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Revolutionizing Indian Healthcare

Innovation-led Equitable Growth

October 2024

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Sathguru has a wealth of experience and knowledge in healthcare, life sciences and allied segments across strategy, M&A, sustainability and innovation partnerships. For any comments or discussions, please reach out to the authors at pushpa@sathguru.com or lifesciences@sathguru.com.

October 2024

Foreword

MESSAGE

India's healthcare industry is undergoing a remarkable transformation, marked by an increasing emphasis on innovation and technology that is redefining the delivery of healthcare services. This evolution is characterized by the integration of advanced digital solutions, such as telemedicine and health apps, which are enhancing accessibility and convenience for patients, particularly in rural and underserved areas. Cutting-edge technologies, including Artificial Intelligence (AI), machine learning, and big data analytics, are being leveraged to improve diagnostic accuracy, streamline operations, and personalize treatment plans, ensuring better health outcomes.

As significant investments flow into building robust healthcare infrastructure, mobile health initiatives, and electronic health records, the focus is increasingly shifting toward creating a more efficient, patient-centric healthcare system that not only enhances access and quality of care but also addresses the country's unique health challenges. This transformative journey towards a technologically empowered healthcare ecosystem signifies a bold step towards achieving universal health coverage and improving the overall quality of life for millions of Indians.

The Indian government has launched a range of digital health initiatives that have further empowered patients and healthcare providers. Coupled with the rapidly growing health tech startup ecosystem the India’s healthcare industry is projected to reach $50 billion by 2025. These reforms are significantly improving the healthcare journey for millions of Indians, ensuring that quality healthcare services are more accessible, efficient, and tailored to the needs of the population.

Deepak Sood,
Secretary General
ASSOCHAM

Foreword

MESSAGE

The Indian healthcare sector stands at the cusp of a transformative era, characterized by robust growth and expansive opportunities. This white paper released at ASSOCHAM's 3rd Healthcare Summit emphasizes depth of fundamental growth momentum across public and private healthcare.

The Indian healthcare sector is poised for significant growth, driven by a confluence of factors. The government's unwavering commitment to universal healthcare, exemplified by the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), is a cornerstone of this transformation. Structural changes introduced such as improved ICU pricing in HBP 2022 and additional payment for high end medicines enhances viability for private sector to deliver publicly funded care. The private sector continues to demonstrate robust growth, with leading hospitals planning to add approximately 30,000 beds over the next three to five years. With aggregate deal value of $5.6billion, fiscal year 2023 was a milestone for mergers and acquisitions (M&A) and private equity (PE) transactions in healthcare. PE funds remain bullish, providing the necessary capital to fuel growth across the healthcare continuum. Innovation is another pillar of India's healthcare evolution. The country has nurtured a substantial pipeline of innovations and there is significant policy stimuli for digitization. Together, this further enhances opportunity to expand access and also transform healthcare outcomes in India and beyond.

As we look to the future, several recommendations emerge as critical for sustaining this growth trajectory. Skilling initiatives must focus on expanding capacity for speciality care and address human resource inequities between Tier 1 and Tier 2 cities. On sustainability, while industry titans have embarked on the decarbonization journey, broader incentives are essential to foster widespread transformation. Further, Venture Capital (VC) for innovation-led life sciences ventures remains constrained. To replicate success of the technology sector's VC ecosystem, catalytic and directed fund-of-funds (FoF) investments will be crucial, particularly for longer gestation life sciences segments.

In conclusion, the Indian healthcare sector is on a promising path of growth and transformation. With continued focus on universal healthcare, robust private sector participation, and a thriving innovation ecosystem, India is well-positioned to achieve reshape both access and outcomes. We hope this white paper provides valuable insights and fosters meaningful discussions at the summit.

Vijay K. Vijayaraghavan,
Founder Director
Sathguru

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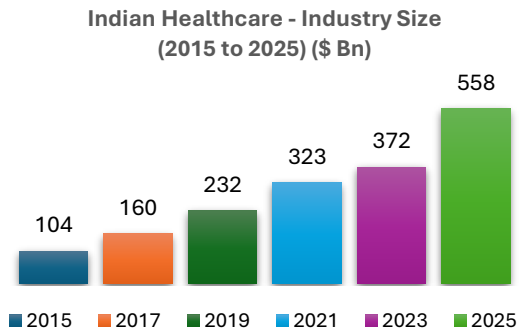
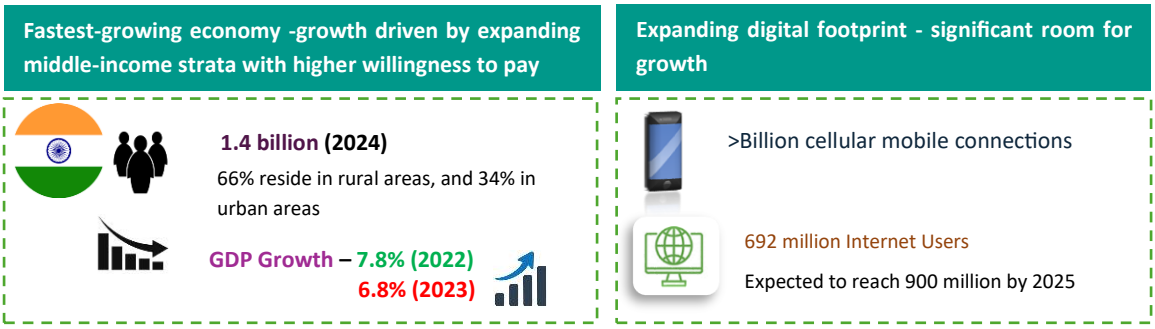
Indian Healthcare Landscape

1. Overview of Indian healthcare industry landscape

The Indian healthcare industry has experienced remarkable growth, with a compound annual growth rate of 22.5% between 2015 to 2023. The industry was valued at US$ 372 billion in 2023 and projected to reach ~600 billion by 2025 (IBEF). This growth is driven by both the private sector and government initiatives, with the public sector receiving strong support to improve healthcare coverage and accessibility. India's robust economy, with a GDP growth rate of 6.9% (IMF), has also contributed to the sector's expansion. The Government spent 2.2% and 2.1% of India's GDP on healthcare in FY22 and FY23, respectively, and has committed to increasing public spending on healthcare to 2.5% of GDP by 2025 with a focus on underserved populations. As public spending increases, corresponding growth in the sector is anticipated. Several other factors including population growth, aging population, expanding middle class, the **rising incidence of lifestyle diseases**, and **accelerated adoption of digital technologies** are also driving growth. Additionally, **increasing investments and FDI inflows** over the last two decades are also fuelling the industry's expansion.

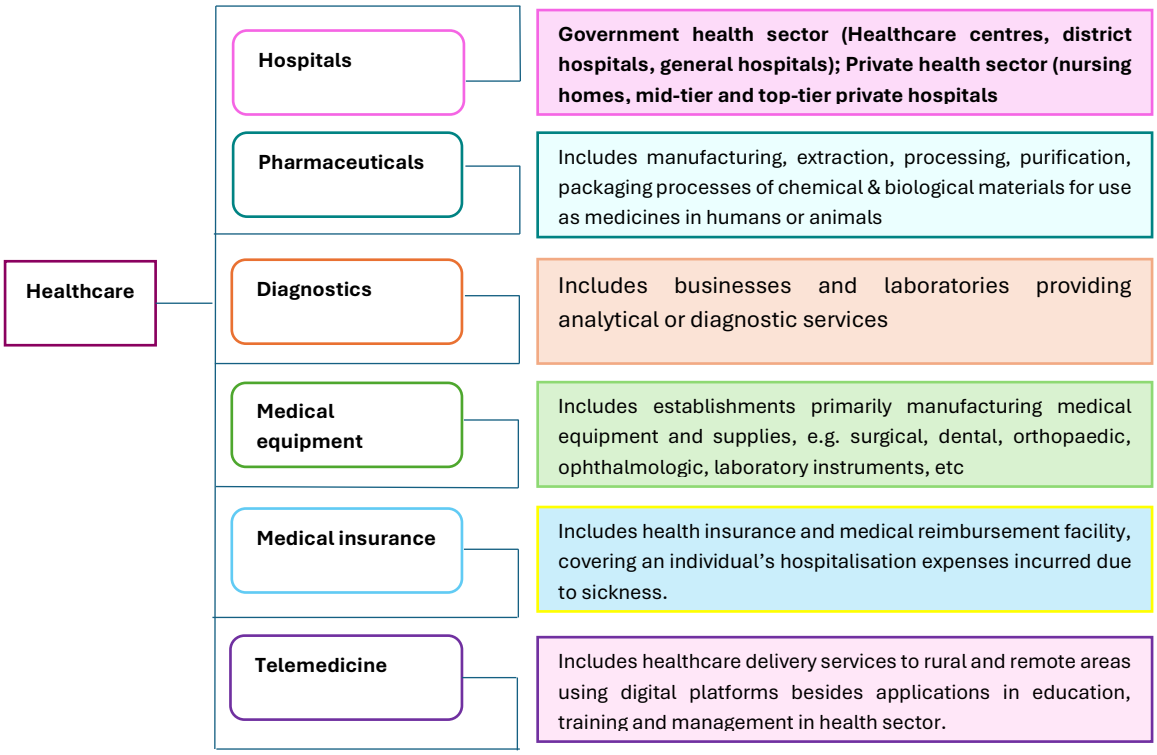




Evolving disease profile and clinical need: The Indian healthcare industry is facing a significant shift in disease profiles, with non-communicable diseases (NCDs) becoming the leading cause of death, accounting for over 50% of all deaths. Cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes are among the top NCDs affecting the population. Changing lifestyle and consumption patterns of Indians have contributed to rising incidence of chronic ailments. This growing burden of NCDs presents a significant opportunity for sector growth, as healthcare providers must adapt to address these emerging health needs. While infectious diseases such as HIV/AIDS, tuberculosis, malaria, and dengue are still prevalent, the industry is also poised to respond to evolving healthcare landscape and meet the growing demands for healthcare services.

