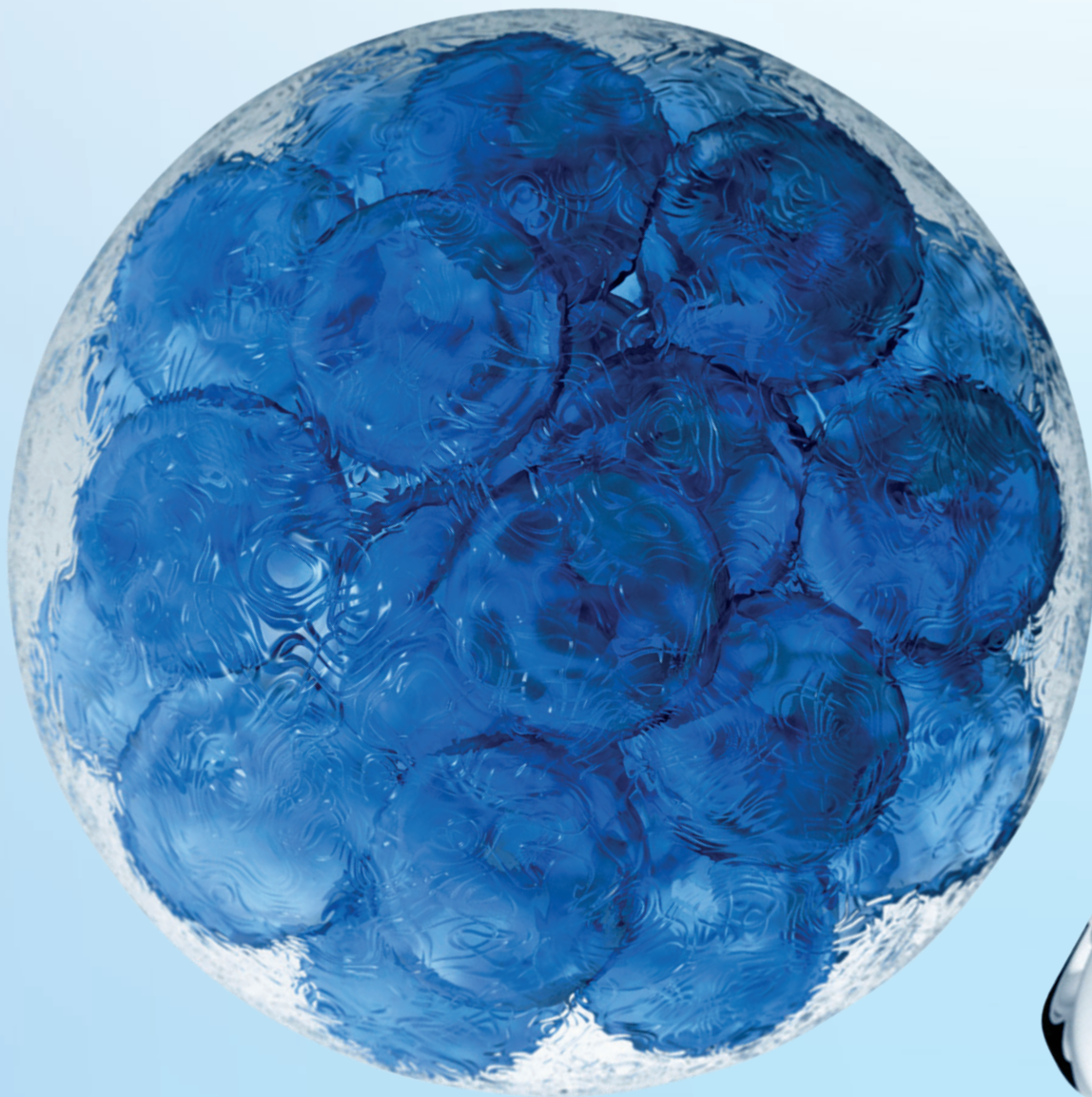


Healthcare in India: Opportunities in the Coming Techade

September 2023



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Executive summary

Healthcare in India is at an important juncture. While there has been substantial improvement in outcomes and the underlying infrastructure in the recent past, there is yet much work to be done to ensure quality and equitable healthcare for the entire population. Other sectors in the Indian economy are witnessing decades' worth of progress in just a few years, assisted by positive forces such as technology advancements and rising incomes. There is now a unique opportunity to harness these same forces to rapidly advance healthcare for India's population within this decade.

A review of progress: The health ecosystem in the country has seen substantial improvements in recent years across the underlying infrastructure, access to care, affordability, insurance coverage, and availability of newer drugs, therapies and diagnostics. This broad-based improvement is reflected in the improvements seen in outcomes such as mortality and disease burden. However, large challenges remain in improving the access and quality of care beyond the cities, advancing health equity, preparing for the twin challenges of non-communicable disease burden and an ageing population, and overcoming the shortage of medical talent. Addressing these challenges is necessary to advance the healthcare sector this decade.

Path forward: Various estimates¹ expect the Indian economy to nearly double to over \$6T by 2030. While the healthcare sector looks set to continue its trajectory of gradual improvement, there is a unique opportunity and imperative to accelerate, even leapfrog, progress over the next few years. Not doing so may further increase the achievement gap between India's broader economy and the health and wellbeing of its people. There is an unprecedented coming together of positive forces including the rapid advancements in technology and AI, the universal presence of digital infrastructure, the expansion of available capital pools, and global tailwinds in favor of India. If harnessed, these can contribute meaningfully to improving healthcare.

Opportunity for the entrepreneurial: Estimates² indicate the healthcare market could grow three-fold between 2020 and 2030 to over \$400B in size, with some sub-sectors such as care delivery and med devices expected to grow at over 15-20% CAGR. Investing into this sector has yielded substantial returns to investors over the past decade, with many sub-sectors outperforming the broader market by 2 – 3 times in total returns to shareholders. Capital trends indicate a confidence in the continuing opportunity.

Ecosystem members can participate in this opportunity in three broad areas: a) Fixing the gaps and inefficiencies of the current system, from access to quality b) Building new capacity and capabilities, both for India, as well as for the global markets and c) Innovating on solutions, especially using India's technology endowment. Seizing this opportunity with boldness and creativity can leapfrog Indian healthcare into one that offers high quality, low cost, equitable healthcare for all.

