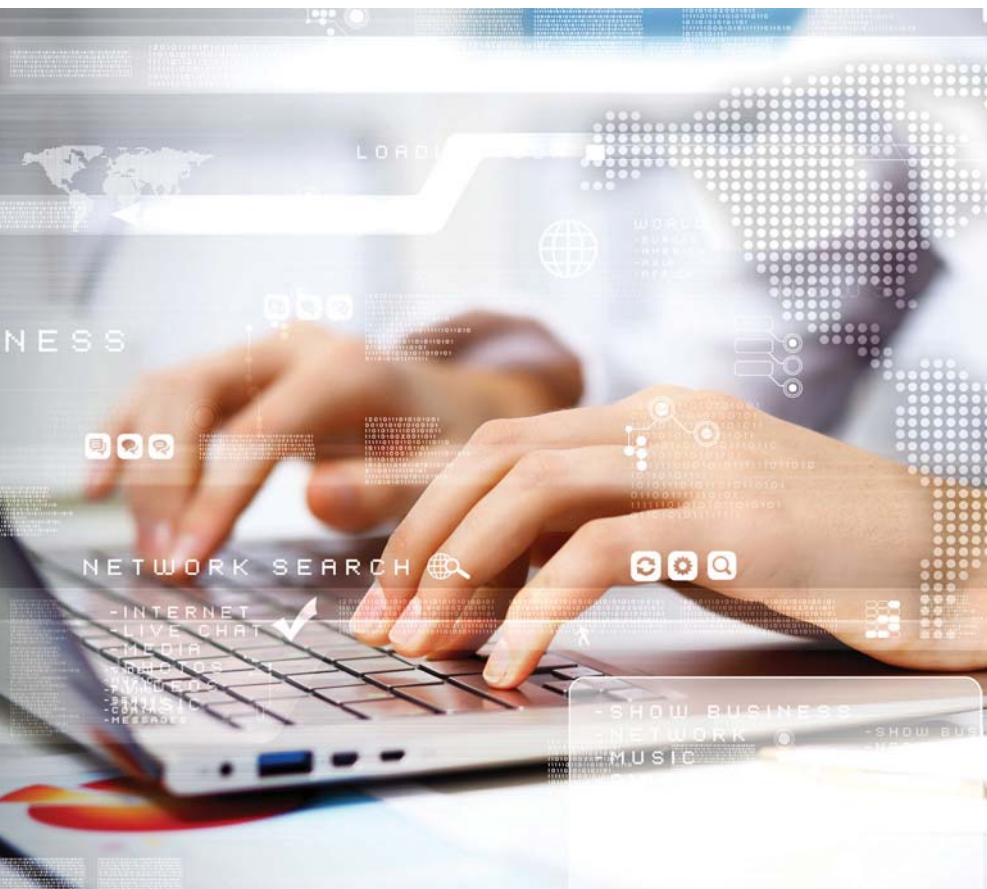


Source: World Bank, PwC analysis



Source: eMarketer, December 2014

Note: Internet users are individuals who have used the Internet (from any location) in the last 12 months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV, etc.



More Indians are using their smartphones with 2G/3G/4G technology and broadband Internet to obtain basic necessities such as food and healthcare. As a result, consumers are looking for an omnichannel experience from companies.

These factors are further enhanced through India's thriving entrepreneurial and start-up culture. India is ranked 3rd among middle-income economies in the Global Innovation Index.¹⁹ The public sector's investment in this culture, through the Startup India initiative, is adding to this interest.

These digital drivers have set the stage for a more disruptive, engaged and digitised India. While these digital drivers are fairly recent, India has had other more long-standing indicators, such as a growing economy, that have helped drive this digital transformation.

¹⁷ World Bank data, PwC analysis

¹⁸ PwC. (2015). Banks taking a quantum leap through digital. Retrieved from <https://www.pwc.in/assets/pdfs/publications/2015/cii-banking-tech-summit-banks-taking-quantum-leap-through-digital.pdf>

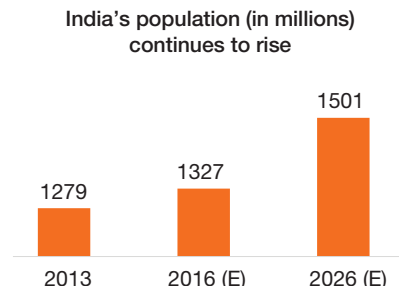
¹⁹ <https://www.globalinnovationindex.org/userfiles/file/reportpdf/GII-2015-v5.pdf>