Critical segments of healthcare industry:

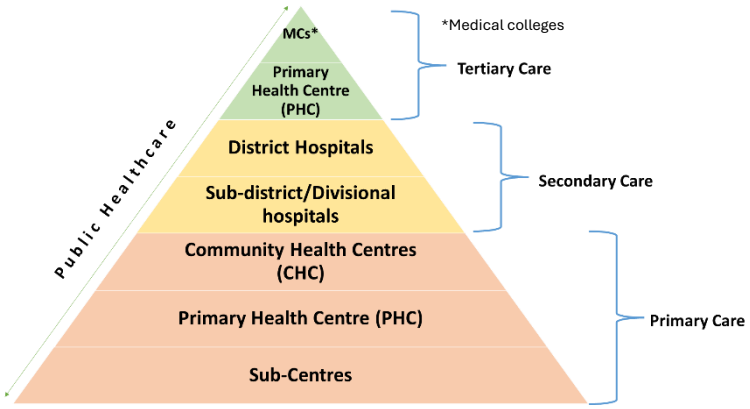
The industry comprises hospitals, medical devices and equipment, health insurance, clinical trials, telemedicine and medical tourism, among which healthcare delivery segment is the largest with market size of $98.9 billion in 2023. It is projected to grow at a CAGR of 8.0% from 2024 to 2032, reaching an estimated value of ~$195 billion by 2032.



Source: IBEF (India Brand Equity Foundation)

I. Healthcare delivery ecosystem

Healthcare in India is highly fragmented with a mix of public and private players.



India's healthcare delivery system is categorized into two main components: public and private sectors. The public healthcare system is comprised Government owned and Government managed healthcare delivery capacity at various levels—central, state, and local. It includes a three-tier system with Sub Health Centres (Urban and Rural), Primary Health Centres (Urban and Rural), and Community Health Centres (Urban and Rural) as the three pillars of Primary Health Care System in India, and similarly, District Hospital (DH), Sub-District Hospital (SDH) and First Referral Unit-community Health Centres under Secondary Care services, and medical institutions under Tertiary Care Services. The foundational tier is comprised of Primary Healthcare Centers (PHCs), which are designed to deliver basic healthcare services, particularly in rural and underserved areas. As patients require more specialized treatment, including microbiological diagnostics, surgeries and critical care, they are served by district hospitals and Government medical colleges providing secondary and tertiary care.

In contrast, the private sector includes the whole continuum of care concentrated in secondary, tertiary, and quaternary care, with a significant presence in metropolitan areas, tier-I, and tier-II

cities providing advanced care. The private healthcare sector in India has rapidly expanded over the last few decades, now constituting a significant portion of the overall healthcare delivery landscape. It encompasses a wide range of healthcare services and facilities, including hospitals, clinics, diagnostic centers, and specialized treatment facilities. As disposable incomes increase, more individuals can afford private healthcare services. The integration of technology into healthcare delivery is enhancing patient engagement and paving the way for more efficient care models, ultimately contributing to improved health outcomes.

II. Health Infrastructure

In India, there are an estimated ~70,000 hospitals and ~19 lakh hospital beds serving the population of 143 crore people. Government hospitals account for ~40 % share of medical infrastructure, whereas private players and individual clinics account for the rest. There are approximately 41,245 public hospitals with 8,25,234 hospital beds which amounts to 0.6 beds per 1,000 population. Therea are about 43,486 private hospitals, with 1.18 million beds translating to 0.83 beds per 1000 population (India's total existing bed to population ratio accounts to 1.4/1000 population both private and public hospitals included). ***Additional three million beds will be needed for India to achieve the target of 3 beds per 1,000 people by 2025*** (IBEF)**.**

III. Human Resource Capacity

Currently, the doctor-population ratio in the country is 1:834 which is above the WHO standard of 1:1000. Government has also taken multiple steps to further increase availability of doctors in the country. One of the notable initiatives in this direction is increase in the number of medical colleges. As of December 2023, India has about 1.3 million registered allopathic doctors with recognized medical qualifications (under the I.M.C Act) registered with state medical councils/national medical councils (estimated active pool of 10.46 lakh at 80% of registered practitioners), and 5.65 lakh AYUSH doctors Also, there are 34.33 lakh registered nursing personnel and 13 lakhs Allied and Healthcare Professionals in the country (PIB). Around 1 lakh doctors of 10.46 lakh registered doctors work in government hospitals (about 10%), with a hefty ~90% working in the private sector. ***It is estimated that an additional 1.54 million doctors and 2.4 million nurses will be required to meet the growing demand for healthcare*** (IBEF). Further, the distribution of healthcare professionals is skewed, with concentration in urban areas, leaving rural regions severely underserved. Finally, the capacity gap for specialists is more stark within the overall context of medical education.

Strides towards medical education and workforce skilling: The Indian government established 60 new medical colleges in 2024 owing to which the MBBS seats grew from 1,08,940 in the 2023-24 academic year to 1,15,812 in 2024-25, a growth by 6.30%. The government has taken great strides to ensure affordable medical education creating an opportunity to bolster the number of qualified/skilled medical professionals in the industry.

While infrastructure challenges, workforce capacity gaps and care accessibility issues persist, it is encouraging to note the shift to Government paid care being increasingly delivered by private sector, continued investment momentum and progressive adoption of transformative digital technologies. Together, these structural enablers, have potential to not only address challenges on access to care but will also result in continued improved in quality of outcomes.

Expanding Healthcare Accessibility in India

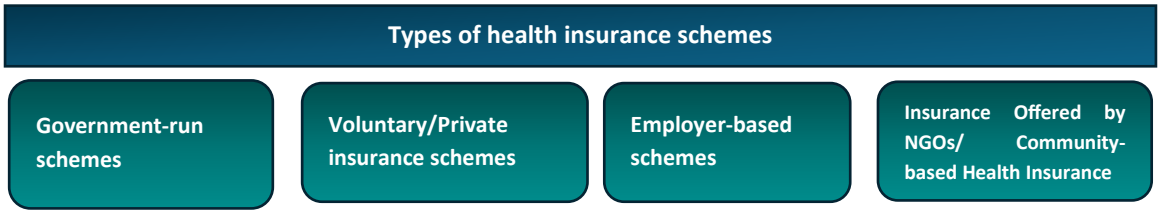
2. Expanding access to care

Improving accessibility, affordability and quality of care

The Government of India has been actively working to expand access to healthcare and drive growth in the healthcare sector through structural and sustained reforms. Central to this initiative is the commitment to Universal Healthcare Coverage, a goal that the government aims to achieve by 2030. To achieve this goal, the Indian government in collaboration with private entities is focused on strengthening healthcare infrastructure, particularly in rural and underserved areas and creating a robust healthcare system which is vital for improving health outcomes for the population and ensuring that every individual, regardless of socio-economic status, can receive the care they need.

I. Expanding healthcare coverage across Government & private insurance

Expansion of health insurance coverage in India is driving growth across various tiers of healthcare delivery capacity, with both private voluntary health insurance and government-funded coverage playing a significant role.

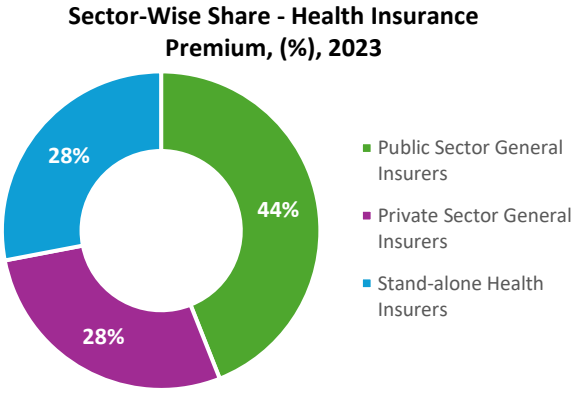


a. *Private voluntary health insurance gaining momentum in India*

Rising burden of new diseases coupled with increasing demand for affordable and quality healthcare is boosting the demand for health insurance coverage in India. In the financial year 2023, India's insurance premium penetration accounted for 4% of the GDP. In 2020, COVID-19 created an enormous impact on healthcare and consequently also the health insurance industry. COVID increased awareness about outbreak of unknown diseases and importance of health insurance. With robust growth year-on-year, healthcare insurance coverage continues to expand, and is one of the most significant propellants of healthcare industry growth.

Robust growth across public and private sector health insurance providers:

Health Insurance Segment reported growth of 21.32% in 2023 with the premium collected increasing to Rs.97,633 crore ($11.6 Bn) in 2022-23 from Rs.80,502 crore ($9.6 Bn) in 2021-22. While public sector health insurance companies held a greater share of the market in 2022-23, private insurance providers continue to grow rapidly as well.