This report is structured into three parts. The first chapter briefly reviews recent progress in the healthcare sector in India and identifies several challenges and opportunities that remain. The second chapter makes the case and opportunity for India to accelerate the pace of progress and illustrates the benefits to the population and various industry stakeholders from doing so. The final chapter then describes a potential path to such acceleration, detailing several ideas that can help address the most pressing challenges and opportunities in the sector.

¹ S&P Global, "India's Future: The Quest for High and Stable Growth," Aug 2023

² National health account India report; NHA, Crisis!; Analyst reports; IBEF Healthcare sector report, McKinsey analysis

01

Progress in recent years

Healthcare in India has seen meaningful improvement in recent years. The population is today living longer, and living more free of illness, than a decade ago. This progress has been driven by broad improvements in access to care, affordability and the overall health infrastructure of the country. At the same time, the sector continues to face several challenges including inequities in health outcomes and access, a shortage of medical workers, and a growing burden of non-communicable diseases.





1.1 Improving health outcomes

India has made substantial progress in key population health measures over the past decade. Fewer infants and mothers die during childbirth, and more infants survive early childhood. Although there is still much to be done, this is an important step forward.

In the preceding decade, India has considerably narrowed the gap between itself and peers in increasing the life expectancy at birth – from 67 years in 2010 to over 70 years by 2020, closing the gap with peers in ASEAN. A contributor to this has been the substantial improvement in mortality rates, including neonatal, maternal, and under-5 mortality, all of which improved from being worse than global averages to being close to or better than the global averages over the past decade. Maternal mortality has decreased from 179 to 103 per 100,000 live births, compared to a global average of 158³. The under-5 mortality rate has decreased from 58 to 32 per 1,000 live births, again better now than the global average of 38. Similarly, neonatal mortality has decreased from 33 to 19 deaths per 1,000 live births, compared to a global average of 19³. The overall health of the population has increased too, evidenced by the decrease in DALY of disease incidence, from 4.0 million in 2010 to 3.4 million in 2019. Across these metrics, India's health outcomes are now close to the aggregate levels seen in ASEAN countries, while meaningful gaps remain compared to the outcomes seen in more developed countries such as the Organization for Economic Co-operation and Development (OECD) group where, for instance, the average life expectancy is nearly 80 years.

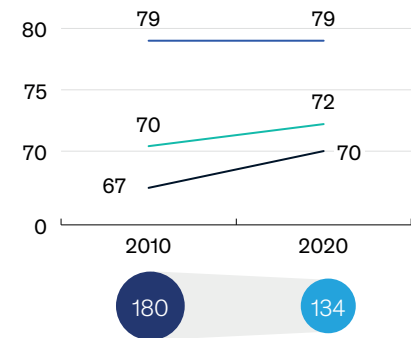
³ UN Inter-agency Group for Child Mortality Estimation, World Bank Databank

Exhibit 1

The last decade has been one of significant progress on health outcomes in India

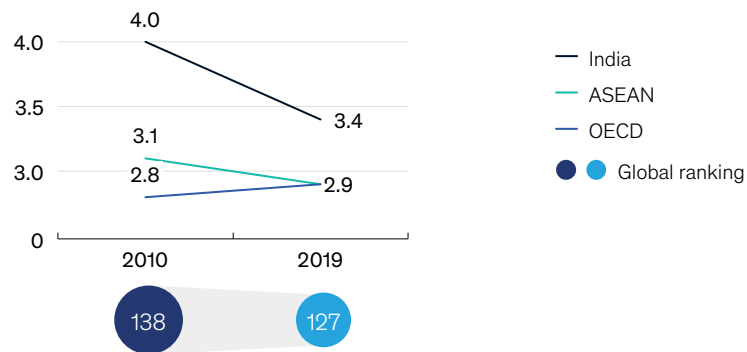
Longevity

Life expectancy at birth in India, years



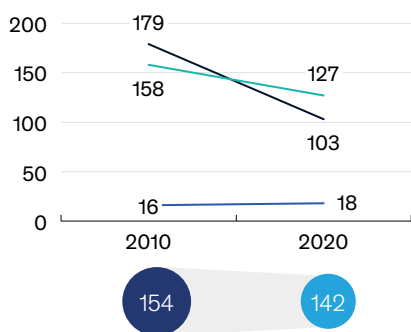
Disease incidence¹

DALY², millions

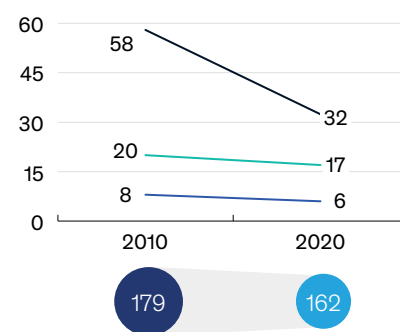


Mortality

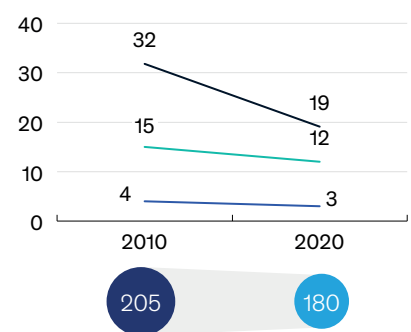
Maternal mortality per 100K live birth



Under 5 mortality per 1K live birth



Neo-natal mortality per 1K live birth



¹Data only up to 2019; does not include COVID-19 impact

²DALYs measure the total burden of disease—both from years of life lost due to premature death & years lived with disability. One DALY = one lost year of healthy life.

Source: Institute for Health Metrics and Evaluation, WHO, World Bank, Our World in Data

1.2 Drivers of improvement

This progress is a result of simultaneous investments and improvements in several areas including expanding public and private capacity, increasing policy support and a stronger focus on public health in areas such as sanitation, vaccinations and maternal and child health services.

