PULSE

A healthcare update from GE HealthCare

Edition 2

Industry Insights

Turning a corner in patient care with AI

India is poised to take the leap towards providing equitable healthcare and greater access. As we enter the 'techade', digital health took a new turn, with healthcare looking at digital possibilities to address the gaps. Recognizing the digital potential, the government announced the National Digital Health Mission or the Ayushman Bharat Digital Mission

(ABDM) in September 2021 with an aim to leverage a digital healthcare infrastructure to support universal healthcare coverage. The mission aims to make our healthcare system more efficient by making data exchange seamless and accessible. The government has made efforts to strengthen and expand India's digital healthcare ecosystem. For instance, the National Health Authority has integrated more than 50 digital healthcare applications under ABDM.

The move particularly helps in solving 'last-mile delivery' challenges when taking it to the masses and clinicians at point of care. The efforts have resulted in 33,000 healthcare professionals registering under the Health Professionals Registry (HPR) while 1.14 lakh health facilities have registered in the Health Facility Registry (HFR) since September 2021.

ABDM has also successfully registered over 23 crore health accounts and linked 3.4 lakh health records of individuals with accounts. Acknowledging this potential, Mansukh Mandaviya, Union Minister, Health & Family Welfare, recently said the government was aware of the importance of a digital health ecosystem in the country and how tech

advancements like artificial intelligence (AI) and machine learning (ML) could significantly improve delivery. [Addressing](#) an industry summit, he reiterated that the government is looking to plug gaps by bolstering facilities at every level, a strong surveillance system and through more testing labs and critical care units. India is poised to take the leap towards providing equitable healthcare and greater access. The government's efforts rely on how well the industry adopts and utilizes AI and other modern technologies. Over the years there has been significant advancements in the collective potential of the internet of things (IoT), cloud computing, ML, robotic process automation (RPA) and AI. In healthcare, multiple avenues for enhancing patient care have opened up and to improve the overall efficiency of healthcare providers. Integrating AI in healthcare can facilitate a holistic digital health ecosystem, provide equitable access to healthcare services, and improve outcomes.

The flagship ABDM aims to provide individuals with access to both private and public health services. It also recognizes the importance of data access for programme managers and policy makers in helping the government make informed decisions. With the help of advanced analytics and health-biomarkers better preventive healthcare can be achieved which is not limited by geography or demography.

The government is now rapidly acquiring new technologies to enhance care quality and improve accessibility and affordability. It is ramping up the overall health infrastructure that depends on legacy systems to function. AI and ML tools are complementing human skills and expanding the scope of our activities significantly. Point-of-Care (POC) devices are playing a vital role in detecting and monitoring both communicable and non-communicable diseases.

GE HealthCare's Indian Edison Accelerator program, for example, forms strategic alliances with growth-stage MedTech start-ups to co-develop innovative solutions. Its Edison platform uses AI, ML, deep learning, and analytics to convert volumes of information into actionable insights.

AI and data integration technologies like these can potentially help add up to USD 500 billion to the country's GDP by 2025, and generate more R&D investments. India is currently developing industry friendly processes to strengthen its innovation and R&D capabilities by investing in a knowledge-driven economy, more innovation and R&D hubs, healthcare collaborations, and a skilled workforce. Moreover, telehealth services and video consultations can deliver tailored facilities to patients both in urban and rural areas. Public-private partnerships can improve healthcare services through digital modules, which, in turn, can facilitate comprehensive patient care irrespective of geographic location.

The National Health Policy (2017) has been instrumental in developing a fully integrated healthcare infrastructure in India which also helped create the [health information exchanges (HIE),](#)

a federated integrated architecture for health information. By integrating AI and working on technology innovation, healthcare services will automate various tasks for precise, contactless diagnoses to free up hospital beds and nursing time. With ABDM developing the backbone to support an integrated digital health infrastructure in India, technology providers, healthcare AI start-ups and academic institutions are finally gathering the momentum to modernize our healthcare value chain quickly and appropriately.

The piece has been put together by GE based on publicly available sources

Perspectives

Mr. Sanjeev Malhotra,CEO, Centre of Excellence for IOT & AI, NASSCOM shares his insights with GE on how upcoming AI technologies play a pivotal role in navigating growth opportunities in the MedTech sector.

The events of the past two years have created a compelling case for transformation in the healthcare sector. Rising requests for remote patient care, rising costs, a low doctor-patient ratio, and regulatory limitations are all placing the sector under a great deal of stress.