Source: IRDAI

The expanding healthcare delivery landscape could lead to innovations in policy

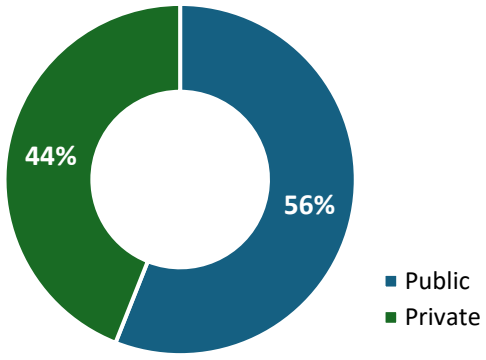
offerings that enhance access to a broader range of healthcare services, ultimately contributing to improved access and outcomes. As the demand for high-quality healthcare rises, affordability expands and corporate focus on employee wellness deepens, the private health insurance sector is likely to expand even further, fostering a culture of health and well-being across the population.

b. Widening government paid public healthcare - Ayushman Bharat

The government of India has implemented multiple Government-Funded Health Insurance schemes over the past decades to ensure affordable healthcare including the Rashtriya Swasthya Bima Yojana (RSBY) and Pradhan Mantri Jan Arogya Yojana (PM-JAY). RSBY was launched by Ministry of Labour and Employment, Government of India to provide health insurance coverage for Below Poverty Line (BPL) families. PM-JAY built on the initial foundation and significantly expanded coverage. With the launch of Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PM-JAY), RSBY got subsumed in it. 22 lakhs beneficiary families belonging to Below Poverty Line (BPL) and 11 other defined categories that were enrolled under RSBY, are now covered under AB-PM-JAY.

The AB-PMJAY, launched by the Government of India in September 2018, provides publicly funded health insurance to 550 million individuals, targeting the bottom 40% of the population with an annual income limit of RS. 2.4 lakh. The scheme provides access to over 1,900 health benefit packages (HBP) and covers up to Rs. 5,00,000 per family per year for secondary and tertiary care hospitalization, with no limits on family size or member age.

Ayushman Bharat Empaneled Hospitals



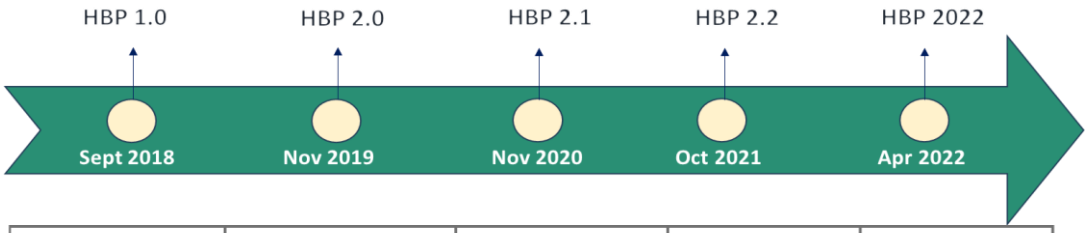
Total **27,742 hospitals** empanelled across India – **15,769 public and 11,973 private hospitals** with **13.3 lakh beds.** Approximately **5.58 crore people hospitalized** under PM-JAY care (2.82 in private hospitals and 2.77 in public hospitals).

It is notable that *44% of hospitals empanelled under AB-PM-JAY are private hospitals*. The widening net of publicly paid care delivered by private hospitals is representative of the evolving landscape of the Indian healthcare system and momentum for private sector growth.

Health Benefit Packages (HBP) – Improved pricing and viability for publicly funded care

Bundled package of services required to treat a condition/ailment/ disease that insured families would receive under AB-PMJAY.

The health benefit package rates for a medical treatment or procedure are fixed in the HBP. This pricing paid to hospitals covers overall cost of treatment including bed charges, consultant fees, diagnostic tests, medicines and all incidentals. Since the inception of the PM-JAY, the HBP list and reimbursement rates have been revised four times - HBP 1.0, introduced in September 2018 to HBP 2022 based on more evidence generated on cost of health services.



1393 packages	874 packages	920 Packages	920 Packages	1159 Packages
-	1592 procedures	1669 Procedures	1670 Procedures	1949 Procedures
24 Specialties	25 Specialties	26 Specialties	26 Specialties	27 Specialties

The latest package HBP 2022 reflects significant increase in several key services including doubling of rate for ICU care. Another key structural change implemented is also likely to have a significant impact on viability of care provisioning for covered patients – in addition to increased package rates, the HBP 2022 also explicitly allows for additional payment for high end medicines over and above package price. Drugs named under high end medicines include injectable antibiotics for ICU use such as meropenem, biosimilars such as trastuzumab for cancer treatment etc. This change can significantly improve viability for more private sector hospitals to provide care for covered patients under PM-JAY.

ICU rates: AB PM-JAY HBP 2.2 and HBP 2022

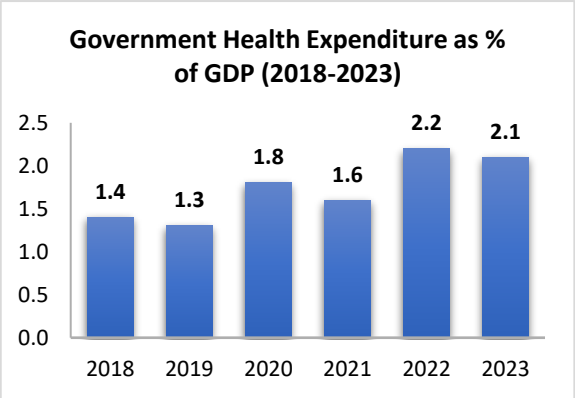
Procedure / Treatment	HBP 2.2	HBP 2022
	Per day (RS.)	Per day (RS.)
Routine Ward	1,800	2,300
High Dependency Unit	2,700	3,630
ICU without ventilator	3,600	9,350
ICU with ventilator	**4,500**	**9,900**

The pricing structure within the PM-JAY is also designed in a way that it not only tries to cover the costing structure of hospitals in different types of locations and cities (tier 1, 2 or 3 cities), but it also incentivises the supply of healthcare services in difficult and hard to reach areas (a 10% incentive is set for procedures performed in hospitals located in aspirational districts).

The interim budget for FY25 allocated Rs.7,500 crore for the scheme (an increase from RS. 6,800 crore), a more than 10% increase over the amount spent in the previous financial year. With continued budgetary commitment, the AB-PM-JAY reflects the expanding coverage of publicly paid care in the Indian healthcare delivery landscape.

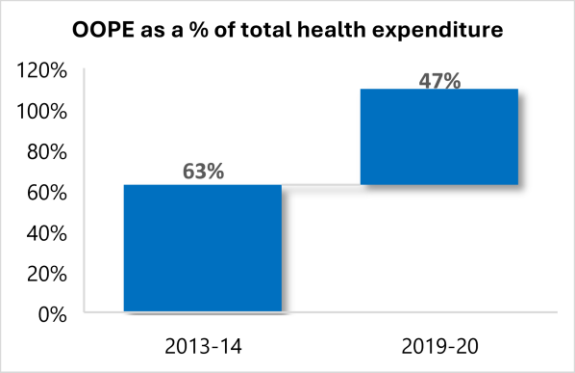
II. Investment momentum in public and private health sectors

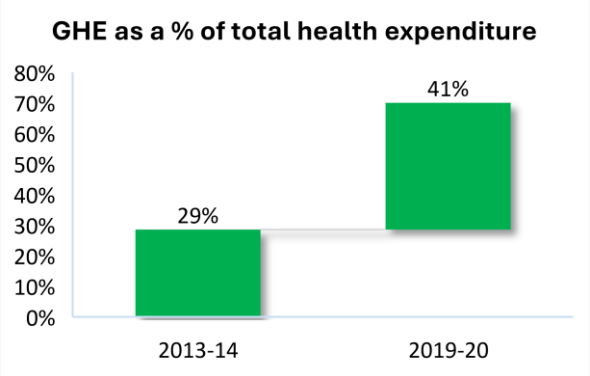
a. Government making investments in strengthening primary healthcare



Total expenditure on health has seen a notable increase from Rs.79,221 crore ($9.4 Bn) in 2023-24 to Rs.90,171 crore ($10.7 Bn) in 2024-25. This increase is intended to enhance funding for health services and infrastructure. Significant increase is observed in budget allocation for Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PMABHIM) which doubled from Rs.2,100 crore ($250 Mn) in 2023-24 to Rs.4,108 crore ($490 Mn) in 2024-25. Overall health spending by federal and state governments reached 2.1% of GDP in FY23, following an increase from 1.6% in FY21 to 2.2% in FY22. Between FY18 and FY24, health expenditure grew at a CAGR of 15.8% (Source: IBEF).

A promising trend is the decline in out-of-pocket expenditure (OOPE) from 62.6% in total health expenditure in 2014-15 to 47.1% in 2019-20. Meanwhile, share of government health expenditure (GHE) in total health expenditure increased from 29% (2014-15) to 41.4% (2019-20) (Source: PIB 2023). This shift indicates a growing role of public funding in healthcare, alongside continued expansion of private sector investments, potentially reshaping the overall composition of healthcare financing in India.





b. Growing investment trends in India's private healthcare sector

The Indian healthcare sector has effectively harnessed technological advancements while adapting to the country's diverse social and economic landscape, and the private healthcare sector emerged as a vibrant force within the Indian healthcare landscape. The growth can be attributed to rising income and healthcare expenditure, high quality healthcare - many metropolitan hospitals now provide cutting-edge infrastructure, top-tier medical facilities, and streamlined healthcare services, increasing public health awareness, and strong government support. The private sector has been investing strongly in capacity creation in response to a growing demand for their services. India’s leading private hospital chains have unveiled their expansion plans in the next few years, with some of the leading

chains such as Apollo, Max, Fortis and Manipal hospitals announcing plans to add beds and increase new greenfield and brownfield facilities, indicating growing demand for their services. Overall, most private players are expected to add over 30,000 beds in the next four to five years at an investment of around Rs.32,500 crore (Source: ICRA).