Exhibit 2

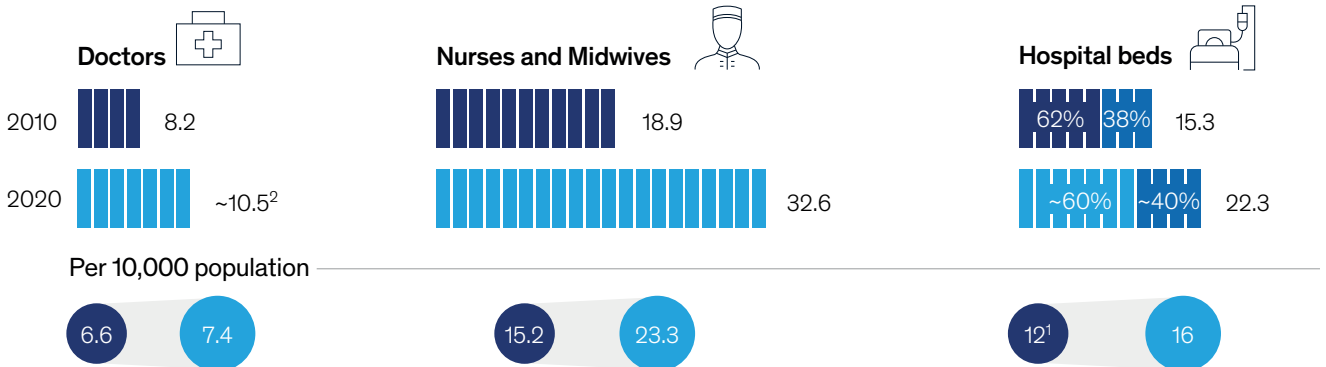
These improvements came on the back of strong growth in the underlying ecosystem and capabilities

Improve accessed

■ Private ■ Public

Significant growth in physical infrastructure and medical personnel

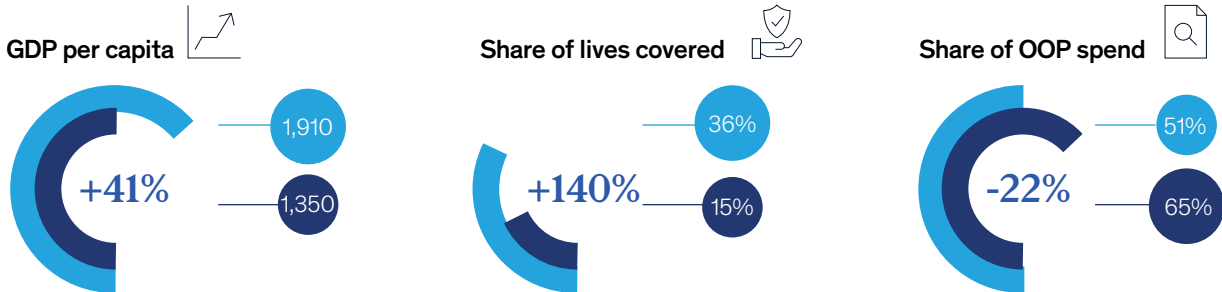
No. of medical personnel and beds available (In lakhs)



Higher affordability

Increase in ability to pay, insurance coverage and decline in out of pocket spend

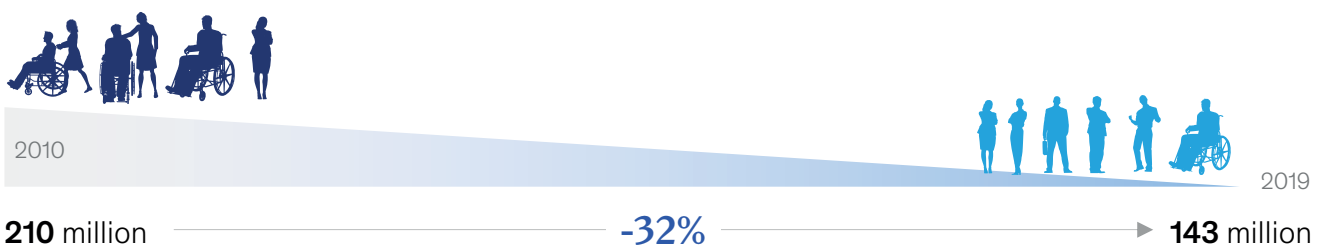
■ 2010 ■ 2020



Awareness and prevention

Significant reduction in communicable diseases achieved through effective vaccine delivery, public health campaigns and new treatment paradigms

Total disease burden from communicable diseases measured in DALYs per year (# Million)



¹2012

²After accounting for double-counting at the multiple state medical councils (standard assumption held by the MoHFW is that only 80% of the registered doctors in the country are part of the active workforce (GoI, 2022a))

Source: Global Burden of Disease Study 2019 (GBD 2019), Institute for Health Metrics and Evaluation, MoHFW annual reports, National health profile, WHO Global Health Expenditure Database, McKinsey Hospital Database, World Bank, CSEP: Medical Education in India, 2023

Access

India's healthcare delivery capacity has grown meaningfully, across primary and tertiary care, availability of medical professionals, and diagnostics. The base of medical personnel has grown between 2010 and 2020: doctors by ~30%, nurses & midwives by 72%. The total capacity of medical academic institutes has nearly doubled. Primary care has increased with an increase in digital channels (e.g., eSanjeevani) and growth/improvement in public primary health centers, 80% of which have been upgraded into health and wellness centers. Total hospital beds have grown 45% to ~23 lakh, with the number of beds per capita growing approximately 30% to 16 beds for every 10,000 individuals. Access to diagnostics has improved, with even 50 very under-developed districts⁴ being served by at least one of the three largest private diagnostic players. Telehealth adoption has resulted in an increase in access, both public and private.