Sanjeev Malhotra, CEO, Centre of Excellence for IOT & AI, NASSCOM

While this was once a sector that was slower to change due to multiple implementation complexities, now with new technology solutions becoming more affordable, accessible, and widespread, digital adoption is the only way to future-proof healthcare businesses and keep the nation healthy.

The potential of technology for healthcare is remarkable. Consider how quickly the Government of India was able to conceptualize and roll-out the CoWIN platform. The platform was built for scale and inclusivity, and as a result, it has managed to handle registration, appointment scheduling, identity verification, vaccination, and certification. The greatest takeaway from the success of CoWIN is this – at a time when we urgently needed to reduce the logistical and administrative burden on the healthcare sector so it

could focus on delivering life-saving care to a billion people, technology rose to the occasion.

A call for AI and next generation HealthTech

As per NASSCOM's artificial intelligence (AI) adoption index, AI has opened up multiple avenues for improving healthcare systems and is expected to generate USD 25 billion of economic value add for India by 2025. AI is helping to provide accessible, efficient, and affordable healthcare.

AI can enhance quality of care

The potential of AI for managing the workloads of healthcare staff and medical providers stretches across the value chain from logistics and administration to patient data security management, disease tracking, and prediction, to preventive healthcare analytics, remote diagnostics, and robotic surgeries. AI will also continue to benefit the public healthcare segment by improving efficiencies, optimizing resource allocation, and even helping doctors deliver in-person care faster and more soundly by providing real-time data analytics.

AI is improving access to care

Think about the number of people you know who regularly consult their general practitioners on messaging apps, simply because it is convenient and quick. Teleconsultation and telehealth success rates are going up thanks to effective data management and AI. Patients with chronic conditions can now feel more supported with the help of wearable technology which collects data from individuals and transmits real-time analysis directly to physicians.

AI is helping to reduce costs by accelerating drug development, providing early disease detection and targeted preventative care, and even by supporting with personalized health education to improve hygiene awareness and prevent disease breakouts altogether. Doctors have long intended to better personalize patient care and improve outcomes. Thanks to technology, this is now increasingly possible. By majorly reducing the load on healthcare providers, technology is ensuring that the focus of healthcare organizations remains on saving lives.

Catalyzing technology's impact on healthcare

There is still a lot of work to be done by both the public and private sectors to realize the full potential of technology in India's healthcare ecosystem. MeitY-NASSCOM Centre of Excellence is providing a collaborative innovation platform to encourage innovators, healthcare providers, and MedTech/pharma companies to work together and accelerate the adoption of technology solutions that will improve the delivery and accessibility of healthcare. CoE through its industry use case led programs called JanCARE Challenge, in partnership with BIRAC & Healthcare Innovation Challenge (HIC) has created a unique

framework that addresses the challenges in the adoption of digital technology solutions by primary healthcare and secondary/tertiary healthcare stakeholders, respectively. The Lifesciences & Healthcare Forum (LHIF) initiative presents a collaborative platform to bring together the thought leaders in the healthcare providers, life sciences & medical device companies, regulatory bodies, public healthcare departments and technology enterprises to voice the concerns of the industry and the set the narrative for inclusive growth of the ecosystem. Last but not the least, enterprises like lifesciences companies, MedTech enterprises get on boarded to the co-creation program to work closely with CoE to enable Indigenous Enterprise Innovation by facilitating joint development & co-sale programs with curated innovators, building cohorts of DeepTech solution providers as per the industry focus areas, positioning their organization as a leader in digital health ecosystem and creating joint programs with the government healthcare departments and healthcare providers for societal impact.

The industry is also witnessing strategic partnerships between corporates and start-ups to co-develop innovative solutions that addresses various challenges in the healthcare sector. GE HealthCare, through its India Edison Accelerator, is working with growth stage MedTech start-ups to co-create solutions that aims to improve patient outcomes & experience, efficiency of clinical practice and that of the healthcare facilities.

India's healthcare market has grown 3X+ from USD 110 billion in 2016 to USD 372 billion. in 2022. However, to further catalyze the impact of technology on India's healthcare ecosystem, concentrated efforts from the industry, government and organizations will be the key.

1. **Increase the propensity for HealthTech innovation:** Innovation challenges done at a large scale, and in collaboration with providers & industry, will incentivize the best minds in the country to focus on our healthcare challenges. Many undiscovered startups and ideas will surface through such competitions.