Macro-level view of India

India's economy continues to expand, with GDP increasing at a CAGR of 3%, and GDP per capita set to rise to 2,054 USD by 2026 on the back of a more economically stable population, a growing middle class, and a wealth of opportunities becoming available.²⁰ Internationally, India is ranked as one of the fastest growing markets in the world and is becoming a more favourable place for investment.²¹

The nation is expected to become the largest consumer base for adopting digital innovations, with its population expected to expand from 1.3 billion in 2015 to 1.5 billion by 2026, making it the world's most

populous country, ahead even of China.²²



Source: World Bank

Second, there is a tremendous opportunity for ROI growth as India's GDP is expected to see the greatest rise in share of world GDP by 2050 (from 2% to 13%), making

it the country with the third highest GDP by 2050. Some factors propelling this are an increased focus on manufacturing, skilled engineering and domestic growth, as well as a growing working class population (410 million in 2010 to 541 million by 2025).²³ India's ranking on the World Economic Forum's Global Competitiveness Index climbed to 55 from 71 a year earlier, demonstrating enhanced competitiveness and a renewed global focus.²⁴

India's growing population and economy clearly present tremendous opportunities for more digital integration, especially in the healthcare sector.



20 World Bank data: <http://databank.worldbank.org/data/home.aspx>

21 World Economic Forum. (2016). Which are the world's fastest-growing economies? Retrieved from <https://www.weforum.org/agenda/2016/04/worlds-fastest-growing-economies/>

22 World Bank data, 23 Mega, V. (2015). Conscious coastal cities: Sustainability, blue green growth, and the politics of imagination. Springer.

23 PwC analysis

24 World Economic Forum. (2014–16). Global Competitiveness Rankings. Retrieved from <http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/> and http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

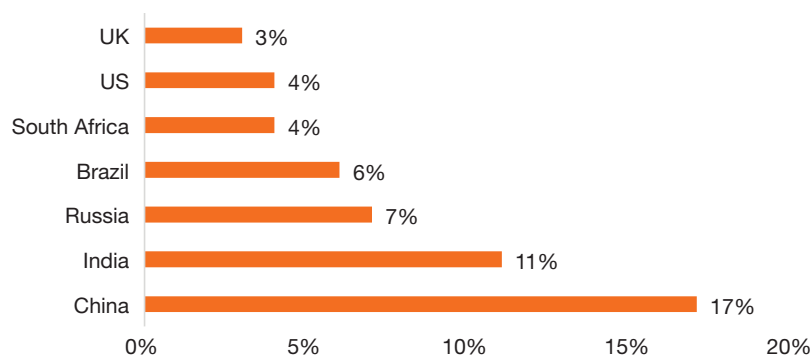
India's expanding healthcare industry

With an estimated market size of 100 billion USD in 2015, one of the fastest growing industries in India is healthcare.²⁵ What makes this industry even more attractive is the strong potential for impact based on the number of challenges

it faces in its health profile, accessibility, affordability and quality. Healthcare in India is a prime candidate for investment, especially through digital interventions, and this trend is already picking up.

India currently has the second largest CAGR in healthcare (11%) among all BRIC countries (China ranks first).²⁶ Healthcare is one of the fastest growing industries and is expected to expand at a CAGR of 18.3% during 2012–20 to reach 280 billion USD.²⁷

India's healthcare CAGR



Source: World Bank data

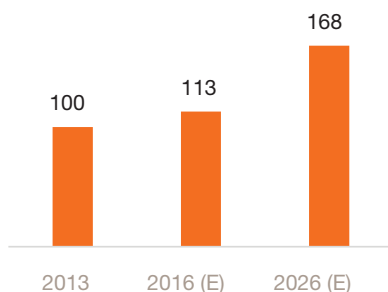
This market, propelled by challenges—mainly an ageing population, a shift in the disease burden, rural inaccessibility to

healthcare, manpower shortage, low insurance penetration, inadequate public sector investment and inconsistent

quality standards—is in the need of major intervention. Digital technology can prove to be a game changer.

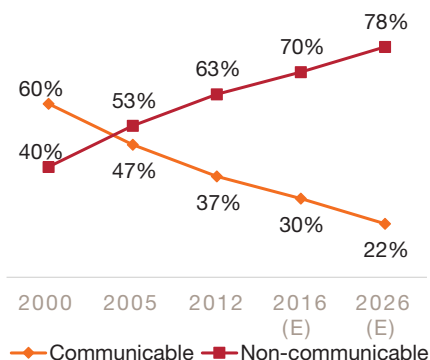
Health profile: Ageing population, shift in disease burden

India geriatric population crossed 100 million in 2014 and is expected to rise to 168 million by 2026.



Source: NCBI, IBEF

Non-communicable diseases account for a greater share of the disease burden in India, with an expected cost of 23,000 crore INR within a decade.