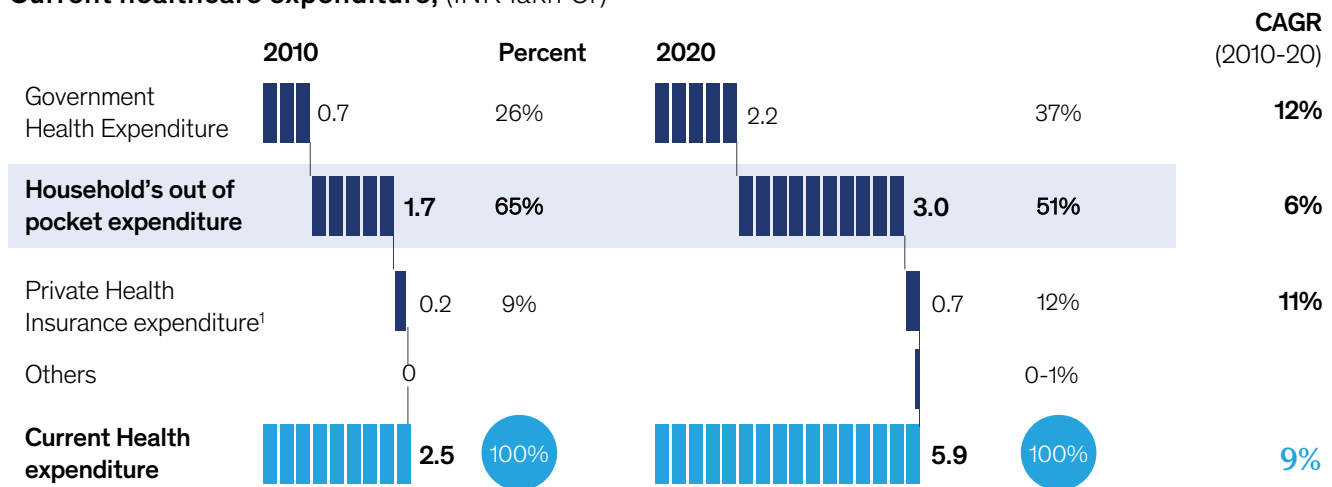
Affordability

At the same time, healthcare has become more financially affordable driven by the overall growth in incomes, increase in private insurance penetration, and the launch of government run insurance schemes. The public insurance scheme, Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), currently offers basic secondary and tertiary care coverage to 220 million individuals⁵, with a roadmap to reach reaching over 500 million. The total size of the private health insurance sector grew over three times between 2010 and 2020 to over 70,000 crores in annual premium underwritten. As a result, out-of-pocket (OOP) expenditure in healthcare has declined from 65% to 51%.

Exhibit 3

Public spending has increased by 12%, Out-of-pocket expenditure has gone down from 65% in 2010 to 51% in 2020

Current healthcare expenditure, (INR lakh Cr)



¹ Refers to Voluntary health care payment schemes including Voluntary health insurance schemes, NPISH financing schemes and Enterprise financing schemes

Source: WHO Global Health Expenditure Database

Disease prevention

The implementation of robust public health programs focused on screening and vaccines has resulted in substantial improvements in disease prevention and eradication. The Universal Immunization Program has achieved an estimated coverage of 75% of the target population of approximately 280 million newborns every year, aided by the cost-effective production of vaccines by domestic organizations⁶. The COVID-19 pandemic provided an opportunity to build and test new capabilities in large-scale program implementation, resulting in over 95% of the eligible population receiving at least one dose of the vaccine⁷, centrally tracked using digital tools. These efforts have led to a 32% decrease in the communicable disease burden, as measured through DALYs (Disease-Adjusted Life Years).

⁴ NatHealth Report: An Assessment of India's Laboratory Diagnostic Industry

⁵ Government of India (<https://pib.gov.in>)

⁶ MoHFW annual reports

⁷ Economic Survey 2022-23, Ministry of Finance (97% eligible received at least one vaccine)

1.3 Challenges

While the healthcare sector in India has made substantial and broad progress, it has potential to make substantially more progress to match the outcomes achieved by more advanced economies⁸ as well as those committed to by the government as part of the Sustainable Development Goals (SDG) 2030 goals. Further progress is required in several areas including reducing inequities in quality and access⁹, addressing the “missing middle” problem of over 30%¹⁰ of the population without access to health insurance, further closing the shortage of specialist doctors and nurses¹¹, tackling the dual burden from growing non-communicable diseases (NCD) and an aging population. If left unaddressed, these risk undermining the progress being made in other areas.

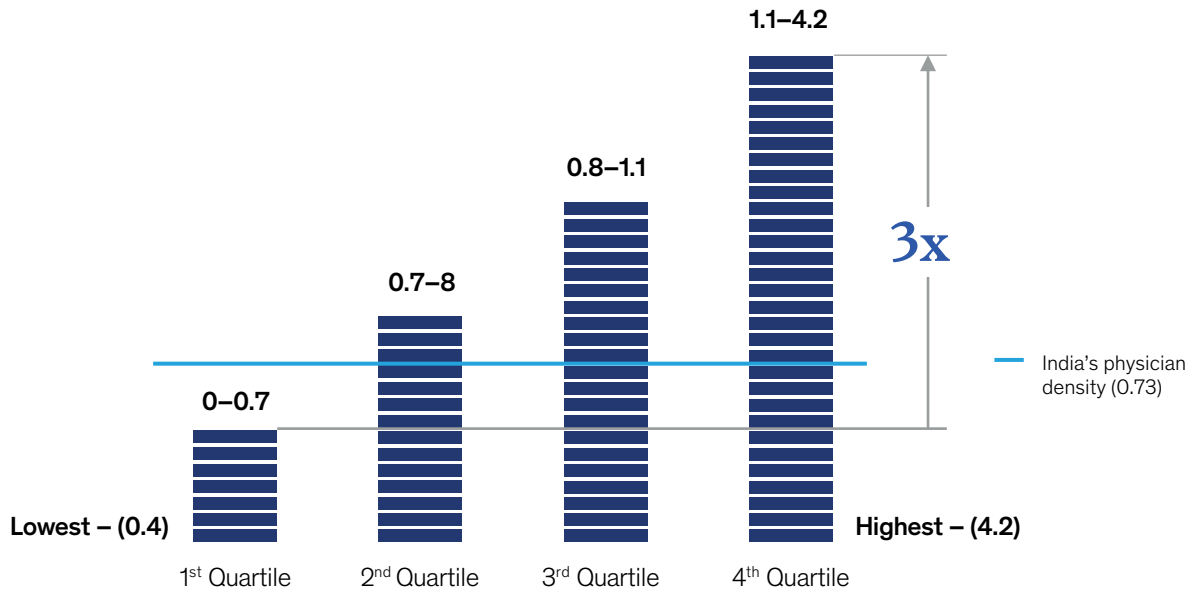
Exhibit 4

Yet, much more progress will be required in the coming years to match the pace of broader economic progress

Shortage of medical talent

India’s physician density has stark differences in states with lowest and highest density

Distribution of states by physician density (per 1000 population), 2019



Quality inequality

In absence of mandatory standards, quality is variable among providers



90%+

Facilities have <5 workers



<3%

Hospitals operate with NABH certifications



~37%

People not availing treatment in government facilities did so due to unsatisfactory quality or unavailability of doctors