Some of the expansion plans of leading private hospital groups -

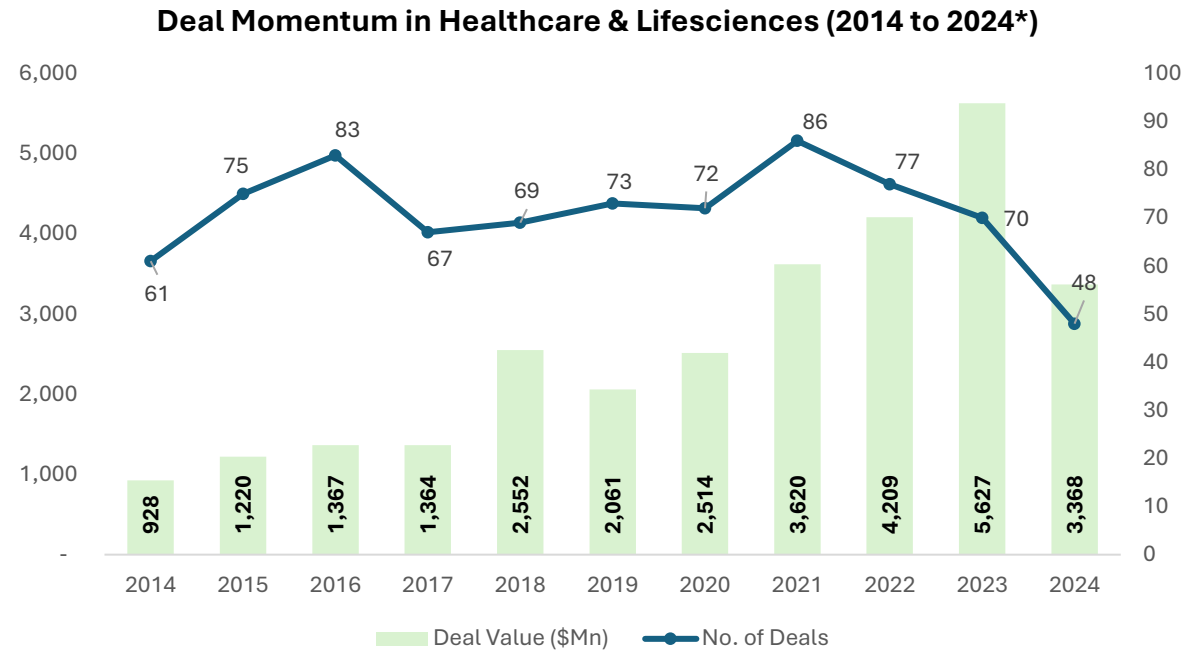
- In October 2024, Manipal Hospitals acquired Khubchandani Hospital in Andheri, Mumbai, for Rs.415 crore. Earlier, in April 2024, Manipal Hospitals signed an agreement to acquire an 87% stake in the Kolkata-based Medica Synergie hospital chain. In 2023, the group also secured an 84% controlling stake in AMRI Hospitals. Looking ahead, Manipal Hospitals plans to add 1,100 beds to its current total of 10,500 beds.
- Max Healthcare has made significant expansions as of October 2024, including the addition of 122 beds at Max Super Speciality Hospital in Shalimar Bagh. They have acquired a 100% stake in Alexis Hospital, Nagpur, which has 200 beds, and purchased the 550-bed Sahara Hospital in Lucknow. Additionally, they acquired prime land in Shaheed Path, Lucknow, with plans to add around 550 beds. They also launched a 303-bed facility at Max Super Speciality Hospital in Dwarka and signed an agreement for a 250-bed built-to-suit hospital in Mohali.
- Apollo Hospitals is focusing on growth in Tier II and III cities over the next three years, targeting locations such as Hyderabad, Bangalore, Kolkata, Pune, Gurgaon, Chennai, and Varanasi. Currently, they have over 1,500 beds equipped with real-time patient monitoring systems, with plans to add another 2,000 connected beds for inpatients by the end of 2024. Additionally, they aim to open four new hospitals with a total capacity of 2,000 beds in existing markets.
- Fortis Healthcare is actively expanding its operations by adding beds and expanding medical programs. Within the next 2 to 3 years, they plan to increase capacity by over 1,400 beds across various locations, including Gurgaon, Mohali, Shalimar Bagh, BG Road, and Noida. Recently, they added 140 new brownfield beds across key units and acquired Medeor Hospital in Manesar, which has a potential capacity of 350 beds. In 2023, Fortis also launched a new 200-bed multi-speciality hospital in Greater Noida and initiated a new block at Fortis Memorial in Gurugram that will include 225 beds, operating theatres, a BMT unit, and other facilities.

The decision to increase bed capacity aligns with the industry's response to rising healthcare demands and demonstrates a commitment to improving healthcare infrastructure in the country.

III. Continued funding fuel for the sector from private equity funds

Private equity firms are playing a transformative role in India's healthcare sector through strategic investments that drive innovation, foster expansion, and enhance access to quality medical services. The Indian private healthcare sector is full of opportunities for industry players, attracting investments, both domestic and foreign, leading to infrastructure development. Global private equity firms and venture capitalists have shown keen interest in the Indian healthcare industry, fuelling the growth of hospitals, both multi-specialty and single-specialty, and novel platform creation for expanding care.

Over the past decade (2014 to 2024 (September)) over $28 billion of private equity funding has been invested in the Indian healthcare and life sciences industry, with more than 40% of investment directed towards the healthcare delivery segment. These investments span across sub-segemnts, including pharmaceuticals, biotechnology, medical devices, Ayurveda, wellness, diagnostics, hospital services, and contract services.



*Till September 2024

In 2023, private equity (PE) investments in India's healthcare sector experienced unprecedented growth, reflecting the increasing interest and commitment of investors in this vital industry. The standout transaction was Temasek's acquisition of a 41% stake in Manipal Hospitals, which marked a significant investment of $2 billion. This deal not only highlighted the potential of major hospital chains but also set the tone for a robust year in healthcare investments. (2024 quarter 1&2 VC investments – 31 deals and $125 million funding)

Overall, Healthcare & Life Sciences companies ranked second after IT&ITES in attracting funding, with total investments amounting to $5.5 Billion. The sector was led by the mega-investment in Manipal Hospital in healthcare delivery ($2 Bn), followed by the $732 million buyout of Indira IVF, the largest provider of fertility services in India, by Baring Asia. The third-largest deal was the $700 million buyout of Care Hospitals by Blackstone. In 2022, the investments were worth $4.2 Billion, characterized by notable deals such as Advent International's acquisition of a significant stake in Suven Pharmaceuticals for $762 million. The increase in 2023 indicates a strengthening investor confidence in the healthcare sector, driven by evolving healthcare needs and the ongoing demand for quality care services across various specialties.

Some of the major deals in healthcare delivery sector include:

Year	Hospital	Acquirer	Deal Value (INR Crores)	Stake
Apr-24	Medica Synergie, Kolkata	Manipal Hospitals	1,400	87%
Apr-24	Ujala Cygnus Healthcare	General Atlantic	1,600	NA
Apr-24	Aster DM's GCC business	Fajr Capital, UAE	8,215	65%
Feb-24	Alexis Hospitals, Nagpur	Max Healthcare	412	100%
Oct-23	CARE & KIMS	Blackstone	8,400	NA
Sep-23	Asian Institute of Nephrology & Urology	AHH	600	NA
Sep-23	AMRI Hospitals, Kolkata	Manipal Hospitals	2,500	84%
Jul-23	Maxvision eye hospital	Quadria Capital	1,300	NA
Jul-23	Indira IVF	BPEA EQT	5,000	60%
Mar-23	Manipal Hospitals	Temasek	16,815	41%

While there has been continuous growth along the entire continuum of care, there is an observable surge in interest regarding investments in single-specialty healthcare services. Notably, investments in these areas reached a notable milestone in 2023, with the value for single-specialty care providers—particularly in in-vitro fertilization (IVF)—reaching half a billion dollars. This surge aligns with a broader trend towards specialization within healthcare, with specific therapeutic areas such as ophthalmology, dermatology, and oncology witnessing increased investment attraction.

Another interesting evolution in investment activity is the heightened emphasis on expanding care for the elderly population which is estimated at 104 million (~ 10% of the Total Population) and expected to increase to 19.5% of total population by 2050. As India's demographic landscape shifts, with an increasing percentage of the population aged 60 and above, there is a growing recognition of the need for tailored healthcare solutions to meet their unique needs. There is currently a growing interest in both multi-specialty and single-specialty service providers that cater specifically to geriatric healthcare, including chronic disease management and rehabilitative services.

Kites Senior Care, a geriatric care company, raised Rs.65 crore in Series A funding in March 2024. The funding was led by Ranjan Pai's Manipal Education and Medical Group (MEMG) Family Office Fund, with Pai investing Rs.45 crore. The remaining Rs.20 crore was contributed by the company's promoters. After the investment, Pai will hold a 44% stake in the company. Kites focuses on providing out of hospital geriatric care and plans to use the funds to increase its capacity by threefold to nearly 1,098 beds and to expand to Pune, Cochin and Coimbatore in the next 15 months.

Athulya has raised Rs.77 crore ($9.3 million) from North Haven India Infrastructure Partners, a fund managed by Morgan Stanley India Infrastructure. Athulya offers assisted living, transition care and home healthcare to address the needs of dependent seniors over the age of 60 and will soon launch palliative care services. The company currently manages over 400 assisted living beds across multiple facilities in Chennai and Bangalore. The company will use the funds to expand its services across south India to reach over 2,500 beds and to serve over 50,000 seniors in the next two years.

Another elderly care start-up Primus Senior Living, based in Bengaluru has raised $20 million in seed funding. Investors include General Catalyst and Nikhil Kamath's Gruhas. The funding supports the creation of India's first full-stack senior care solution.

Antara Senior Care, a subsidiary of the Max Group, has invested Rs.6 crore in its first care home in Bengaluru. The care home in Bannerghatta has a capacity of 83 beds, providing primary health care and emergency response services for seniors, primarily above the age of 55. The company plans to add around 300 beds across Chennai and Bengaluru at about four to five care homes overall, in the first few months of FY25.

