

HealthTech Predictions 2021



Transitioning towards
technology-led patient-centric
remote care

About —



Praxis Global Alliance is the next-gen management consulting and business research services firm revolutionizing the way consulting projects are delivered. We deliver practical solutions to the toughest business problems, by uniquely combining domain practitioner expertise, AI-led research approaches, and digital technologies.



The Internet and Mobile Association of India [IAMAI] is a young and vibrant association with ambitions of representing the entire gamut of digital businesses in India. It was established in 2004 by the leading online publishers, and in the last 16 years has come to effectively address the challenges facing the digital and online industry including mobile content and services, online publishing, mobile advertising, online advertising, ecommerce and mobile & digital payments among others.

Sixteen years after its establishment, the association is still the only professional industry body representing the online industry in India. The association is registered under the Societies Act and is a recognized charity in Maharashtra. With a membership of nearly 300 Indian and overseas companies, and with offices in Delhi, Mumbai, Bengaluru, the association is well placed to work towards charting a growth path for the digital industry in India.

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Foreword _



COVID-19 has been an eye-opener for the overall healthcare industry, with both the Government and public becoming much more aware about preventive healthcare, digital healthcare, and healthcare budget and usage of technology to treat provide care to patients. Though hospitals saw a decline in its OPD and IPD footfall during the first few months of lockdown; for the HealthTech sector, COVID-19 turned out to be the much-needed catapult to push the customer adoption by ~2 to 3 times which if this pandemic had not occurred would have taken another 4 to 5 years. There was an increased adoption towards online consultation, E-pharmacy, homecare services and E-diagnostics. Even hospitals started redesigning their strategy and increased its focus to acquire patients through online channels.

This report is intended to provide various industry stakeholders including business leaders with an overall perspective on the past trends of HealthTech in 2020 and what lies ahead for this sector in 2021. We have conducted interviews with key leaders in the HealthTech space to get their understanding how this space would further evolve in future. Further, we have also studied the challenges that exists and how regulatory can help to overcome it providing a sustainable growth in future.

We, at Praxis and IAMAI, look forward to continuing the discussion with our friends across sectors and exchanging notes.

Madhur Singhal
Managing Partner & CEO

Aryaman Tandon
Managing Partner & Co-Founder

A close-up, blue-tinted photograph of a microscope's objective lenses and eyepiece, creating a scientific and technological atmosphere.

Key Takeaways—

Large market opportunity with very high headroom for growth

- Large headroom for growth with HealthTech market less than 1% of overall healthcare market (~US\$ 1.9B market in 2020, growing at 39% CAGR)
- Changing customer attitude towards digital healthcare
- Government initiatives like the National Digital Health Mission (NDHM), Telemedicine Practice Guidelines 2020, E-pharmacy Draft Rules, etc. create a conducive environment to promote the digital healthcare ecosystem in India
- Use of AI/ML by HealthTech companies so that healthcare becomes more tech-led than tech-enabled
- Increased adoption among the public also increased the need for technological solutions, in turn resulting in start-ups coming up with innovative ideas
- COVID-19 in 2020 catalyzed the process of adoption and these adoption trends are likely to go on for a longer period of time
- HealthTech is driving the healthcare in India towards a value-based and cost-efficient care model



Executive summary_

Healthcare system has never been in the spotlight in India's history as it has been in 2020. COVID-19 pandemic brought a sharp focus on the sector and highlighted the already existing major gaps in accessibility and affordability. This gave rise to realization of the role of technology in healthcare delivery.

Healthcare universe in India can be further divided into smaller ecosystems, which are responsible for the diagnosis, treatment, care, and rehabilitation of the patients. One of these ecosystems is the HealthTech ecosystem.