Source: WHO, World bank , Rural Health Statistics 2012 and 2022, NITI Aayog District Hospital Report , Niti Aayog, Ministry of Finance (India); MOSPI; Indian Census, National Institute of Health, NABH

⁸ Refer to Exhibit 1: India’s health outcomes relative to OECD economies

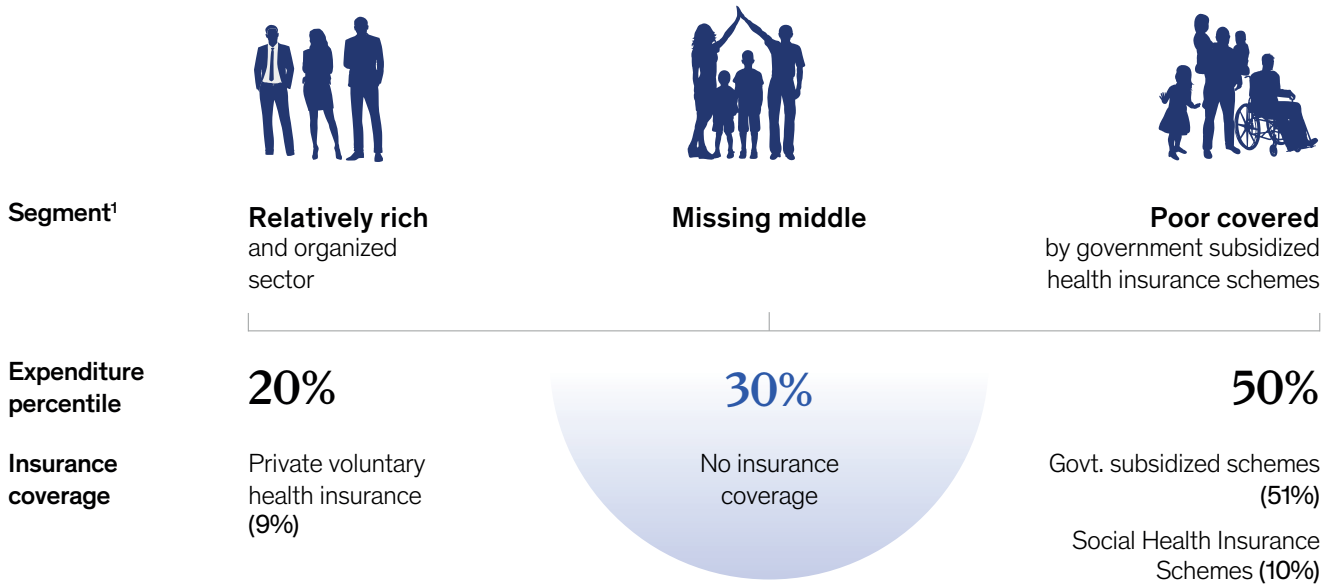
⁹ National Family Health Survey 5, 2019-21, Ministry of Health and Family Welfare

¹⁰ NITI Aayog: Health Insurance for India’s Missing Middle, 2021

¹¹ Ministry of State for Health and Family Welfare, Lok Sabha proceedings, July '23 (shortage of doctors in rural hospitals)

Incomplete insurance coverage

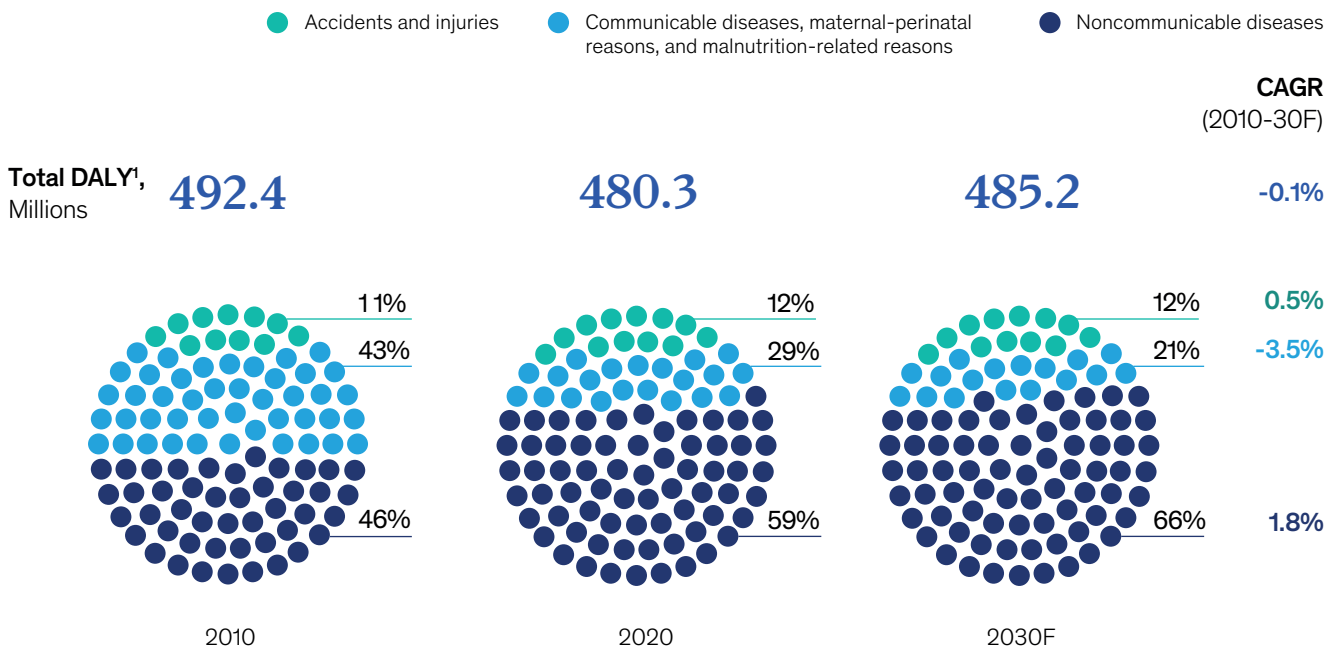
~30% of population do not have access to any insurance coverage



Growing NCD burden

Epidemiological transition towards NCDs is underway, without any meaningful shift in health systems or resource allocation