Source: PwC analysis

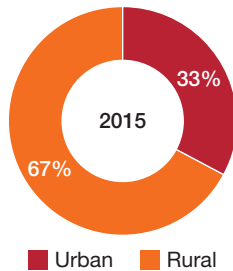
25 IBEF. (2015). Healthcare industry in India. Retrieved from <http://www.ibef.org/industry/healthcare-india.aspx>

26 World Bank data: <http://databank.worldbank.org/data/home.aspx>

27 IBEF. (2015). Healthcare industry in India. Retrieved from <http://www.ibef.org/industry/healthcare-india.aspx>

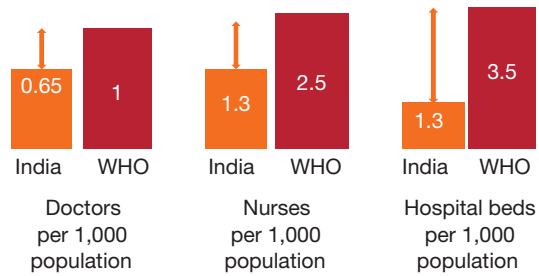
Accessibility: Rural inaccessibility to healthcare, lack of manpower

Even though the majority of India's population lives in rural areas, they have only 33% of Indian doctors.



Source: PwC analysis

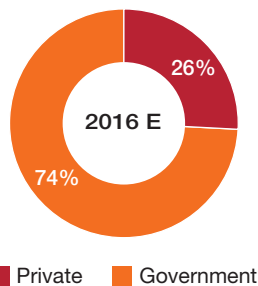
India does not meet minimum WHO recommendations for healthcare workforce and infrastructure



Source: PwC analysis

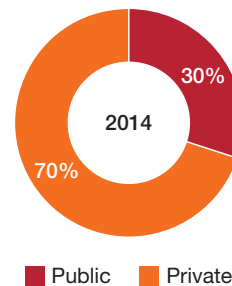
Affordability: Low insurance penetration, inadequate public sector investment

Only 295 million out of over 1 billion people are covered by insurance, contributing to the 39 million Indians that fall below the poverty line due to healthcare expenses.



Source: PwC analysis, IRDA

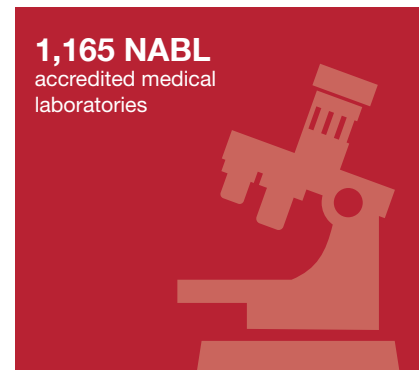
India only spends 4.7% of its GDP on healthcare cumulatively, with just 1.4% from the public sector, which is among the lowest in the world. Healthcare expenditure is primarily private-driven.



Source: World Bank

Quality: Inconsistent quality standards

Less than 1% of India's hospitals are accredited.²⁸



Source: PwC analysis

28 IBEF. (2015). Healthcare industry in India. Retrieved from <http://www.ibef.org/industry/healthcare-india.aspx>

The evolving trends in the Indian healthcare sector have increased the urgency of addressing these challenges. Some of the major trends are more patient-focused care, value- vs volume-driven healthcare, continuum of care and increasing digital integration.

Patients today are more conscious, tech-savvy and more willing to embrace emerging technology.²⁹ As a result, a new trend—‘flipped care’—has emerged, where the focus has shifted from the provider to the patient.³⁰ Patients want to take more control of their health and are open to new ways of receiving care. They