FIGURE 1

Types of companies in HealthTech

HealthTech landscape

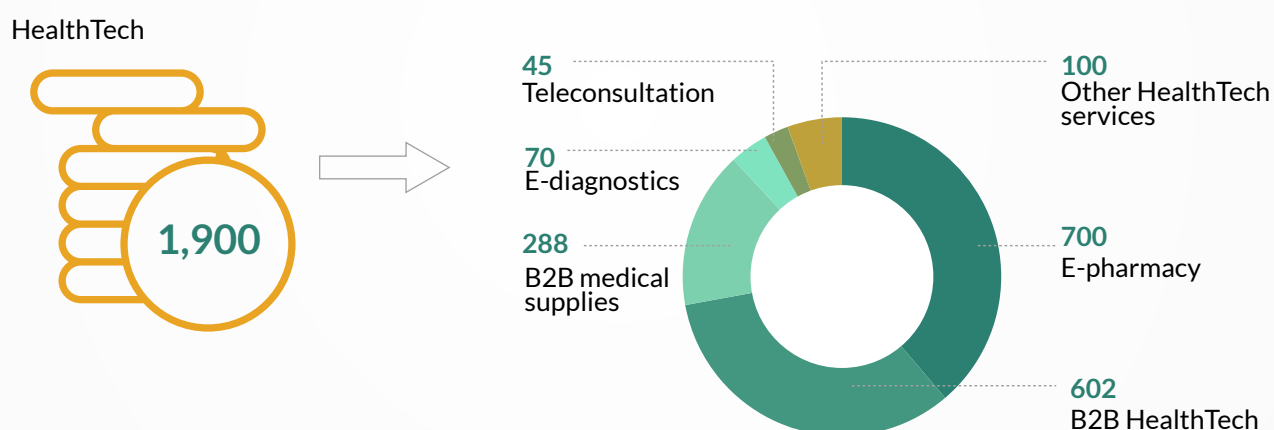
E-pharmacy	→	  PharmEasy  MEDLIFE 
EHR/EMR and HIS	→	 DocEngage  21Century  Binary Spectrum  AKHIL SYSTEMS  docomo  PURPLEDOCS
DeepTech diagnostics	→	 MEDGENOME  CYCLOPS  SIG-TUPLE  qure.ai  XCODE  strand
Healthcare IT & analytics	→	 innovaccer  pharmarack  ENDORUSH  CARESTACK  BuddhiMed Technologies  ATTUNE  Predible
B2B Telemedicine providers	→	 Criticnext  INTELEICU  Telerad PROVIDERS  Prognosys  Teleradiology SOLUTIONS
B2B medical supplies	→	 medikabazaar  ColMed  ZEPNUR  DrStore.in
Online Teleconsultation	→	 1mg  p  lybra+e  DocsApp  MediBuddy  fine  CLINIKK  doc prime
E-diagnostics	→	 1mg  Healthians  KlinikApp  Thyrocare  MedPluslab.com
Online home healthcare	→	 PORTEA  care24  HealthCare HOME  CallHealth
Emergency/ medical tourism	→	 M! urgency  DIAL 4242  plan my MEDICAL TRIP.com  STANPLUS  MEDMINKS
Financial services	→	 primechain  Health Fin  thynk blynk  affordplan  LetsMD  carecover
Personal health management	→	 cure.fit  brün health  Quadrio  tinyst  PregBuddy  DRIEFCASE  skin

HealthTech is a fast-growing industry vertical within the broader healthcare sector, currently accounts for only 1% of the sector, it was at ~US\$ 1.9B in 2020 growing at 39% CAGR and expected to reach ~US\$ 5B by 2023. It is majorly composed of all technology-enabled healthcare products and services that are delivered and/or consumed by the patients inside and outside of the hospital or physician's office like E-pharmacy, E-diagnostics, teleconsultation, B2B HealthTech, B2B medical supplies, and other healthcare solutions like personal health management, online home healthcare, etc.

FIGURE 2

Indian HealthTech market size (2020)

HealthTech market (US\$ M)



- E-pharmacy and B2B HealthTech are the two largest segments in the HealthTech sector and account for ~70% of the overall HealthTech market
- E-diagnostic and teleconsultation are the fastest-growing subsegments in HealthTech; growing at 66% and 73% respectively



Going forward, in this report, we will talk more about E-pharmacy, E-diagnostics, and teleconsultation