Overall, the landscape of healthcare investments in India is evolving rapidly, reflecting broader trends in patient needs and preferences. With significant financial backing and a growing focus on specialized care, along with initiatives aimed at enhancing elder care, the sector is poised for continued growth and transformation in the years to come. This commitment by investors not only stands to improve healthcare outcomes but also elevates India's position as a burgeoning hub for healthcare services.

Innovative Technologies Reshaping India's Healthcare Sector

3. Embracing Innovations Changing the Indian Healthcare Landscape

Automation and digitalization transforming the healthcare industry in many ways

Addressing healthcare challenges presents opportunity for innovation at various levels of care including preventive services such as screening and diagnostic services for diseases, behaviour change communication, health awareness and education, treatment services, and follow-up care. Digital transformation in healthcare has significantly redefined the way medical professionals diagnose, tret and monitor patients. Healthcare providers are implementing novel strategies and providing personalized care, fostering patient trust.

I. Emphatic focus on digital transformation of healthcare

In India, digital technology is revolutionizing the healthcare sector by introducing cutting-edge innovations across various healthcare segments. India's healthcare landscape has experienced a profound transformation, driven by the rapid expansion of telemedicine, electronic health records (EHR), wearables, telemedicine, remote patient care, virtual reality (VR), artificial intelligence (AI), and robotics. While the private healthcare sector has long been at the forefront of technology adoption, the public healthcare system has witnessed a rapid surge in recent years, driven by growing consumer demand for quality healthcare services, government initiatives, and policies. The COVID-19 pandemic has also significantly accelerated the adoption of digital technologies across both private and public health sectors. It also acted as a catalyst for the Government of India to establish comprehensive guidelines to enhance service delivery. Government launched notable initiatives such as the Ayushman Bharat Digital Mission (ABDM) (over 52 crore health accounts, over 2.6 lakh healthcare professional registered), e-Sanjeevani (over 19 crore patients served), CoWIN app (over 149 registrations), and Aarogya Setu app (22 crore downloads) as building blocks to develop a digitized health ecosystem (Source: PIB) to improve access to quality healthcare, particularly in underserved rural areas. Remote patient monitoring (RPM) has also become instrumental in addressing the challenges faced by the healthcare system, especially for the 70% of India's population residing in rural areas with limited infrastructure (understaffing, poorly equipped and medicines run out). Care delivery majorly being concentrated in urban areas, RPM has emerged as an effective technology to bridge the urban-rural disparity in healthcare.

Further, the integration of IoT, artificial intelligence (AI), and machine learning (ML) in clinical practice allows for real-time monitoring and data analysis, fostering a more responsive healthcare environment. Despite the considerable potential of EHRs.to streamline patient data management and enhance continuity of care, their adoption remains slow due to high implementation costs and a lack of regulatory mandates. Nevertheless, some hospitals are beginning to implement EHR systems and hospital management software. Notable hospitals using EHR/EMR include AIIMS (Coimbatore), Apollo Hospitals (Chennai), Fortis Hospital (Mohali and Delhi), Manipal Hospital (Bangalore), Sankara Nethralaya, and Max Hospital (Delhi).

Under the Ayushman Bharat Digital Mission, India has employed an incentive system like the US to encourage EHR adoption. Currently, less than 1,700 hospitals, clinics or diagnostic labs have signed up for the incentive scheme. However, over 34 crore individual Ayushman Bharat Health Accounts (ABHAs) linked with health records is a good start for a nationwide EHR system.

Source: ABDM

Concurrently, wearable technology has become a game-changer in the healthcare industry, revolutionizing how patient health is monitored and improving healthcare outcomes. The rise of remote healthcare and preventive care has increased the demand for wearable technology capable of monitoring and detecting health conditions in real time. Wearables, ranging from fitness trackers to advanced sensors that monitor critical vitals like heart rate, blood glucose levels, and oxygen saturation have been pivotal in real-time monitoring as they facilitate continuous health monitoring and personalized treatment plans, enabling informed decisions for optimal patient care. AI-enabled sensors that monitor parameters 24/7, even during sleep, capturing data such as breathing patterns, brainwaves, and sleep quality, are being widely adopted. These devices, integrated with AI-driven apps, empower users to make informed lifestyle choices regarding their diet, exercise, and medication, enhancing overall quality of life and reducing the risk of complications. This shift is further supported by the increasing availability of smartphones and health applications, as well as the anticipated benefits of 5G technology, which promises to enhance connectivity and security in healthcare services.

Medical Imaging Datasets for India (MIDAS) - new platform for quality-graded health data for AI-enabled healthcare in India. MIDAS is a joint initiative by ICMR, IISc, and ARTPARK to create high-quality and standardized medical datasets representative of the Indian population.

Healthtech startup AarogyaAI is using AI-enabled software for expediting diagnosis and enabling personalized treatment within a few hours. **AarogyaAI** will combat lethal infectious diseases like Tuberculosis and develop an AI-driven software to diagnose Drug-resistant Tuberculosis,

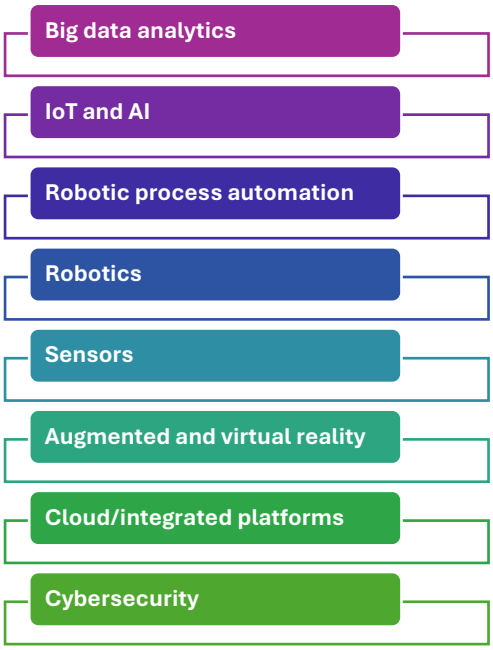
National e-Governance Division (NeGD), Ministry of Electronics & IT (MeitY), Government of India collaborated with Intel India to implement '**Responsible AI for Youth**' - A national program enabling government school students to become AI Ready and help reduce the skill gap, while enabling youth to create meaningful social impact solutions.

Continuing the momentum of AI skilling program, National e-Governance Division, Ministry of Electronics & IT, Government of India launched the '**YUVAi- Youth for Unnati and Vikas with AI**' program, aimed at fostering a deeper understanding of AI, to equip school students from classes 8th to 12th across the nation with AI skills, and empower them to become human-centric designers and users of AI.

Advancements in healthcare have notably improved the effectiveness of home health and remote monitoring services. Additionally, digitally enabled pharmacies and diagnostic chains have contributed

to enhanced price transparency, increased accessibility, and improved options for patients. Therefore, healthcare providers are accelerating digital investments their digital investments to enhance operational efficiency and improve the patient experience.

II. Integration of digital technology into all areas of manufacturing process



The adoption of digital technologies in manufacturing offers a transformative opportunity for overcoming unique challenges, streamlining processes, and ultimately delivering superior products to healthcare providers and patients. Key benefits of digital transformation in manufacturing include the automation of complex tasks, reduction of manual errors, enhanced overall efficiency, real-time data access, faster and more accurate quality assurance, effective tracking of regulatory changes to ensure compliance, and innovations in product design and manufacturing techniques. Artificial intelligence systems are increasingly playing a vital role in driving production processes and enabling data-driven decision-making through predictive analytics. As a result, the demand for digital solutions is surging across various sectors of the healthcare manufacturing industry.

The Indian pharmaceutical industry is moving from manual processes towards more agile systems that facilitate the delivery of personalized medications to patients. This evolution, often referred to as digital manufacturing, or Pharma 4.0, integrates advanced methodologies such as additive manufacturing (3D printing), computer-aided design (CAD), and simulation software, all of which contribute to a more efficient and responsive manufacturing landscape.

Digital transformation creates intelligent, connected manufacturing systems to enhance efficiency, reduce waste, and promote sustainability. By leveraging these advancements, India aims to create a more equitable healthcare system that enhances access to quality care, reduces costs, and fosters greater coverage for its diverse population.

III. Innovations in molecular diagnostics

Innovations in molecular diagnostics are creating demand for unprecedented care

Molecular diagnostics has emerged as a critical innovation in the Indian healthcare sector, significantly enhancing patient care and driving demand for next-generation healthcare solutions. Notable advancements include the development of portable diagnostic devices that provide immediate results at the point of care, thus facilitating timely clinical decision-making. Additionally, liquid biopsy technologies offer non-invasive methods for cancer detection and monitoring, while the integration of artificial intelligence and machine learning improves the accuracy of interpretations by harnessing vast datasets. Many new ventures in the diagnostic space are revolutionizing patient care, especially in

complex and interventional diagnostic procedures. With innovations such as AI-driven diagnostic tools and advanced imaging techniques (e.g., 3D imaging, machine learning algorithms) the accuracy and speed of diagnosis is significantly increased leading to quicker decision-making and improved patient outcomes.

Helmed by experienced and research focused clinical expertise, ***Exsegen is developing non-invasive liquid biopsy*** technology that can revolutionize brain tumor diagnostics by leveraging genomics, AI and ML. The technology provides precise, early detection possibility and thus negates the need for high risk and high cost tissue biopsy for brain tumors.

Next-Generation Sequencing (NGS) is being employed to personalize medicine, enabling rapid and cost-effective sequencing of entire genomes for tailored treatment plans for diseases such as cancer and genetic disorders. Advanced PCR techniques, including quantitative and reverse transcription PCR, enhance the speed and accuracy of infectious disease detection, particularly for COVID-19. With a growing emphasis on preventive medicine, molecular diagnostics is also pivotal in screening for hereditary diseases and infectious agents, shifting the focus from treatment to proactive health measures.