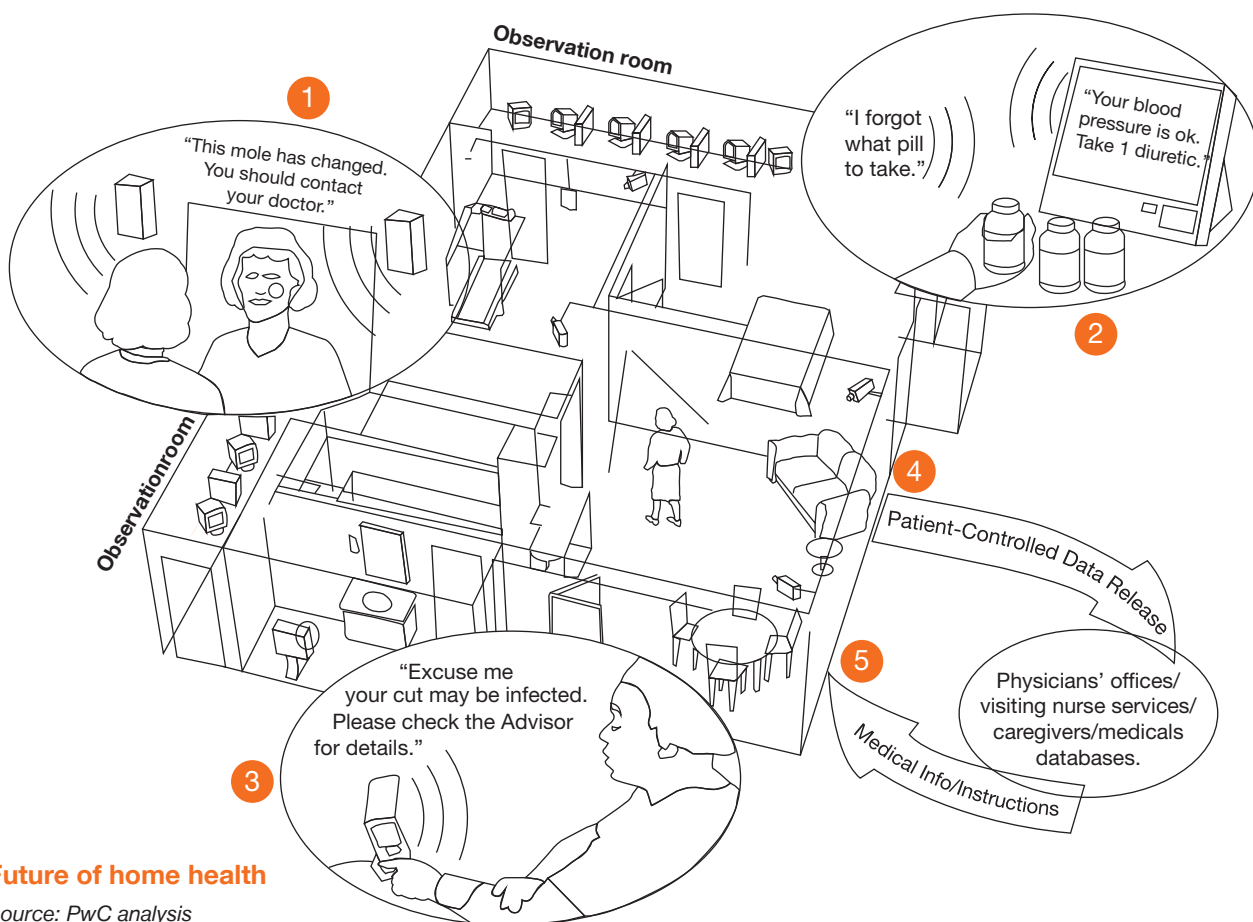
no longer want traditional models of healthcare that are usually disparate and siloed.³¹ As a study by the Innovation Unit pointed out:

‘How much time does the average person spend with healthcare professionals? Even patients with long term health conditions will spend on average just five hours a year interacting with a clinician. The rest of their waking hours – all 8755 of them – patients are looking after themselves.’³²

This trend of ‘flipped care’ puts an increased emphasis on value based care vs volume based care. With

rising healthcare costs and low insurance penetration, patients want to avoid unnecessary tests and receive transparent information about their treatment.

A third trend is the continuum of care beyond the hospital—specifically home health. With an inadequate number of beds, many healthcare providers are focusing more on how to install digital technologies for remote patient monitoring, such as telemonitoring, IoT, connected devices and wearables. This helps enhance patient convenience and reduces healthcare costs for the provider.



Future of home health

Source: PwC analysis

Finally, digital technology has already been integrated in areas such as education and training of doctors, patient records, and health information systems. It will be

discussed in detail in the subsequent sections. Healthcare stakeholders are slowly realising the benefits of digital in solving their problems and are incorporating these technologies.

India’s healthcare challenges and new trends are helping the digital revolution expand across the nation.

29 Infosys. (2015). Digital healthcare ecosystem. Retrieved from <https://www.infosys.com/digital/white-papers/Documents/digital-healthcare-ecosystem.pdf>

30 Philips. (2016). Future health index. Retrieved from http://www.ehealthnews.eu/images/stories/pdf/future_health_index_report_2016.pdf

31 PwC. (2016). The digital healthcare leap. Retrieved from <http://www.pwc.com/gx/en/issues/high-growth-markets/assets/the-digital-healthcare-leap.pdf>

32 Innovation Unit. (2012). 10 ideas for 21st century healthcare. Retrieved from <http://www.innovationunit.org/sites/default/files/DIGITAL%20VERSION10%20Ideas%20Final.pdf>

India's ongoing digital revolution in healthcare

Digital technology adoption is already gaining prominence in India's healthcare industry, with efforts from both the public and private sectors. The government has launched several initiatives such as Digital India and Aadhaar in some cases with support from the private sector. The private sector has created mobile apps, adopted telemedicine, and set up innovation centres all around India, among other measures. These initiatives have been largely influenced by a rising number of digital health start-ups.