Share of disease groups in total disease burden, India, Percent



~10% allocated towards preventative care

¹Based on NITI Aayog's "Health Insurance for India's Missing Middle"

Source: WHO, World bank, Rural Health Statistics 2012 and 2022, NITI Aayog District Hospital Report, Niti Aayog, Ministry of Finance (India); MOSPI; Indian Census, National Institute of Health, NABH

Medical talent

As of 2020, India's average physician density was ~0.74 per 1,000 population, which falls below the WHO's recommended 1.0 per 1,000. This is lower than Asian peers, such as Malaysia (2.2) and China (2.4). There is an acute shortage of physicians in certain regions of the country compared to others. For example, the physician density is 0.4 in Jharkhand, while it is 4.2 in Kerala¹² which does not face a shortage. Another pressing concern is the lack of specialist doctors, particularly in rural areas. Nearly 68% of specialist doctor positions in rural community health centers (CHCs) remain unfilled, resulting in a shortage of approximately 22,000 specialists across nearly 5,000 CHCs¹³. In the academic year 2022-23, around 6.5% of NEET PG medical seats remained unoccupied¹⁴. While the overall number of healthcare professionals is increasing, the overall shortage and skewed distribution will remain a key challenge in the coming decade. Given the lengthy training required to become a specialist doctor (at least eight and a half years of training after high school to receive a specialty qualification, and over eleven years for a super specialty qualification), this is a challenge that requires urgent and patient attention.

Quality

The most recent National Family Health Survey, conducted between 2019 and 2021, highlighted the substantial gap in quality, especially in rural, public hospitals. For instance, of the nearly 50% of the population that chooses not to use a government care facility when in need, poor quality of care is cited as the most common reason, by 48% of those not choosing a government facility¹⁵. Additionally, the unorganized and small-scale nature of most healthcare facilities in India, with over 90% operating with a team of fewer than five workers¹⁶ makes it more challenging to invest in necessary resources and investments necessary, compared to larger facilities. As a result, fewer than 2% of hospitals and diagnostic labs in India are accredited by the National Accreditation Board for Hospitals & Healthcare Providers (NABH), most of them urban or private facilities.

Disease burden

India is currently undergoing an epidemiological transition, with non-communicable diseases (NCDs) accounting for a substantial 59% of the total disease burden in 2020, up from 46% in 2010. The four main NCD groups, including cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes, contribute to nearly 60% of all deaths in India¹⁷. Cardiovascular diseases alone cause over one in four of all deaths¹⁸ and account for nearly two-thirds of all NCD burden. Cardiovascular diseases (CVD) incidence also occurs nearly a decade earlier among Indians than in Western populations, taking away productive years of the economically vulnerable¹⁹. Similarly, there are an estimated 77 million people above the age of 18 suffering from type-2 diabetes in India, and nearly 25 million prediabetics, according to WHO²⁰. Alarmingly, more than 50% of people are unaware of their diabetic status. With an aging population, the NCD burden is set to worsen and stands as the most critical priority for healthcare in the country. The country's health expenditure pattern has not changed to adapt to this rising challenge, with preventive care remaining nearly constant at around 10% over the past decade.

Affordability and insurance coverage

Affordability remains a key barrier to improving health outcomes in India, driven by low insurance coverage and limited economic means for much of the population. Despite recent increases in insurance coverage, including the AB-PMJAY scheme and growth in private insurance, over 30% of the population falls into a "missing middle" category, lacking insurance coverage and vulnerable to financial distress in the event of a medical emergency²¹. Studies have shown that catastrophic health expenditures push 7% of the population below the poverty line each year²². This lack of access to affordable healthcare also leads to delayed or inadequate treatment, resulting in increased morbidity and mortality rates.

¹² WHO Global Health Workforce Statistics; Ministry of Finance (India), MoSPI

¹³ Rural Health Statistics Report 2021-22

¹⁴ Minister of State for Health and Family Welfare in Lok Sabha, July '23 (4400 out of 64,059 vacant in year 2022-23)

¹⁵ National Family Health Survey 5, 2019-21, Ministry of Health and Family Welfare

¹⁶ K Madan Gopal (NITI Aayog): Strategies for Ensuring Quality Health Care in India: Experiences From the Field, 2019

¹⁷ WHO: "Burden of NCDs and their risk factors in India"

¹⁸ The Global Burden of Disease Study 2016

¹⁹ Prabhakaran D., Jeemon P., Roy A.: Cardiovascular diseases in India, 2016

²⁰ WHO #BeatDiabetes program campaign

²¹ NITI Aayog: Health Insurance for India's Missing Middle, 2021

²² Indian Ministry of Health, National Health Policy 2015

02

The opportunity and potential for impact

Various estimates suggest that the Indian economy will nearly double to over \$6T by 2030²³. While the healthcare sector can be expected to continue improving on its current trajectory, there is a unique opportunity to accelerate progress in the next few years. Positive forces, such as advancements in technology and AI, universal digital infrastructure, expanded capital pools, and global tailwinds, are coming together to make such a course possible. This presents an attractive proposition for investors and entrepreneurs, combining both, the opportunity to contribute to advancing healthcare for millions, while also offering financial returns. With the sector expected to almost triple in size by the end of the decade²⁴, the demand for innovative and quality healthcare services and products is expected to rise. This creates a favorable moment to enter or expand in the industry.

²³ S&P Global, "India's Future: The Quest for High and Stable Growth," Aug 2023

²⁴ National health account India report, NHA, Crisil, IBEF Healthcare sector report, Analyst reports, McKinsey analysis