AI in diagnosis*: The integration of AI into healthcare presents a remarkable opportunity for improving disease diagnosis and treatment selection. The potential of AI to support clinicians in making informed treatment decisions—especially in predicting patient responses to therapies—has been increasingly acknowledged. One notable application is developed by the Mumbai-based startup* ***Qure.ai****, which employs deep learning techniques to analyze chest X-rays and identify abnormalities. Collaborating with state governments such as Karnataka and Maharashtra, Qure.ai is actively involved in the early detection of lung cancer and tuberculosis****. Apollo*** *partnered with* ***Google*** *to build a Clinical Intelligence Engine (CIE) using Google Cloud's Vertex AI and generative AI (gen AI) models. This enables doctors to identify the next best action for patients during consultations. The CIE service leverages data from Apollo Hospitals and large language models (LLMs) from Google Cloud to create a proprietary solution in which all patient data is kept securely within the hospitals' systems.*

As these innovations continue to develop, they are poised to transform healthcare in India, leading to improved patient outcomes and more efficient healthcare systems, underscoring the necessity for collaboration among technology, policy, and healthcare to ensure sustainable growth and equitable access to advanced care for all.

In September 2024, ***Qure.ai raised $65 Mn (RS. 543 Cr) in a Series D funding*** round co-led by Lightspeed Venture Partners and 360 ONE Asset Management and joined by the Merck Global Health Innovation Fund and Kae Capital.

This funding will power Qure.ai to continue to push forward globally within the realm of AI in radiology. Qure.ai utilizes deep learning and AI to identify critical diseases such as TB, lung cancer, and stroke. Digital transformation in radiology can expand access to care while also improving outcomes.

MedTech start-up **SigTuple has raised $4 Mn (over RS. 33.5 Cr) in an extended series C funding** round led by Sidbi Venture Capital, and from its existing investors.

A pioneer in AI in pathology, the Company plans to deploy these funds to expand its geographical footprint, broaden product portfolio and support regulatory clearances. SigTuple leverages microfluidics, robotics, artificial intelligence (AI) and cloud computing to create smart diagnostic solutions that enhance the affordability and accessibility of quality healthcare.

IV. Policy Stimulus Likely to Accelerate Pace of Digitization

Government of India is committed to ensuring equitable access to quality healthcare for all citizens. In addition to implementation of healthcare coverage schemes and expanding human resource capacity, to realize this vision the Government has also laid emphasis on digitizing healthcare. With due acknowledgement of the transformative potential of digital health innovations, policy stimulus for digitization has been all compassing and progressively expanding:

A. Digital Initiatives

Multiple programs including prioritization of digital innovations and preparedness as themes for G20's health working group and focus on integrated care have been initiated to address the health system challenges that currently India is facing.

India's G20 presidency in 2023 represented a significant milestone, embodying the theme "Vasudhaiva Kutumbakam," which translates to "One Earth, One Family, One Future." During this presidency, digital healthcare emerged as a major priority, highlighted by the launch of the Global Initiative on Digital Health (GIDH). This platform aims to facilitate knowledge sharing and the exchange of digital health products among nations, ultimately strengthening the global digital health framework and aiding countries in their pursuit of universal health coverage. Within the health working group, India has identified three key priorities: enhancing health emergency prevention and response, bolstering cooperation in the pharmaceutical sector to ensure access to safe and affordable medical countermeasures, and fostering digital health innovations to improve healthcare service delivery. This strategic focus aligns with India's broader goals for transforming its healthcare ecosystem.

Another significant initiative under the Indian government is the promotion of AYUSH, which encompasses traditional systems of medicine, including Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy. The AYUSH sector has observed remarkable growth, with manufacturing valued at $18 billion in 2020 and projected to reach $24 billion by 2024, reflecting a compound annual growth

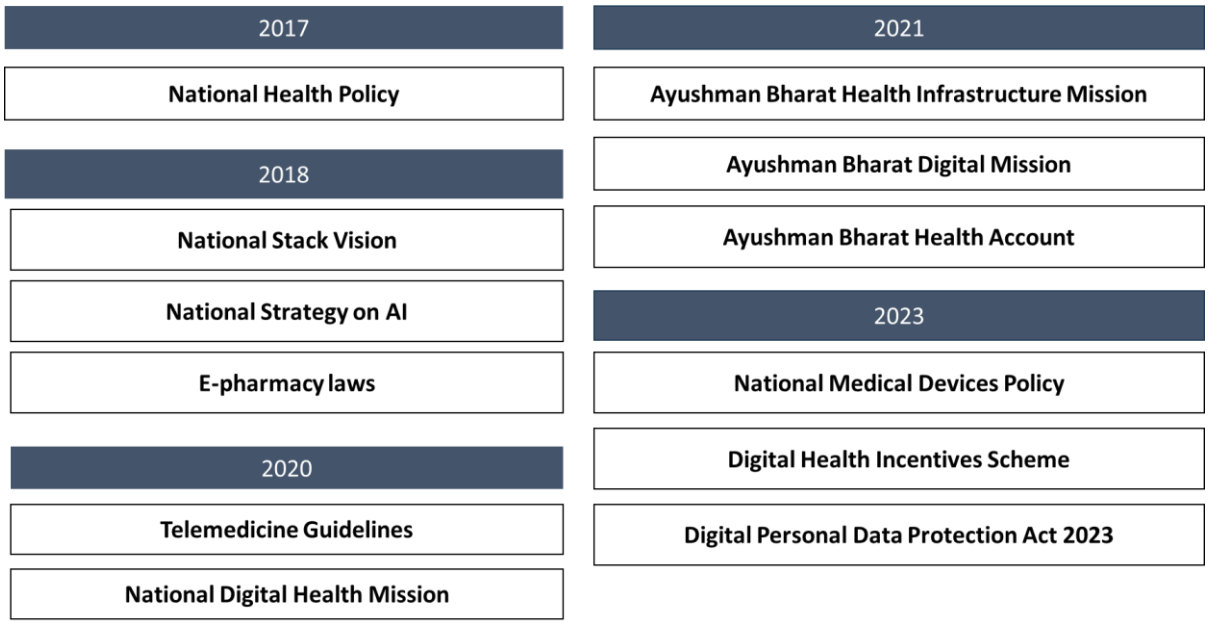
rate (CAGR) exceeding 30% from 2014 to 2020 (IBEF). This growth is driven by increasing public awareness and demand for natural therapies, supported by government initiatives aimed at mainstreaming traditional medicine systems. **The Indian Union budget for 2024-2025 reflects a robust commitment to this sector, with an increased allocation of Rs.3,712.49 crore for the AYUSH Ministry, up from Rs.3,000 crore the previous year**. The AYUSH sector not only offers numerous investment opportunities—ranging from wellness centers to herbal product development and AYUSH educational initiatives—but it has also garnered international attention boosting exports and fostering strategic partnerships. To sustain this growth, it is crucial for India to focus on research, standardization, quality control, and the development of a skilled workforce within the sector.

AYURGYAN Scheme has been approved for the period from the FY 2021-2022 to FY 2025-2026 for promoting education and research in the field of AYUSH. The scheme aims to enhance and develop capacity in the AYUSH healthcare sector at the country level. It seeks to improve health practices through sustainable AYUSH methods, encourage professionals to undergo professional orientation, update knowledge of teachers and doctors, and promote the use of information technology for disseminating AYUSH developments. The scheme also focuses on encouraging research and development in priority areas to validate claims and enhance the acceptability of AYUSH approaches and drugs in the global market.

Source: GOI Ministry of Ayush

B. Digital Health Policies

As digital and advanced healthcare technologies continue to proliferate, concerns regarding patient privacy and data security are on the rise. The primary issues associated with the transmission of personal data include maintaining confidentiality, managing data exchange control, ensuring security and privacy, and fostering awareness, trust, accountability, and responsibility. The Indian Government has made significant strides in reforming its healthcare sector through various policies aimed at enhancing digital transformation. Some of the key initiatives include:



Ayushman Bharat Digital Mission (ABDM): Launched in September 2021, the ABDM aims to revolutionize the nation's digital healthcare ecosystem to enhance healthcare accessibility, efficiency, and transparency. It leverages Digital Public Infrastructure (DPI) to enable interoperability in digital health transactions.

ABDM features a unique Health ABHA ID for each citizen, establishing a trustworthy identity for managing health records. It includes a Healthcare Professionals Registry (HPR) and Health Facility Registries (HFR) that connect healthcare providers and facilities across various medical systems. The Health Information Exchange and Consent Manager (HIE-CM) allows secure access and sharing of health records based on informed consent, while the Unified Health Interface (UHI) streamlines healthcare interactions and service delivery. The initiative standardizes the insurance claim process through the National Health Claims Exchange (HCX) and prioritizes data privacy and security in compliance with the Digital Personal Data Protection Act, 2023.

With a focus on interoperability, ABDM facilitates efficient data exchange among healthcare stakeholders, promoting transparency by allowing individuals to choose from public and private services while ensuring accountability and adherence to guidelines.

Over 67 crore ABHA accounts have been created, providing citizens with unique digital health IDs for secure access and sharing of health records. Additionally, more than 42 crore health records have been linked to ABHA, enabling seamless access to medical histories and enhancing healthcare delivery. Over 236 private entities including labs, pharmacies, digital solution companies have integrated with the ABDM ecosystem, joining hands to achieve interoperability. Currently, over 1.3 lakh facilities are ABDM-enabled, including more than 17,000 private facilities. 3.3 lakh health facilities and 4.7 lakh healthcare professionals have been successfully registered.