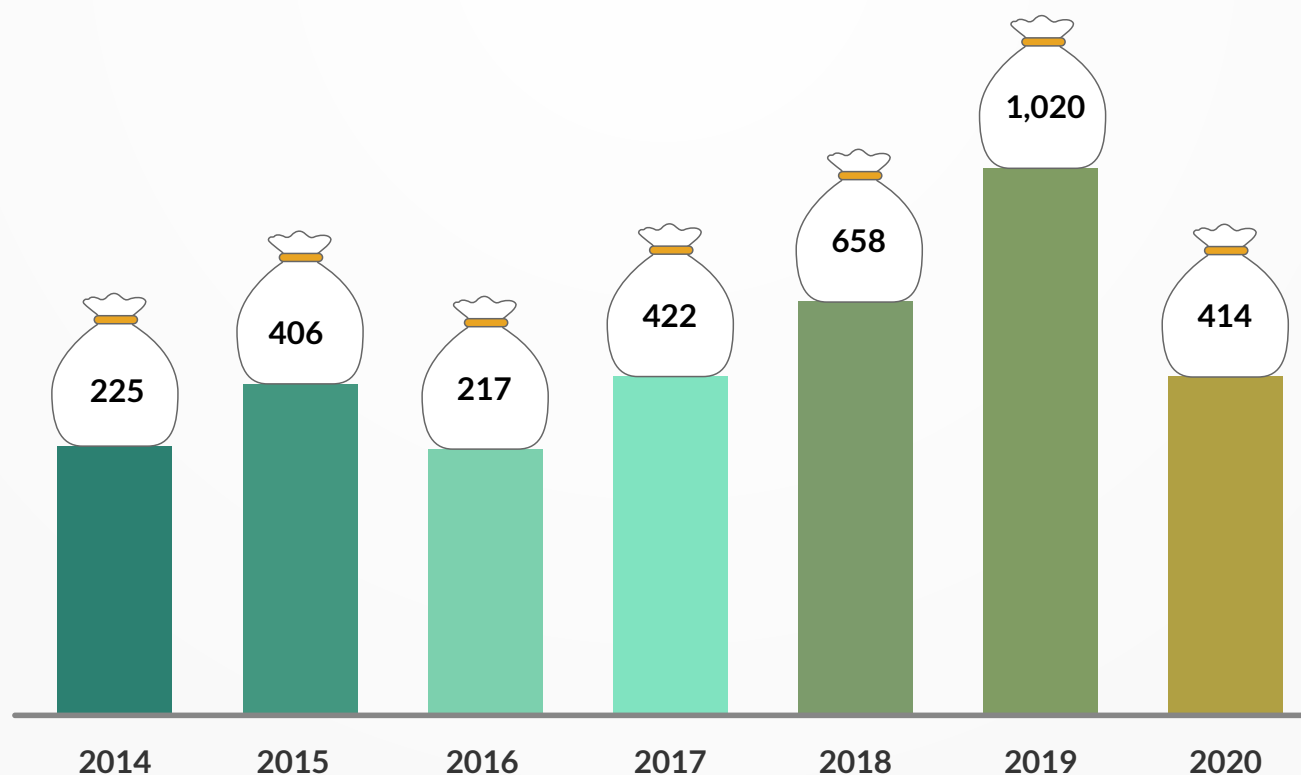
Major players and investments in HealthTech

HealthTech startups will help complement existing infrastructure and bridge jarring accessibility in the healthcare industry. Indian HealthTech sector has seen a surge in investment from 2015 and the sector has received ~US\$ 3.4B funding since 2014. According to data from Tracxn, late-stage companies got a lion's share of the funds (\$173 million or 43%) in India. Investment trends seen in the industry are as follows:

FIGURE 3

Investment trends in HealthTech sector (2014-2020)

Private investment in HealthTech companies in India (US\$ M)



Source(s): Tracxn, Press releases, Praxis analysis



Leaders speak _



Dharmil Sheth
Co-Founder, PharmEasy

COVID-19 has brought healthcare to the forefront in public's mind. People are becoming proactive in solving problems rather than being reactive when it comes to their health. People have become conscious of their lifestyles and health metrics. We will see these body vital tracking platforms and fitness guidance programs gain momentum in the future. Government is also working to connect the health ecosystem seamlessly and help the customer to manage their health properly.



