



Digital Healthcare in India

“Healthcare of the Future”

Together for a healthier world

Report by

India Health



By Informa Markets

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Topline digital health stats for India

- ✚ Digital intervention in healthcare is expected to drive the industry at a **CAGR of 23% by 2020**
- ✚ Telemedicine market in India is expected to rise at a CAGR of 20% during 2016-2020, reaching **US\$ 32 million by 2020**
- ✚ The implementation of telemedicine technology could save India **US\$ 4-5 billion every year**
- ✚ The applications of AI in the healthcare space in India will be worth **US\$ 6 billion (INR ~431.97 bn) by 2021**
- ✚ **76% of healthcare professionals** in India already use digital health records (DHRs) in their practice
- ✚ There are **4,892 start-ups** in the Indian health-tech space
- ✚ Health-tech startups in India raised a total of **US\$ 504 million** between 2014-2018



The role of digital health

New health technologies such as wearable tech, telemedicine, genomics, virtual reality (VR), robotics and artificial intelligence (AI) are changing the landscape of the Indian healthcare system. Like many other markets, India too is at the cusp of a 'digital health' revolution.

Digital health technology is a pivotal pillar in delivering value-based care across the healthcare continuum in India. Adaptive intelligent solutions can help lower the barriers between hospitals and patients, improving access to care and enhancing overall patient satisfaction, particularly in tier II and III cities in India.

Healthcare companies are ready to embrace innovation and emerging trends to successfully steer new-age technologically driven business strategies by capturing consumer interest. As the pace of digital innovation in healthcare accelerates, so do the opportunities for healthcare companies and medical devices manufacturers across India who are willing to embrace the digital health space over the coming years.

"Harnessing the power of digital technologies is essential for achieving universal health coverage. Ultimately, digital technologies are not ends in themselves; they are vital tools to promote health, keep the world safe, and serve the vulnerable."

Dr Tedros Adhanom
Ghebreyesus, WHO
Director-General





A growing market

India Brand Equity Foundation (IBF) anticipates that the healthcare sector will record a threefold rise, at a Compound Annual Growth Rate (CAGR) of 22 % during 2016-2022 to reach US\$ 372 billion in 2022 from US\$ 110 billion in 2016. Similarly, the hospital industry in India stood at \$61.79 billion in 2017 and is expected to increase at a CAGR of 16-17 % to reach \$132.84 billion by 2022.

This growth is driven by lifestyle diseases, an ageing population, rising income levels, increasing access to insurance and growing health awareness. This rapidly increasing need and demand for healthcare services puts immense pressure on various stakeholders to efficiently manage the scarce human resources and inadequate infrastructure while controlling the increasing cost burden on consumers and simultaneously providing better quality care and increased accessibility.

Telemedicine is a fast-emerging sector in India and the telemedicine market in India is expected to rise at a CAGR of 20 % during 2016-2020, reaching US\$ 32 million by 2020.

Meanwhile, digital intervention in healthcare is expected to drive the industry at a CAGR of 23 % by 2020.

The adoption of AI is reshaping the Indian healthcare market significantly. Research & Markets predicts that the applications of AI in the healthcare space in India will be worth US\$ 6 billion (INR ~431.97 Bn) by 2021, expanding at a rate of 40 %.

The National Association of Software and Services Companies (NASSCOM) has pegged the Indian Healthcare Information and Communications Technology (ICT) market at US\$ 1 billion in 2014. The industry is expected to grow 1.5 times by 2020, according to the 2015 report. A significant portion of the projected growth is expected to be driven by digital health start-ups.

According to the Future Health Index (FHI) 2019 report, India is leading in the adoption of digital health technology with 76 % of healthcare professionals in the country already using digital health records (DHRs) in their practice.

The FHI is based on primary research conducted across 15 countries. The study explores the experiences of healthcare professionals and individuals. India meets the 15-country average when it comes to the usage of artificial intelligence (AI) within healthcare at 46 %.

Opportunities for the future

New digital tools and technologies are already starting to make an impact across the healthcare system in India and hold great promise to transform the delivery of health services in the near future by improving efficiency and bettering patient care.