Source: PIB

T**he National Medical Devices Policy (2023):** The National Medical Devices Policy is designed to support the structured growth of the medical device sector in line with public health goals, focusing on access, affordability, quality, and innovation. To help the sector achieve its full potential, the policy outlines strategies such as establishing a conducive ecosystem for manufacturing, emphasizing innovation, creating a streamlined regulatory framework, and offering training and capacity-building initiatives. Additionally, it promotes higher education to develop talent and skilled resources that meet industry needs. Encouraging domestic investment and production of medical devices aligns with the Government's initiatives of 'Atmanirbhar Bharat' and 'Make in India'.

The policy lays down a roadmap for accelerated growth of medical devices sector while promoting safety and quality to systematically achieve the following missions:

Digital Personal Data Protection Act 2023 (the DPDP Act) enacted in August 2023 aims to govern the handling of personal data in India by establishing a framework of data accountability and governance. The Act imposes obligations on Data Fiduciaries (those processing data), and outlines the rights and duties of Data Principals, individuals to whom the data pertains. It also introduces financial penalties for breaches. DPDP created the Data Protection Board of India (DPB), the first regulatory body in India focused on protecting personal data privacy, and its goal is to oversee compliance and impose penalties on non-compliant organizations.

Overall, the Indian Government's focus on digital transformation within healthcare is seen as a fundamental driver for achieving universal healthcare goals. Through these comprehensive reforms and initiatives, the Government is nurturing an ecosystem conducive to significant advancements in the healthcare sector.

Way Forward

4. Way Forward

I. Accelerated implementation of key initiatives for expanded access

Context - Several Government catalytic initiatives to expand access and foster digitization

Over the last several years, Government of India has shaped several initiatives with significant potential for expanding access to care and fostering digitization at scale. Indicative initiatives include:

i. **Revision of HBP under AB-PMJAY,** flagship program launched by the government to achieve universal health coverage. As of June 30, 2024, 33 states and Union Territories (UTs) in India have implemented AB-PM-JAY, with the exception of Odisha, West Bengal, and the National Capital Territory (NCT) of Delhi. The health benefit packages (HBP) under AB-PM-JAY evolved over the last five years based on the requirements of States and to accommodate state-specific variations in disease profile - from 25 specialties and 1393 packages at the time of inception to 27 specialties and 1949 procedures in the latest (HBP 2022) version. Despite the improved pricing for services, the adoption of revised health benefit package has been uneven across states. States are using different versions of HBPs, with several states not yet transition to HBP 2022 with improved pricing and coverage.

ii. **Ayushman Bharat Digital Mission**, to establish a robust digital health infrastructure. Since its inception in 2021, ABDM has made a significant progress driving transformation in both public and private sectors. Over 67 crore Ayushman Bharat Health Accounts (ABHA) have been created providing citizens with unique digital health IDs for secure access and sharing of health records which mark, and more than 42 crore health records have been linked to ABHA.

Recommendation and way forward imperative

In India, health is primarily a state subject leading to heterogeneity in pace implementation of these initiatives across the country. Each state has its unique set of challenges (resources, priorities), which can influence the adoption and execution of these initiatives. Also, the Indian healthcare system is fragmented with large number of providers (about 70,000 hospitals in total) operating at various levels, resulting in uneven distribution and accessibility of health services.

Structural challenges such as fragmented care delivery landscape and health as a state subject necessitate concerted efforts from the government to foster accelerated execution across the country for all such critical initiatives. This will be important to realize potential impact of such initiatives and actualization of the goal of equitable access to quality care for citizens across the country.

II. Review scale of skilling initiatives and need for expanded investments

Context - High momentum in healthcare delivery expansion

The Indian healthcare industry has experienced unprecedented growth momentum in both private and publicly funded care in recent years driven by various factors, including government initiatives aimed at broadening healthcare accessibility, and the recent investment trends in public and private sector. The private healthcare sector has attracted substantial Private Equity (PE) investment ($5.5 billion in 2023), and leading hospitals have also been investing in both organic and inorganic growth. Private hospitals are expected to add over 30,000 beds in the next three to five years. The continuing investment momentum for healthcare delivery expansion is likely to drive continued demand for qualified workforce.

Government focus on skilling and medical education To address the expanding need for skilled human resources, the Government has already been making concerted investments. This includes expanding access to affordable medical education – an intent emphatically evident in the Government establishing 60 new medical colleges in 2024. Consequently, number of medical colleges now stands at around 730 (July 2024, PIB) and number of MBBS seats grew from 1,08,940 in the 2023-24 academic year to 1,15,812 in 2024-25.

Recommendation and way forward imperative

The robust outlook of growth calls for review of pace at which the directed investments should be made to ensure skilling and higher education investments keep pace with capacity expansion in the sector. Further, the challenge of capacity development becomes all the more critical above the base layer and continues to be a pronounced challenge in the mid to high end of the mid-term care delivery. For instance, while India has an overall doctor-population ratio of around 1:834 which is not too distant from the WHO standard of 1:1000, the same paradigm of access is not necessarily true for specialists. As an example, the same ration weakens to 1;30,000 when reviewed in the context of access to cariologists.

Hence, directed investments will be essential to foster equitable access to healthcare delivery in the country while steering capacity creation in specialists. This could be in the form of fellowships, postgraduate programs and immersions in prioritized therapy areas. If the goal of equitable access to high quality care across primary care, secondary and tertiary care levels is to be realized near term, concerted and directed investments in healthcare skilling and medical essential will be essential.

III. Catalyze expanded investments for life sciences venture capital

Context - Significant venture pipeline fuelled with catalytic initiatives including non-dilutive funding

Government of India has been focused on nurturing vibrant startup ecosystem through several catalytic initiatives. Within the realm of life sciences and healthcare, initiatives such as grants from BIRAC in the Department of Biotechnology have been far reaching in impact. Between 2021 and 2023, the cumulative number of life sciences and biotech startups surged from 5,365 to 8,531 (India Bioeconomy Report 2024). In addition to access to non-dilutive seed and early de-risking financing, ecosystem enablement has included several initiatives such as development of shared facilities and infrastructure and rapid scale-up in incubation capacity through programs such as BIRAC's BioNest, DST's Nidhi Prayas, and Atal Innovation Mission's Atal Incubation Centers. Additionally, more recent initiatives such as the Scheme for Promotion of Research and Innovation in Pharma-MedTech Sector (PRIP) further expand Government investments in early-stage non-dilutive financing. Within the budget outlay of RS.. 5,000 crores for period of five years (2023-24 to 2027-28), RS. 4,250 crores is earmarked for financial assistance for innovation investments by startups and larger companies.

Venture capital (VC) funding for life science ventures still lags pipeline size

To expand access to VC funding, in 2016 Government of India launched Fund of Funds for Startups (FFS or FoF) Scheme with a corpus of Rs 10,000 crore. This has led to spiralling impact on access to capital with SIDBI having committed RS. 10,229 crores to 129 Alternate Investment Funds (AIF) and disbursing RS. 4,552 crores to 92 AIFs as of January 2024. During the same period, RS. 17,452 crores has been invested by the AIFs across 939 startups (StartupIndia). However, lion's share of this funding has been directed to the tech sector with life sciences and healthcare receiving marginal attention. With significantly longer timeframe to commercial success, healthcare and life sciences sectors are yet to be prioritized to the required extent by Venture Capital (VC) funds. The only FoF dedicated to healthcare and life sciences is the ACE Fund managed by BIRAC where budgetary allocation has been limited to a relatively low sum of RS. 150 crores which has been committed to 13 funds.

Hence, institutional equity capital at the venture stage continues to be a looming gap despite ease of access to capital at the earlier stage of seed stage grants and the later stage of growth stage private equity. This is also starkly evident in the deal value of VC investments in healthcare and life sciences during FY24, a relatively low deal value of about RS. 245 crores over about 13 deals (Venture Intelligence database and SMC analysis). This is starkly low considering strength of the pipeline nurtured and imminent funding need.

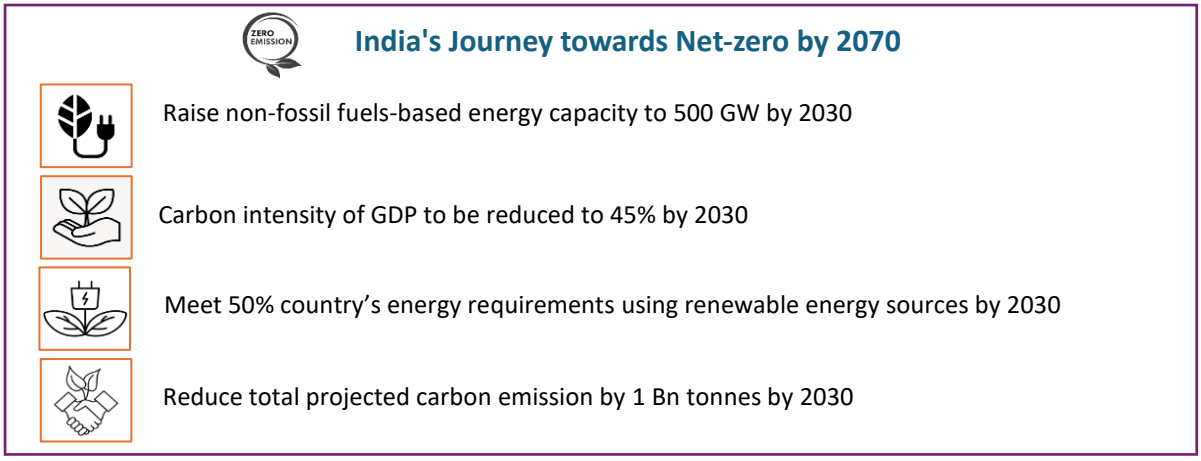
Recommendation and way forward imperative

It is critical to rapidly expand access to VC funding in healthcare and life sciences in India to power venture success beyond the well-funded domain of technology startups. Pipeline is currently primed but catalytic pool of Government committed capital in a FoF model would need to expand in an accelerated manner to mobilize much needed investment momentum. In the absence of such a concerted effort, we stand on the threat of mortality for pipeline ventures or flight of ventures to countries where funding is more accessible. Targeted pool of expanded FoF investments will also help attract sector focused fund managers to create specialized capacity required in this segment.