Vivek Tiwari
Founder and CEO, Medikabazaar

The past year has seen an explosion in the promotion and adoption of online in the healthcare industry. Due to lockdowns and the perceived risks of physically visiting medical establishments, many processes went online thereby accelerating the digital transformation in the Indian healthcare industry. We have observed a major mindset shift towards tech adoption and AI-driven solutions. And this change will continue to extend across sectors in healthcare.



Prashant Tandon
CEO and Co-Founder, 1mg

HealthTech has seen a tremendous behavioral change from the consumer side, the adoption that was gradually expected to come in 5 years happened in the span of few months during the COVID-19 pandemic. We now will observe the power of data and innovation in creating better models for healthcare which is the second phase of innovation in the sector, first was quality access to products and services.



Vivek Srivastava
Co-Founder and CEO, HCAH

Home healthcare has been a preferred way of care during COVID-19 and people have realized that this is a very convenient way to consume healthcare with similar or better outcomes than hospitals. We believe 70% of all that can be done in a hospital can be done at home. Patients would now like to consume more and more in their homes. In fact, for chronic diseases, comprehensive care delivered in the community is a much better way to manage diseases. Due to increased consumer adoption, investments in out of hospital settings/community settings will also reach new heights in 2021.



“ **Deepak Sahni**
Founder and CEO, Healthians

We are experiencing a drastic change that we were probably expecting in the next 4-5 years. People realized that this is the time to focus on their health and they wanted to do this at home, which has given companies a good chance for innovation. We can expect some regulations in telemedicine, E-pharmacy, and E-diagnostics to bring more clarity/transparency to businesses and also to protect the customer.



“ **Ravi Gandhi**
President, Reliance Retail

This year, covid-19 has affected the economy and many businesses. But at the same time it has also brought the opportunities in technology space. In healthcare sector the opportunities like E-pharmacies, telemedicine, etc. will go long way in improving the health infrastructure of the country. Government's initiatives like NDHM will help in end to end digitization of healthcare systems and their standardization to the benefit of citizens.





HealthTech in 2020_

COVID-19 pandemic catalyzed the growth of the Indian HealthTech industry, the main reason for this was the reluctance of the consumers to physically visit a place that can be a hotspot of infection. Even the consulting doctors were reluctant to physically indulge with the patient until and unless absolutely necessary. In such times, HealthTech played an important role in connecting the caregiver, patient, and various other associated services. It made primary care convenient and accessible for the public.

COVID-19 increased the demand for technology-based solutions to increase the efficiency and reach of the healthcare system. COVID-19 outbreak was an opportunity for the Indian healthcare system to work out its shortcomings; it also created positive momentum for HealthTech startups to develop innovative products.

Key trends in HealthTech sub-vertical (2020)



Growth trends in the sector

- E-pharmacy saw a 200% increase in the number of orders in 2020, E-pharmacy adoption in households also increased by more than 2x post-COVID
- Number of consultations on teleconsultation platforms, increased by 300% in 2020; doctors reluctance to connect in person with patients drove this growth
- India's E-diagnostics market was at ~US\$ 0.07B in 2020 and is growing at a CAGR of ~66%; patients convenience, with diagnosis at home is the main growth driver

Business model adoption

- E-pharmacy saw the use of a subscription model for chronic patients, to better manage medication for long term diseases
- E-pharmacy players went through various business model changes like tie-ups with local vendors for faster delivery and overcome the regulatory restriction on inventory holding, spread to become both B2C and B2B businesses
- Current focus of the players was on building basic blocks for teleconsultation and focus on quality access to health products

Consumer adoption

- 60-70% of the medicine order volume across E-pharmacy platforms came from patients suffering from a chronic disease
- 80% of the customers going for teleconsultation were first-time users., 50% more doctors joined the teleconsultation platforms

Regulatory advancements

- The Union Home Ministry, vide order number 403/2020-D dated 24th March 2020, recognized delivery of medicines through E-commerce as an essential service. This was later echoed by 19 State Governments and the Department of Posts
- Telemedicine Practice Guidelines were announced by the MoHFW on 25th March 2020 laying out clear guidelines for registered medical practitioners to provide effective patient care through online mediums
- At the 'Prarambh: Startup India International Summit', Hon'ble Prime Minister Shri Narendra Modi commended the crucial role of startups in ensuring safe doorstep delivery of medicines
- The Govt has introduced NDHM, and eAccess to healthcare will be a key area for the country. However, regulation has been moving slowly in this space