A digital strategy refers to the use of the convergence of multiple applications to disrupt business processes and ensure enhanced and sustainable access to services for all. Such a strategy can be applied in healthcare. Technology is not the solution itself; rather, it enables the development of healthcare solutions, improved patient care and provider growth. Some of the most widely discussed digital technologies that are being used to create healthcare solutions in India are:

1) M-health

M-health is probably one of the largest sectors within digital healthcare in India, with an estimated market size of 2,083 crore INR in 2015—which is set to rise to 5,184 crore INR by 2020.³³ Acceptance of m-health is increasing simultaneously. A study showed that 68% of doctors in emerging markets recommend m-health and

59% of patients are already using it.³⁴ Mobile apps, especially those connecting doctors to patients and enabling remote consultations, are a major segment within m-health.

Example: A mobile app that offers online video consultation and an ability to book diagnostics tests online. It has verified over 90,000 doctors.³⁵

2) Remote diagnosis:

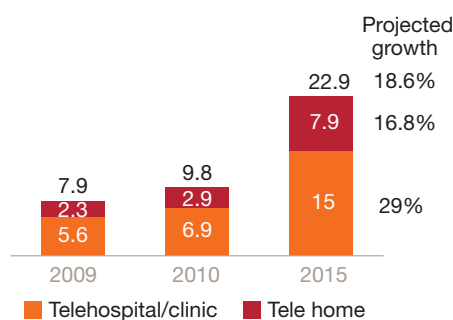
Low-cost portable innovations are being developed in India to cater to the needs of its vast rural population. India's remote healthcare delivery market was estimated at 7.5 million USD in 2011 and is expected to grow at a CAGR of 20%.³⁶ These products help increase access to healthcare for remote and rural populations by providing point-of-care diagnostics, teleconsultation and e-prescription capabilities.

Example: A wireless health monitor that measures blood pressure, oxygen saturation, pulse, body temperature, blood sugar, blood cholesterol and total haemoglobin count with a mobile application on your smartphone

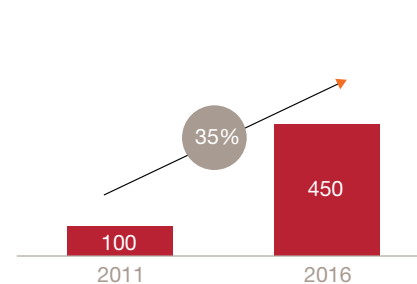
3) Telemedicine

Telemedicine is the use of technology for remote diagnosis, monitoring and education. While telemedicine is usually categorised under remote diagnosis, the size of its market in India allows us to consider it as an independent segment. India's telemedicine market was valued at 100 million USD in 2011 and is expected to grow by over four times by the end of 2016.³⁷ Telemedicine has helped bring down provider and patient costs as well as provide care in the most remote areas. As the figure below shows, India is ahead of the curve on the global scale.

Global telemedicine market (billion USD)



India telemedicine market (million USD)



Source: PwC analysis

33 PwC. (2015). The healthcare agenda: Stakeholder collaboration for the way forward. Retrieved from <https://www.pwc.in/assets/pdfs/publications/2015/the-healthcare-agenda.pdf>

34 PwC. (2014). Emerging mHealth: Paths for growth. Retrieved from <https://www.pwc.com/gx/en/healthcare/mhealth/assets/pwc-emerging-mhealth-full.pdf>

35 SundayGuardianLive. (June 2016). 'Future of health apps in good shape, say doctors'. Retrieved from <http://www.sundayguardianlive.com/news/5255-future-health-apps-good-shape-say-doctors>

36 PwC analysis

37 PwC. (2015). The healthcare agenda: Stakeholder collaboration for the way forward. Retrieved from <https://www.pwc.in/assets/pdfs/publications/2015/the-healthcare-agenda.pdf>

Example: Top private hospitals in India have integrated telemedicine capabilities, and one is even working with the central government to open 60,000 telemedicine centres.³⁸ Similar capabilities are being seen on the public side—for example, the Karnataka State Telemedicine Network Project with ISRO; and medical institution side tele-healthcare activities at the Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow.³⁹