IV. Sustainability focused transformation

Context: India' sustainability goals call for transformation across sectors including healthcare

At the at the 26th session of the United Nations Framework Convention on Climate Change (COP 26) in November, 2021, India announced five energy commitments (Panchamrit) and the ultimate goal of Net Zero emissions by 2070 (PIB).



Leading Indian Companies pursuing science-based targets: Aligned with national commitment to sustainability, several leading listed companies in healthcare have prioritized sustainable practices and have explicitly articulated defined targets. Indicative examples are highlighted below:

- Apollo hospitals: Target of 25% sourcing from *renewable energy and 10% reduction in energy and water consumption by 2024-25* and i*ncluding aspects of Scope 3 emissions as part of the reporting framework*. "**Project Virya**," launched in 2021, targets 20% reduction in energy consumption and carbon footprint (decrease CO_2 emissions by 290,000 tons) across 18 major facilities.
- Max Healthcare: Committed to environmental safety, with renewable energy comprising 33% of its energy mix, leading to a reduction of 19,156 tons of CO2 emissions. The organization aims to increase this share to 60% by FY 2024-25. Their flagship project includes a 400 kW solar rooftop installation, which contributes to a carbon footprint reduction of 395 tons annually.

Recommendation and way forward imperative

While market leading healthcare companies and PE invested companies have been forerunners in the sector in defining science based decarbonization targets, carbon neutrality in the broad base of 70,000+ hospitals is currently not a visible goal. There is significant potential for nurturing sustainability focused operational transformation in the healthcare sector. Providing tax breaks and subsidies for healthcare organizations that invest in renewable energy sources and allocating grants specifically for research and development focused on sustainable medical practices, waste reduction technologies, and green infrastructure can significantly encourage sustainable practices. For the healthcare sector to be a force enabling the Panchmarit national goals, it is important that policy led incentivization is considered to reward sustainability integration in healthcare.

List of Abbreviations

AABY	**Aam Aadmi Bima Yojana**
ABHA	Ayushman Bharat Health Accounts
ABDM	Ayushman Bharat Digital Mission
ABHIM	Ayushman Bharat Health Infrastructure Mission
AB PM-JAY	Ayushman Bharat Pradhan Mantri Jan Arogya Yojana
AI	Artificial Intelligence
AIIMS	All India Institute Of Medical Sciences
AMR	Antimicrobial Resistance
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
Bn	Billion
BPL	Below Poverty Line
CAD	Computer-aided Design
CAGR	Compound Annual Growth Rate
CGHS	Central Government Health Scheme
CHC	Community Health Centre
CIE	Clinical Intelligence Engine
CPHC	Comprehensive Primary Healthcare
CVD	Cardiovascular diseases
DBT	Direct Benefit Transfer
DH	District Hospital
DHIS	Digital Health Incentives Scheme
DHR	Digital Health Record
DISHA	Digital Information Security in Healthcare Act
DPB	Data Protection Board of India
DPDP	Digital Personal Data Protection Act 2023
DPI	Digital Public Infrastructure
EHR	Electronic Health Record
EMR	Electronic Medical Record
FDI	Foreign Direct Investments
FY	Fiscal Year
GDP	Gross Domestic Product
GeM	Government e Marketplace
GHE	Government Health Expenditure
GIDH	Global Initiative on Digital Health
HBP	Health Benefit Package
HCX	National Health Claims Exchange
HFR	Health Facility Registries
HPR	Healthcare Professionals Registry
HIE-CM	Health Information Exchange and Consent Manager
HIMS	Health Information Management System
HMIS	Hospital Management Information System
HPR	Healthcare Professionals Registry

HWC	Health and Wellness Centres
ICMR	Indian Council of Medical Research
ICT	Information and Communications Technology
ICU	Intensive Care Unit
IISC	Indian Institute of Science
I.M.C Act	Indian Medical Council Act, 1956
IVF	In-vitro Fertilization
LEED	Leadership in Energy and Environmental Design
LLM	Large Language Models
MDR	Medical Devices Rules
MIDAS	Medical Imaging Datasets for India
MeitY	Ministry of Electronics & IT
Mn	Million
ML	Machine Learning
MMU	Mobile Medical Units
MoHFW	Ministry of Health and Family Welfare
M&A	Mergers and acquisitions
NCDs	Non-Communicable Diseases
NDHM	National Digital Health Mission
NeGD	National e-Governance Division
NGS	Next-generation sequencing
NHM	National Health Mission
NHP	National Health Policy
OOP	Out-Of-Pocket
OOPE	Out-Of-Pocket Expenditure
PCR	Polymerase Chain Reaction
PE/VC	Private Equity/ Venture Capital
PHC	Primary Healthcare Centre
PLI Scheme	Production Linked Incentive Scheme
PPP	Public Private Partnerships
PMABHIM	Pradhan Mantri Ayushman Bharat Health Infrastructure Mission
RPM	Remote Patient Monitoring
RSBY	Rashtriya Swasthya Bima Yojana
SDH	Sub-District Hospital
SDG	Sustainable Development Goals
UHC	Universal Health Coverage
UHI	Unified Health Interface
UTs	Union Territories
VR	Virtual Reality
YUVAi	Youth for Unnati and Vikas with AI

NOTES

The Associated Chambers of Commerce & Industry of India (ASSOCHAM) is the country's oldest apex chamber. It brings in actionable insights to strengthen the Indian ecosystem, leveraging its network of more than 4,50,000 members, of which MSMEs represent a large segment. With a strong presence in states, and key cities globally, ASSOCHAM also has more than 400 associations, federations and regional chambers in its fold.

Aligned with the vision of creating a New India, ASSOCHAM works as a conduit between the industry and the Government. The Chamber is an agile and forward-looking institution, leading various initiatives to enhance the global competitiveness of the Indian industry, while strengthening the domestic ecosystem.

With more than 100 national and regional sector councils, ASSOCHAM is an impactful representative of the Indian industry. These Councils are led by well-known industry leaders, academicians, economists and independent professionals. The Chamber focuses on aligning critical needs and interests of the industry with the growth aspirations of the nation.

ASSOCHAM is driving four strategic priorities - Sustainability, Empowerment, Entrepreneurship and Digitisation. The Chamber believes that affirmative action in these areas would help drive an inclusive and sustainable socio-economic growth for the country.

ASSOCHAM is working hand in hand with the government, regulators and national and international think tanks to contribute to the policy making process and share vital feedback on implementation of decisions of far-reaching consequences. In line with its focus on being future-ready, the Chamber is building a strong network of knowledge architects. Thus, ASSOCHAM is all set to redefine the dynamics of growth and development in the technology-driven 'Knowledge-Based Economy. The Chamber aims to empower stakeholders in the Indian economy by inculcating knowledge that will be the catalyst of growth in the dynamic global environment.

The Chamber also supports civil society through citizenship programmes, to drive inclusive development. ASSOCHAM's member network leads initiatives in various segments such as empowerment, healthcare, education and skilling, hygiene, affirmative action, road safety, livelihood, life skills, sustainability, to name a few.

Sathguru Management Consultants

Life sciences Advisory Group

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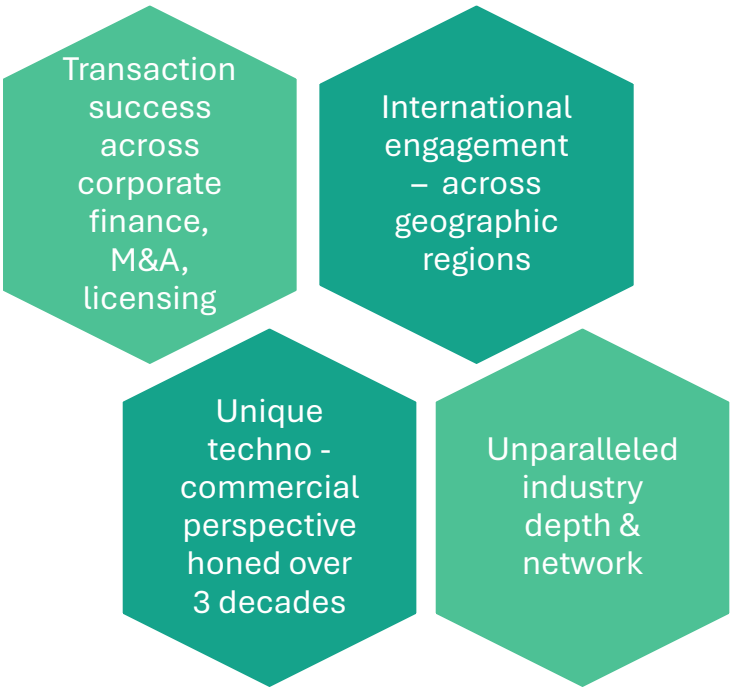
Over the last 30 years, Sathguru has evolved a unique approach to consulting. Our combination of strategy, corporate finance/M&A and innovation advisory differentiates us and provides us a techno-commercial perspective. Our holistic view stems from engaging with clients from across the ecosystem – market leading large companies, young ventures, research institutions, investors and policy makers.

We are also known for our industry depth and pragmatic approach that stems from an integrated team engaging across strategy as well as key execution areas such as M&A, innovation advancement and strategic partnerships.

Sathguru has a team of 200 professionals and has offices in India, USA, Africa, Bangladesh and Nepal.



We are here to catalyze success and help you maximize your impact.

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