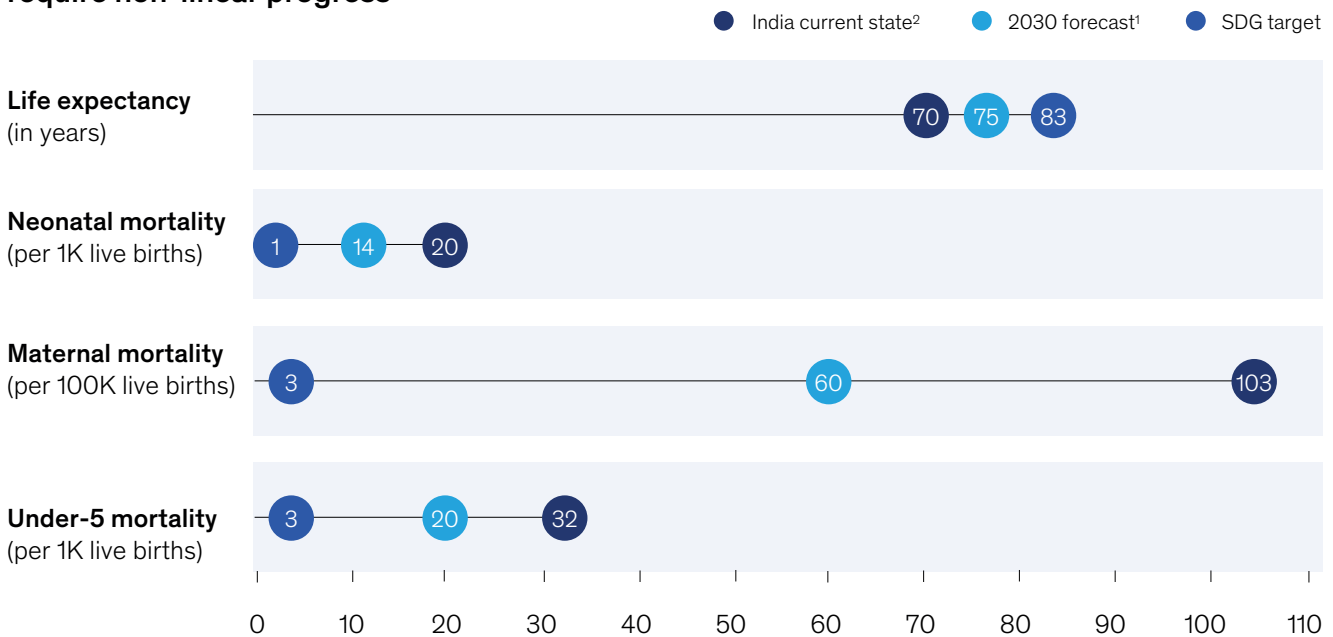
2.1 Raising the aspiration

The current path

As the experiences of other developing and developed economies show, improving health outcomes becomes increasingly challenging as simpler interventions are exhausted first. This makes it more difficult to realize the Sustainable Development Goals (SDG) 2030 targets that the Indian government has committed to working towards. The gap between various outcomes likely to be achieved on current trajectory likely, and India's 2030 SDG targets is illustrated in the exhibit below. For example, maternal mortality has declined²⁵ from 179 to 103 over the past decade, but at the current rate of improvement, it is projected to improve only to 58-60 by 2030, compared to an SDG target of 3. This highlights the need to raise collective aspirations for both the goal and pace of change in this decade.

Exhibit 5

Current trajectory will further close gap to peers, but achieving SDG targets and beyond will require non-linear progress



India's GDP per capita (PPP-adjusted) is expected to continue to increase at **8-10% to ~\$15K-17K by 2030**

Maintaining historical rate of progress can help India meet or exceed targets of ASEAN-5 countries, but the **government's aspirations for SDG targets are even more ambitious**

¹ Lower bound derived using the historical rate of change over the past decade; upper bound derived using the ASEAN-5 benchmarks

² Based on latest year: 2020 for life expectancy and mortality

Source: World Bank, Our World in Data SDG goals

Need for a dynamic approach

The healthcare landscape of the country is changing rapidly, the approach to making progress needs to adapt accordingly to be effective. Specifically, it is important to consider three key sets of trends – demand-side, supply-side and structural.

On the demand side, two trends are emerging. There is growing consumerism along with rising income levels. This is leading to a rapid increase in the proportion of the consuming class which spends more on healthcare. Estimates²⁶ suggest this at 5% of the population in 2010, which has increased to 14% in 2020 and is expected to grow to over 50% by 2030. Moreover, the growing digital economy is impacting expectations and behaviors in healthcare in fundamental ways, as it is in other sectors.

²⁵ World Bank, Our World in Data SDG goals

²⁶ McKinsey MGI India Urbanization Econometric Model, World Bank data, Government of India, McKinsey analysis

The approximately one billion strong and growing mobile user base²⁷ is a potent force for change across industries.

On the supply side, three trends are important. One, the fast pace of technology evolution and adoption²⁸, with implications for healthcare ranging from drug discovery to personalized medicine. Two, a continuing expansion of available capital pools in India, indicating high interest from private investors. This is demonstrated by the fact that 7 out of the 10 largest private hospitals in India are backed by private equity today. Three, a slow but steady formalization of the care delivery, diagnostic and pharmacy sectors, over 90% of which comprise small, unorganized players today. There is scope for this trend to continue as organizations seek to attain better economics of scale.

Finally, there are structural changes underway in the overall market. This includes increasing government support in setting up an enabling environment in healthcare, such as through recent enabling regulation for med-tech, prescriptions and healthcare data. Additionally, government's role as a payor through AB-PMJAY continues to grow, driving insurance penetration up beyond the 50% mark. Finally, current global and geopolitical tailwinds are expected to support India's emergence as a trusted supplier in healthcare value chains.

2.2 The economics of impact

The above trends indicate that the sector will likely continue to expand this decade as capacity, access, affordability continue to improve at a meaningful pace, driven by strong investments from both private and public actors. Our estimates indicate that the overall industry is likely to nearly triple in size between 2022 and 2030 to \$400-550B, on the back of similar robust growth over the past decade, with many sub-sectors growing at over 15% CAGR.

The expanded pool of capital in the healthcare industry has increased capacity and driven innovation, while also providing financial benefits to investors. Our analysis of publicly listed healthcare organizations reveals that, across sub-sectors, the industry has returned higher total returns to shareholders (TRS) than the broader market, as shown in the exhibit below. While COVID-19 and post-COVID-19 demand have contributed to some of the overperformance in the last couple of years, these returns still compare favorably to those seen in other emerging and developed markets.

Recent trends in the capital deployed by private investors across stages has reflected confidence in the continuation of this trend. Total capital deployed by PE/VC firms grew over three and a half times between 2019 and 2022 from \$1.7B to \$6.1B. Nearly 40% of this growth came from the growing investments in the digital health sector.