Challenges & way forward_

2020 has revolutionized the adoption of technology in healthcare, going forward this momentum is likely to continue. Going ahead following drivers and barriers are going to shape the future of HealthTech in India:

Drivers for HealthTech



Need for improving accessibility

- High disparity in infrastructure between rural and urban areas; most notably in terms of unavailability of qualified practitioners in rural areas
- Technology-led solutions such as teleconsultation can improve accessibility

Increasing internet penetration

- Digitally savvy population with internet penetration of ~75% will further boost adoption in consumers

Increase in lifestyle diseases

- Graying population, poor nutrition, a high-stress environment, sedentary lifestyle, and rising environmental pollution are contributing to an increase in the burden of lifestyle and chronic diseases
- Need for affordable technology interventions for early diagnosis, prevention, and better disease management

New innovations and improving affordability

- Increased focus of existing players in managing downstream costs; technology sought for augmenting resources, capabilities, and efficiencies
- Leapfrogging of concepts between the developed and developing markets

Supportive policy regime

- E-pharmacy Draft Rules when notified will cement the role of E-pharmacies in improving accessibility to quality medicines
- The Govt has introduced NDHM, and eAccess to healthcare will be a key area for the country. However, regulation has been moving slowly in this space
- Ayushman Bharat and state health insurance will improve paying power of the public for HealthTech offerings such as teleconsultation

Barriers



There are many challenges that the players in the industry are facing daily and will continue to do so for some time. Industry's focus on mitigating the impact of these barriers would also shape the way forward for the industry. Some of the notable barriers for HealthTech in India are as follows:

Behavioral barrier to adoption

- Absence of a physical examination and constraints on testing leading to inability to diagnose all illnesses properly
- Cultural habit of self-medication or consult chemists for small ailments
- Lack of awareness among people in Tier 3 cities/villages
- General resistance to change among people

Technical challenges

- Quality issues in audio/video calls due to internet connectivity and quality of mobile devices
- Gaps in the supply chain eco-system to cater to remote locations
- Lack of technical know-how, especially among senior citizens
- Concerns with data usage and privacy
- Lack of standardized data for the purpose of diagnosis and treatment

Investment challenges

- Dearth of healthcare mentors/investors in India when compared to other countries

Regulatory challenges

- Time consuming and tedious approval process
- Lack of regulatory clarity on various HealthTech services and role of other innovative technologies like Artificial Intelligence and Machine Learning in this space
- Lack of Government focus to connect all HealthTech services on one platform, for the ease and convenience of the user
- E-pharmacy players cannot hold inventory as per current guidelines, clarifications in this will help companies to redesign their operational models
- Using AI, one of the key regulatory issues that are hampering the acceptance of AI in healthcare is the archaic regulatory infrastructure, black boxes as well as AI algorithms that constantly self-update, present safety concerns that have yet to be addressed by any regulatory framework

How regulatory changes can further boost growth in HealthTech?



E-pharmacy

In August 2018 MoHFW published E-pharmacy Draft Rules which provides sector specific E-commerce regulations aiming to harmonize existing laws/guidelines like IT Act, D&C Act and Rules and PN-2, 2018:

- The draft rules provide for registration and conditions of registration of E-pharmacies
- E-pharmacy Draft Rules does not provide license for online sale of medicines
- Sale of medicines will only be undertaken through the physical pharmacy, duly licensed in this regard under existing Part VI of the Drug Rules
- There is an Amendment of Drug Rules and not the D&C ACT

Above mentioned requirements make it difficult for E-pharmacy players to deliver drugs to retailers.

Teleconsultation

- Doctors were not allowed to prescribe medicines through remote consultation (teleconsultation), but now the prescription of drugs over telemedicine has also gained legitimacy under the Telemedicine Practice Guidelines

If the health ministry eases regulations to reduce the overall time for approvals, it would help new companies to initiate the business quickly.