4) Digital and social connectivity

As mentioned earlier, social connectivity is an upcoming trend. Social media is prominent in India, with the average person spending 25% of his/her time on social networking sites, courtesy of improved telecom infrastructure.⁴⁰ In healthcare specifically, this has been in the form of patient support communities and knowledge portals on the patient side. On the provider side, this has prompted the emergence of digital chatter platforms where medical professionals share knowledge and ask for help. There are also communication technologies that

help connect doctors around the world for both a second opinion and training.⁴¹

Example: The Indian government is trying to set up a National Optical Fibre Network to connect 2,50,000 gram panchayats in the country to the Internet, which aids the expansion of e-health.⁴²

5) Wearables

Initially, wearables in healthcare were devices that could track diet and fitness activity and were known to improve diet and exercise outcomes. Now, wearables are being increasingly used to measure basic health parameters such as heart rate. The overall healthcare wearables market in India is currently valued at 30 crore INR and is expected to increase in value as wearable technology is beginning to expand.⁴³

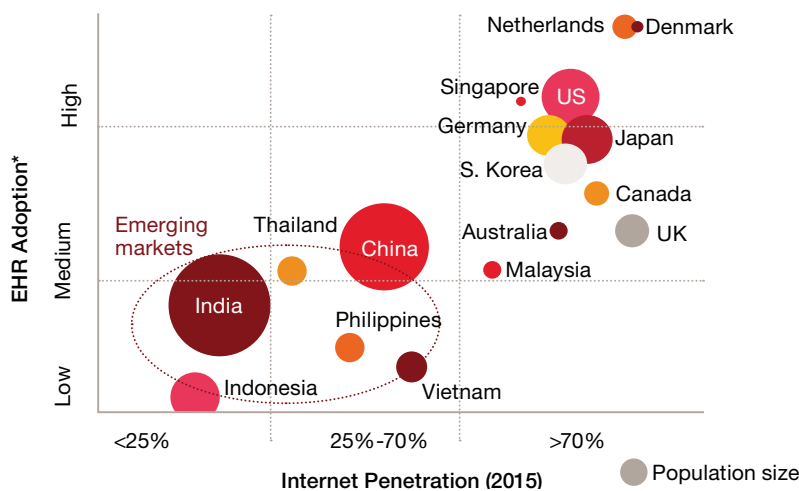
Example: there is a wristwatch that acts as a personal emergency response system and relays medical and GPS data to a remote server.

While the above technologies have a relatively concrete foundation in India, some of the technologies that are gaining wider acceptance

in the Indian healthcare industry are discussed below:

- 1) Big data analytics: Big data is slowly entering the Indian healthcare landscape. Different healthcare players are now realising the value of combining consumer insights and internal company data to inform and optimise their product offerings, and are accordingly increasing investments in the necessary tools.⁴⁴ In this way, the healthcare system can pull consumers towards them and share these insights to work with other players in the space.⁴⁵
- 2) Smart cities: Cities have begun to use technology to enhance the use of resources within existing infrastructure.⁴⁶
- 3) Electronic medical records (EMR): EMRs are beginning to be adopted by healthcare providers. This digitisation has paved the way for advanced IT systems, such as health information systems and cloud computing to increase remote and ubiquitous accessibility to patient data. This should help reduce medical errors and improve health outcomes.

India is on the low end of EMR adoption:



*Note: EHR Adoption includes usage of medical records, health records, and other digital solutions by hospitals and physicians to deliver healthcare service.

Source: PwC analysis

38 PwC. (2015). The healthcare agenda: Stakeholder collaboration for the way forward. Retrieved from <https://www.pwc.in/assets/pdfs/publications/2015/the-healthcare-agenda.pdf>

39 PwC Analysis

40 PwC. (2013). Through the looking glass: What successful businesses find in India. Retrieved from <http://www.pwc.com/gx/en/services/advisory/consulting/india-market-entry-expansion.html>

41 PwC analysis

42 PwC analysis, Bharat Broadband Network Limited website

43 PwC. (2015). The healthcare agenda. Retrieved from <https://www.pwc.in/assets/pdfs/publications/2015/the-healthcare-agenda.pdf>

44 PwC. (2013). Through the looking glass: What successful businesses find in India. Retrieved from <http://www.pwc.com/gx/en/services/advisory/consulting/india-market-entry-expansion.html>