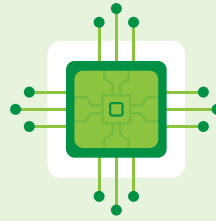
- Telemedicine can reduce the time it takes to consult a doctor to 10-15 min in both rural and urban areas by cutting wait times through optimal utilisation of doctors and by avoiding the need to travel to a clinic or hospital, at a fraction of the cost of current healthcare systems.
- Electronic Medical Records (EMRs) can digitalise patient's information coming from various sources at one place, helping the doctor make an accurate prognosis in a shorter time.
- AI will play a big part in improving clinical outcomes as increasing amounts of health data becomes more available and analysis techniques improve. From the automation of clinical tasks to virtual nursing assistants. AI has the potential to transform everyday health management.
- In an era where there is a pressing need to improve the durability and cost-effectiveness of surgical intervention; robotics will play a key role through endosuturing, sensing, image guidance, materials, manufacturing and surveillance strategies in surgical procedures.
- Smart health monitors can collect personalised vital signs and test results in real-time, which will help with rapid diagnosis, timely and proper treatment at an early stage, eliminating travel and wait times for diagnosis. It also increases operational efficiencies for doctors and assures patients with improved support and feedback.
- Human DNA analysis enabled by increased computer processing will enable truly personalised genomic testing and treatment options for certain genetic diseases. This could vastly improve the effectiveness and safety profile of the treatments.
- Mobile health apps can help in preventing serious diseases by increasing patient engagement, providing health education and expert guidance from healthcare providers.
- VR has the potential to transform the way we think about pain management, stress management and rehabilitation, as we begin to see the migration of services beyond the walls of a doctors office to mobiles, headsets and headphones. Patients become fully immersed in a multi-sensory world.



6 Ways AI and robotics are improving healthcare



Improving accuracy



Precise diagnosis



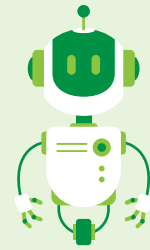
Remote treatment



Augmenting human abilities



Supporting mental health and daily tasks



Auxiliary robots

Source: Robotics Business Review 2019



What the experts say

According to the Future Health Index (FHI) 2019 report, India is leading in the adoption of digital health technology with 76 % of healthcare professionals in the country already using digital health records (DHRs) in their practice.

The report also confirms that digital health technology is a pivotal pillar in delivering value-based care across the healthcare continuum in India.

Speaking about India's adoption of digital health in an article for the Observer Research Foundation, Prof Rajendra Pratap Gupta from Digital Health India, said: "Given that India is setting up 150,000 health and wellness centres by converting its rural health centres, and these have an element of tele-medicine as its offering, it is the right time to frame legal and regulatory frameworks/standards for digital health, data privacy and protection act."

Meanwhile, in a recent interview for QUARZ India, Dr Shetty was quoted saying: "The disruption caused by Airbnb and Uber is nothing compared to how technology will disrupt the healthcare industry. People talk about the use of data analytics and artificial intelligence (AI). But all these technologies need data. Now, how do you get the data when 95 % of the hospitals in India don't have EMRs. If you don't have EMR, you are looking at manually typing in the data, which will not be 100 % accurate. So the big game of data analytics making a big difference in healthcare will only happen if every hospital is using EMR, and every patient has his own personal health record in a digital format."

According to Dr Devi Shetty, who is the Chairman, of Narayana Hospitals: "In future, the world's largest healthcare provider will not be a hospital. It will be a software."



MEDICINE
HEALTH
TREATMENT
DOCTOR
SURVEY
RECIPE

A vibrant start-up ecosystem

Digital health start-ups in India provide a vast backdrop for solutions. The start-up landscape within the Indian healthcare ecosystem goes well beyond a specific disease, therapeutic area, geography, type of product and service or business model.

According to Inc42's The State of Startup Ecosystem Report 2018, there are a total of 4,892 startups in the Indian health-tech space. 2018 saw an increase of 45.06 % in the total investments in health-tech startups. Overall, health-tech startups in India raised a total of US\$ 504 million between 2014-2018.

Digital health start-ups are bringing novel technologies such as wearable tech, telemedicine, genomics and artificial intelligence to the Indian healthcare system. ISBInsight offers pointers for the challenge of scaling up:

Non-communicable diseases (NCDs)

NCDs offer multiple avenues to leverage technology. First, technology helps create the much-needed structured care continuum for the chronic patient pool. Second, technology enables the collection of non-clinical grade personal health data such as diet, exercise and medication adherence, which are all integral to managing non-communicable diseases. Lastly, technology enhances access to care for patients suffering from non-communicable diseases.