Standards for healthcare data need to be defined and implemented, without standardization, there is bound to be chaos in the case of data records' portability.



HealthTech predictions 2021_

HealthTech saw a drastic change in customer adoption in 2020 due to the COVID-19 pandemic. COVID-19 not only sped-up the process of adoption but also gave HealthTech industry momentum for growth which is not momentary and will sustain for a long period. Major trends for 2021 are expected to be as follows:

Broader digitization of healthcare infrastructure: We have experienced a widespread acceleration in the adoption of digital and virtual business models, and this adoption is expected to be consistent for 2021 as well. With 5g internet expected to be launched at the end of 2021 a whole lot of new avenues like telesurgery, haptic remote examination etc. will open up.

- NHDM is also likely to drive a digital ecosystem with digital personal health ID cards with patient detail on cloud storage

Integrated Healthcare system: Currently there are different platforms for healthcare services, however, there is a need for end-to-end seamless integration amongst these platforms to envelope the entire spectrum covering the care provider, payer, patients,

and various services required by the patient. Going forward, industry players are likely to work towards integrated health solutions leading to an integrated healthcare system.

Regulatory changes: It is expected from the Government to release regulatory decisions in 2021 on HealthTech services to have more clarity on how to manage operations.

- NDHM is expected to become the digital backbone required to facilitate interoperability between different stakeholders in a secure, confidential and private way to realize universal health coverage
- Increased traction for E-pharmacy from subscribers of NDHM ecosystem (ultimately expected to cover all Indian citizens)
- Demand for EHR, EMR, and HIS solutions is expected to increase – Government to launch own solution while also accepting 3P solutions
- Teleconsultation and E-diagnostics to expect increased traction from the subscribers of the NDHM ecosystem

Move to value-based healthcare: Also known as fee-for-service care is a quality-based model in which fees are paid based on the outcome of the service provided. Better health awareness and increased data collection will enable the shift to value-based healthcare. In this structure, the providers will be incentivized for providing better care and promoting health/wellness. HealthTech will enable providers to tap into data to improve patient outcomes.

Long term disease management: Companies were focused on providing access to quality products to the customers, but now the focus is shifting towards long-term disease management models. Companies are using the power of data to devise long-term disease management models that work on better clinical outcomes for patients.

Tech-led procurement and inventory management: Going forward healthcare providers are expected to become more tech-enabled in procurement. We expect higher use of AI-based inventory and order planning, leading to smart and efficient procurement. E-procurement in Government healthcare providers is also going to increase with better adoption of online quotations.

Tech-led remote consultation: COVID-19 pandemic created a fundamental need for remote consultation, but after being used to the service the patients and doctors find it convenient to connect remotely for preliminary consultations. Going forward this trend of remote consultation is likely to continue and will move towards a more tech-enhanced service. AI will play an important role in pre-diagnosis and validation in remote consultations.

- AI applications are being developed to analyze x-rays and other radiology images, read ECGs and spot abnormal patterns, automatically scan pathology slides and assess fundus photographs for signs of retinopathy

Indian HealthTech is currently in a nascent stage with just US\$1.9B (~1% of the overall HealthTech market) but is becoming an integral part of the overall healthcare ecosystem. HealthTech is quintessential in addressing the three main challenges of Indian healthcare system: Accessibility, Affordability, and Quality. The year 2020 accelerated the widespread adoption of HealthTech such as teleconsultations and e-pharmacies amongst the consumers. Going forward, with increased adoption, collection of more data, and increased use of AI/ML, HealthTech is expected to drive the change towards value-based healthcare and reduce the cost of care. However, realizing the true potential of HealthTech in India would also require regulatory support in terms of clear and supporting guidelines.



Conclusion_

HealthTech is a rapidly growing segment in healthcare and has the potential to transform the way healthcare has been traditionally delivered in India. While currently large part of HealthTech consist of only E-pharmacy and B2B HealthTech, other areas like E-diagnostics and teleconsultation are growing at almost double the rate. HealthTech will also improve healthcare access by increasing the reach and affordability of the existing infrastructure.

Specific practitioner expertise

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