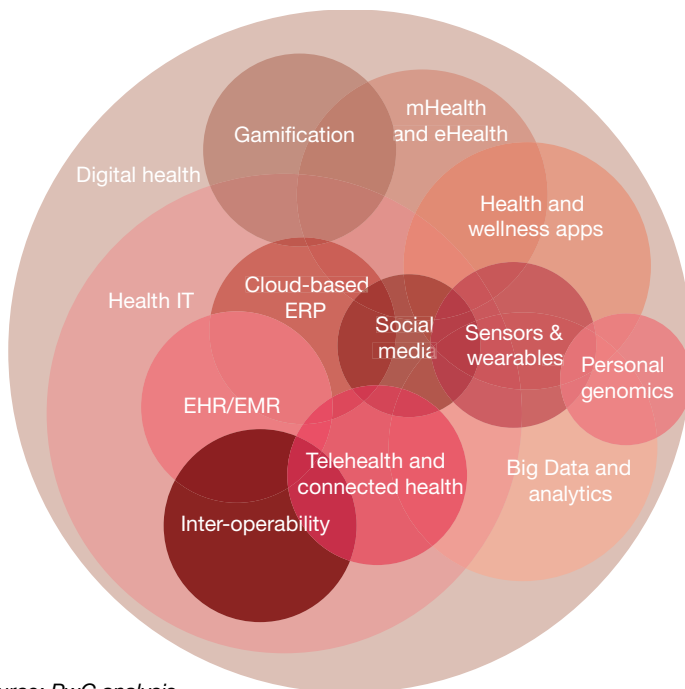
45 Infosys. (2015). Digital healthcare ecosystem. Retrieved from <https://www.infosys.com/digital/white-papers/Documents/digital-healthcare-ecosystem.pdf>

46 PwC. (2015). The healthcare agenda. Retrieved from <https://www.pwc.in/assets/pdfs/publications/2015/the-healthcare-agenda.pdf>

These are just a few types of technologies. The whole digital health ecosystem of technologies is represented below:

Digital health ecosystem

Digital health components



What does it mean for healthcare:

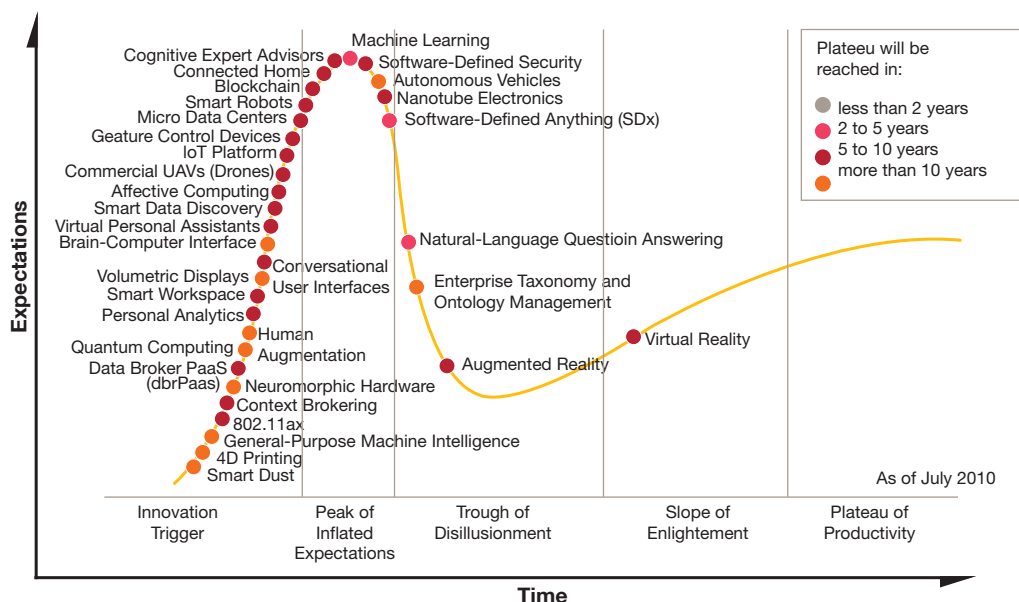
- Improve access
- Quality care
- Better information
- Better patient outcomes
- Increase patient engagement
- Enhance information flow

Source: PwC analysis

Continuous innovations are under way in the following areas:

- Bringing your own device for healthcare providers to manage their patient data⁴⁷
- Owning a disease for a comprehensive solution to management and possibly a cure for a disease⁴⁸

Gartner Hype Cycle for Emerging Technologies, 2016



Increasing innovation is leading to the growth of digital and healthcare partnerships between the public and private sector, including the set-up of mobile medical units and partnerships between the Indian government and international players.