2. **Design solutions collaboratively**: When solutions are designed with the support of the industry, regulatory bodies, as well as the government, they will be more effective and quicker to be implemented.

3. **Use a pilot and scale approach:** Test projects with a pilot launch and then scale up their adoption across the nation, to help weed out challenges early on while not delaying time-to-market.

Healthcare needs urgent technology intervention. Though we have started the journey towards it but still have a long way to go. More efforts are needs for ecosystem stakeholders to place India's healthcare ecosystem on global standards.

This piece has been put together by NASSCOM for GE

GE HealthCare's '5G Innovation Lab': Transforming remote healthcare in India

India has a significant urban and rural divide where access to healthcare is concerned, with 80% of the doctors located in urban areas serving only 28% of the population. With the recent Ayushman Bharat Digital Mission, the government has been looking to strengthen digital technologies with an aim of making healthcare accessible by setting the premise for a

GE HealthCare announces its first 5G Innovation Lab to develop future-ready solutions, turning a new corner in innovation

more digital-intensive public health sector and ultimately delivering the "Healthcare for All" objective.

5G has the potential to disrupt patient care continuum, transforming diagnosis, therapy, and prognosis, owing to the advantage of massive bandwidth, high data speeds, low latency, and highly reliable connectivity. According to an analysis by GSMA Intelligence, 5G-enabled technologies in Indian healthcare is valued to provide a socio-economic growth projection of approximately USD 4 billion over the period from 2025 to 2040. High-speed connectivity offers the potential to facilitate point-of-care services by pushing the boundaries of telehealth, remote health diagnosis, real-time remote image processing, and artificial intelligence (AI). 5G could function as a pivotal stimulant for transforming the patient experience by enabling high-speed transmission of a cluster of data and real-time, high-definition video to support a quicker turnaround in analytical insights and therefore organize clinical decision-making. In the broadest sense, 5G could also significantly accelerate improvements in the quality of medical care and reduce the burden of healthcare costs.

At GE HealthCare, we recently announced the launch of our 5G Innovation Lab in India, situated at the John F. Welch Technology Centre (JFWTC) in Bengaluru. The lab is a first for GE Healthcare across the globe and the largest R&D centre outside of the USA. To develop future-ready results, the lab aims to transform remote care and foster partnership with academia, industry, and start-ups. It has been designed to place GE HealthCare at the

front line of pathbreaking advancements in patient care and providing access of cutting-edge technology to remote and sub-urban regions.

The 5G Innovation Lab functions as a testbed to develop future-ready products and solutions and will be a key milestone in innovation. It houses state-of-the-art infrastructure, including a private 5G network for testing and development. It provides expertise as well as a platform for a conjunct ecosystem for academia, the healthcare industry, and startups, facilitating analysis and enabling testament and qualification of 5G-enabled precision healthcare use cases.

At the lab, our lead scientists and technologists carry out research to develop the most critical healthcare matters in question, for India and the world. It serves as a channel for the interplay of integrated technologies like AI/ML, IoT, big data, edge computing and cybersecurity. GE HealthCare, using its clinical expertise and know-how, aims to deliver highly personalized care and advanced precision health. Furthermore, 5G-powered augmented reality (AR) and virtual reality (VR) are key for capacity building in physicians, doctors, nurses and even interns. It is to enable them to be equipped with procedures in a more engaged and conditioned manner. Efficient healthcare delivery is subject to efficient diagnosis systems made accessible at an early stage and the 5G Innovation Lab is designed to facilitate patient care and, ultimately, improve lives.

The piece has been put together by GE based on publicly available sources

GE HealthCare unveils its new brand name

We, at GE, aim to build on our more than 100-year history of precise, connected and compassionate care. For this, we recently announced the brand name of our healthcare business with the ambition of

creating an industry-leading, global, investment-grade public company focused on the growth of the healthcare sector.

The GE HealthCare name will serve as a persistent marker of safety, quality, trust, and innovation. Through the new HealthCare brand color, "compassion purple" we intend to reflect more humanity, warmth and commitment to achieve greater distinction.

As a way forward, GE has in view to execute the tax-free spin-off of GE HealthCare in early 2023, creating an independent company driving innovation in precision health to improve patient outcomes and address critical patient and clinical challenges. Together, we are not only building a healthier future but living our purpose to create a world where healthcare has no limits.

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