From administrative to clinical

Most start-ups have conventionally provided administrative solutions such as building IT infrastructure, automating internal processes and digitising health records for healthcare providers. Now, start-ups are increasingly focusing on solving clinical problems as well. They provide services across the clinical care spectrum – wellness and prevention, diagnosis and treatment, and monitoring and management services.

Beyond Tier 1 cities

While the prevailing opinion suggests that digital health start-ups cater to providers and patients only in metro cities, some start-ups are starting to look beyond metros and Tier 1 cities. Beyond non-metro cities, start-ups have begun catering to the rural patient base as well.

Stakeholders in a changing ecosystem

Technology-led service models are impacting the stakeholder nexus in three ways. First, start-ups operate on service models designed to replace existing stakeholders completely. Second, start-ups add new stakeholders to the existing healthcare ecosystem. Third, start-ups are being pushed to develop their solutions by keeping in mind various stakeholders in the health ecosystem, including but not limited to patients. Many start-ups are designing their value proposition by focusing on stakeholders other than their primary buyers. Moreover, an increasing number of start-ups are looking to collaborate with stakeholders other than patients to drive uptake.

Developing a clinical core

Start-ups will require a multidisciplinary approach, especially with a more in-depth clinical focus. The approach to solution design should entail the identification of the clinical problem before conceptualising the technology-enabled solution. One way to do this is to develop a professionally diverse team with a mix of medical professionals and product engineers.

Startups to watch

Top 5 Indian health-tech startups to look out for

Cure.Fit

Bengaluru-based Cure.Fit was founded in 2016 and offers fitness, nutrition and mental well-being solutions through offline and digital channels. In its vision to make health and fitness easy, Cure.fit intelligently integrates physical fitness (Cult.fit), mental fitness (Mind.fit), healthy food (Eat.fit) and recently launched a primary care (Care.fit) vertical, which includes doctor consultation, health checkup and managed care plans on a single platform. The company raised a US\$ 120 million round in July 2018 to strengthen its technology platform by offering AI-driven health planning, create its own fitness devices, and also to explore opportunities to expand its services to newer markets.

DocsApp

DocsApp is an online medical consultation platform that was founded in Bengaluru in 2015. DocsApp investors believe that DocsApp has dramatically altered the patient and doctor experience in more ways than one — the platform on-boards only specialist doctors who are then connected with patients in under 30 minutes. The platform goes a step further in understanding the patient's condition and, accordingly, connecting with the right doctor. In 2018, it reached 5 million installs on Google play store and recorded a 150% year on year growth in revenue. Also, it claims to have a 65% user base from rural parts of the country. It is currently offering more than 100,000 consultations every month.

Forus Health

The objective of Bengaluru-headquartered Forus Health is to use technology to increase access, bring down the cost of diagnosis (affordability) and raise awareness (the three As) for eradicating the preventable blindness, which is a global healthcare challenge. The startup claims that its solution is available across 26 countries and so far, Forus Health's first product, 3nethra Classic, has been installed in 2,200 places.

HealthPlix

Founded in 2014, HealthPlix's Electronic Medical Records (EMR) software for hospitals and clinics is integrated with AI-driven Clinical Decision Support (CDS) system to assist doctors while performing treatment on various diseases. As of July 2018, the company claimed that its HealthPlix EMR technology was used to treat more than 1.2 million unique patients in 150 cities across 20 states. Around 60% of their users are based in Tier 2 and Tier 3 towns in India.

Innovaccer

New Delhi-headquartered Innovaccer assists healthcare organisation implement value-based care models and improve care delivery with artificial intelligence applications for care management, physician burnout reduction, and patient engagement. As of January 2019, the company claims that customers have improved outcomes and created more than US\$ 400 million in cost savings so far.

Source: Inc42's Startup Watchlist 2019

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By Informa Markets

Healthcare has become one of India's largest sectors both in terms of revenue and employment. India Health presents an opportunity to all stakeholders in search of a platform that facilitates business interaction, learning and development, and access to the right healthcare entities, authorities and associations in a fast-emerging economy.

Brought to you by the organisers of Arab Health, India Health will take place from **9-11 September 2020** at Pragati Maidan, New Delhi, India.

For more information, visit indiahealth-exhibition.com