Source: <http://www.gartner.com/smarterwithgartner/3-trends-appear-in-the-gartner-hype-cycle-for-emerging-technologies-2016/>

47 PwC analysis

48 PwC. (2012). 10 minutes on medical innovation. Retrieved from <https://www.pwc.in/assets/pdfs/healthcare/medinn.pdf>

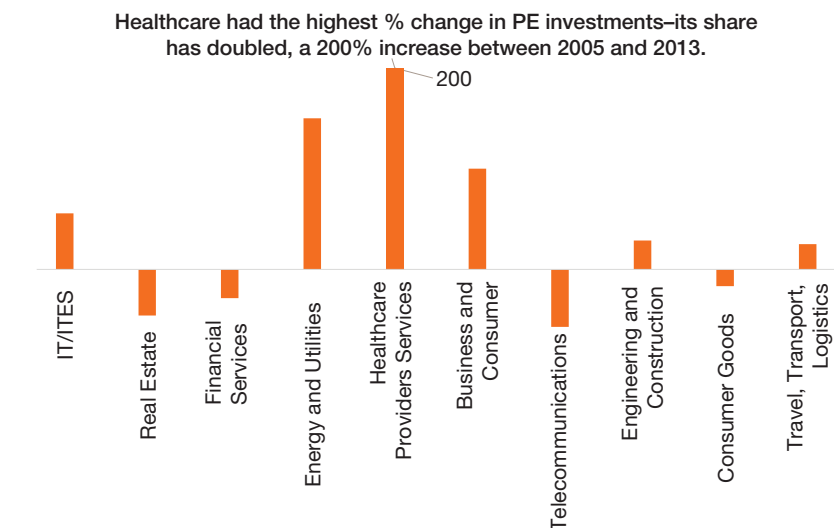
Renewed global focus on India

India is entering into more substantial global partnerships. On an international level, FDI inflows in India reached a record 59 billion USD in 2015—a 70% rise.⁴⁹ This renewed international focus can be categorised into four areas: financial investment, product innovation, local partnerships and medical tourism.

FDI in healthcare continues to rise. From June 2012 to June 2015, there was a 51% increase to 17.5 billion USD, with increasing investments from medical tourism.⁵⁰ The healthcare and life sciences sector saw a 54% jump to 166 million USD in private equity investments between Q4 2014 and Q4 2015 alone.⁵¹

In terms of product innovation, many companies are immersing themselves in ‘reverse innovation’—that is, the creation of products and services for the emerging market first and then the release of those products in the developed world.⁵² Emerging markets have the largest demand for healthcare services because of the depth of problems, large consumer base and expected magnitude of solution impact, as seen in India. For example, a global medical device manufacturer launched an 800-USD ECG machine for rural India that was portable, battery-operated, easy-to-use and easy-to-repair, compared to the normal 2,000-USD ECG machine.⁵³

With emerging markets as the new target consumer, international companies are setting up bases in India as well as investing in



Note: Change calculated between periods of 2005-08 and 2009-13

Source: PwC analysis

and co-investing with Indian companies. The Indian government is also promoting venture funding, providing firms with capital and passing favourable government policies.⁵⁴ For example, the Make in India initiative allows 49% FDI in the insurance and pension sectors and 74% FDI in brownfield pharmaceuticals.⁵⁵ India rose by two places in A.T. Kearney’s FDI Confidence Index, thus entering the top 10 places for FDI investment.

‘[G]lobal executives are more optimistic about India’s economic outlook than about that of any other emerging market.’⁵⁶

With surgery costs that are one-tenth of those in developed countries, India’s medical tourism industry continues to boom with a CAGR of 30% (rising from 2.8 billion USD in

2015 to 38.4 billion USD by 2025).⁵⁷ International hospitals have received the international Joint Commission International (JCI) accreditation, thus increasing confidence in India’s quality standards. More hospitals are looking to obtain the same accreditation. In 2013, India had close to 2,30,000 medical tourists, mostly from emerging economies. India has also expanded its international health services to include e-health and setting up of hospitals abroad. India’s pharma, healthcare and biotech sector was one of the top five sectors for outbound M&A deals, with a value of 567 million USD in 2013.⁵⁸

Thus, India has laid the foundation for digital disruption in healthcare through its economic strength, changing consumer behaviours and international investment.

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51 PwC. (2015). MoneyTree India Q4 2015. Retrieved from <http://www.pwc.in/assets/pdfs/publications/2016/moneytree-india-report-q4-2015.pdf>

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54 PwC. (2012). 10 minutes on medical innovation. Retrieved from <https://www.pwc.in/assets/pdfs/healthcare/medinn.pdf>

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Conclusion

The world is rapidly becoming more digital, and any business not realising and incorporating this trend will fall behind. India has the potential for digital growth,

given its current technology penetration, advancing economy, growing population and accelerating healthcare industry. The rise of digital technology is pushing India

to achieve Health for All, putting the country at the forefront for foreign investment. With these opportunities, India is emerging as the global leader in digital health.



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