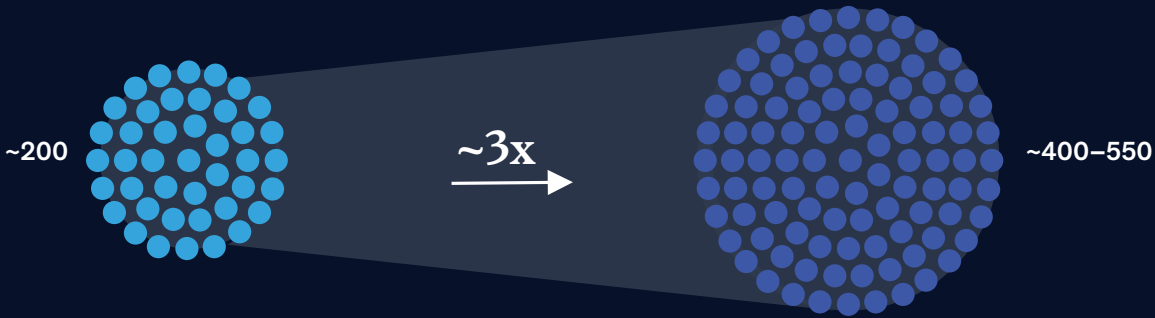
²⁷ Ministry of Information and Broadcasting, 16 Nov 22 (1.2 billion mobile users, 600 million smartphone users)

²⁸ According to OpenAI, ChatGPT achieved 100 million users in 2 months, compared to 9 months for the popular social network TikTok

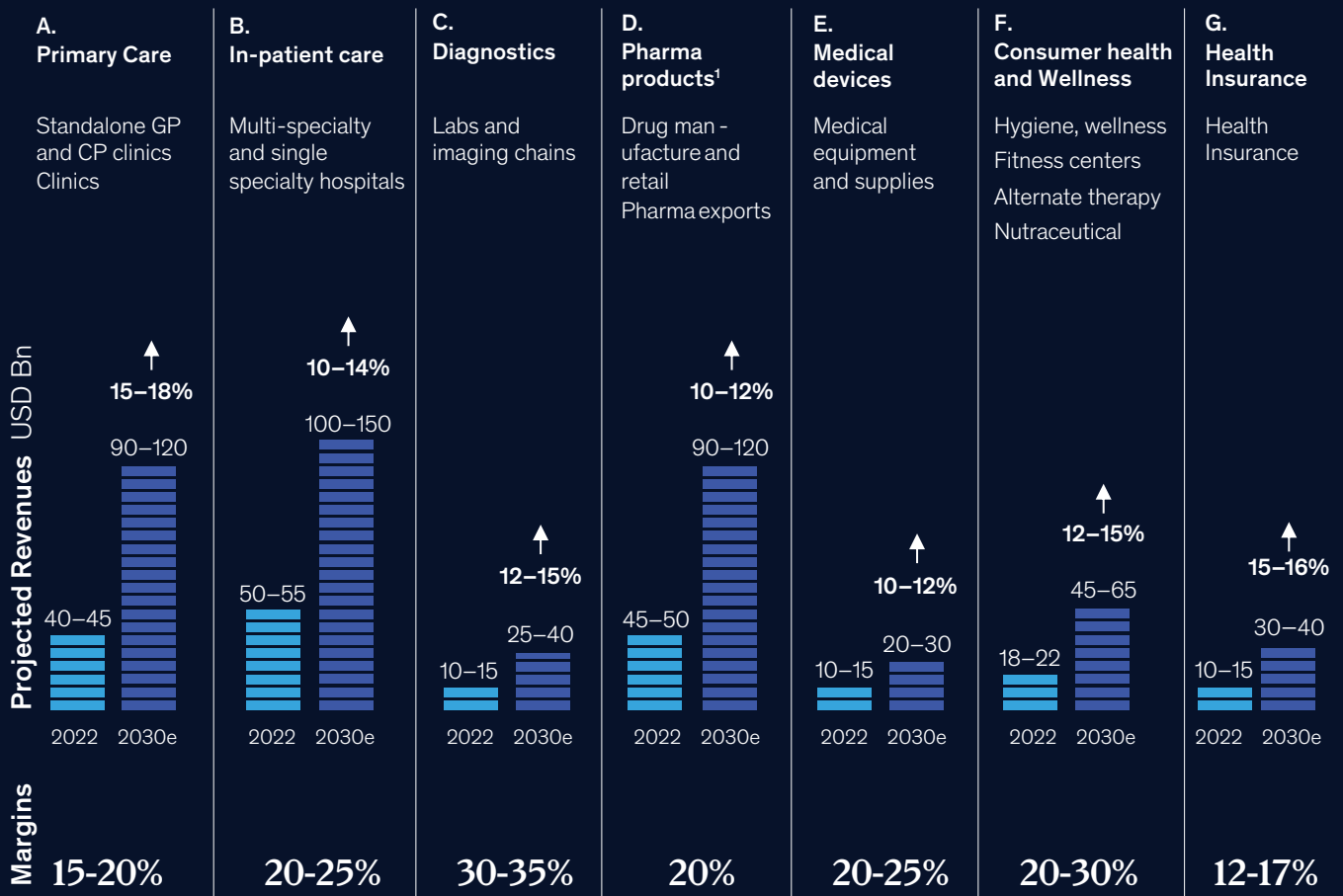
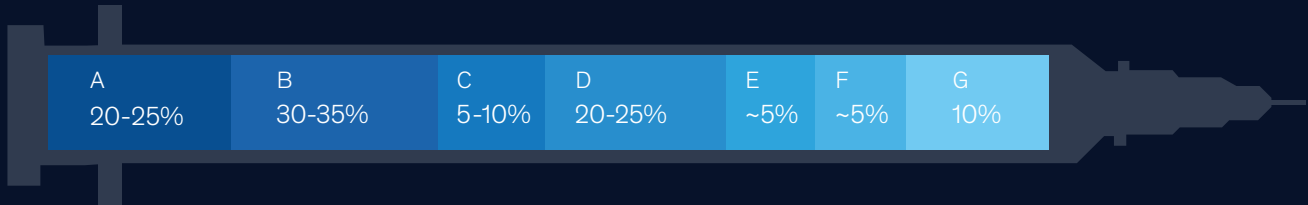
These trends indicate that the industry is likely to continue to grow rapidly in this decade

Projected market size, USD Bn

● 2022 ● 2030e



Current healthcare value pools split, by Revenue



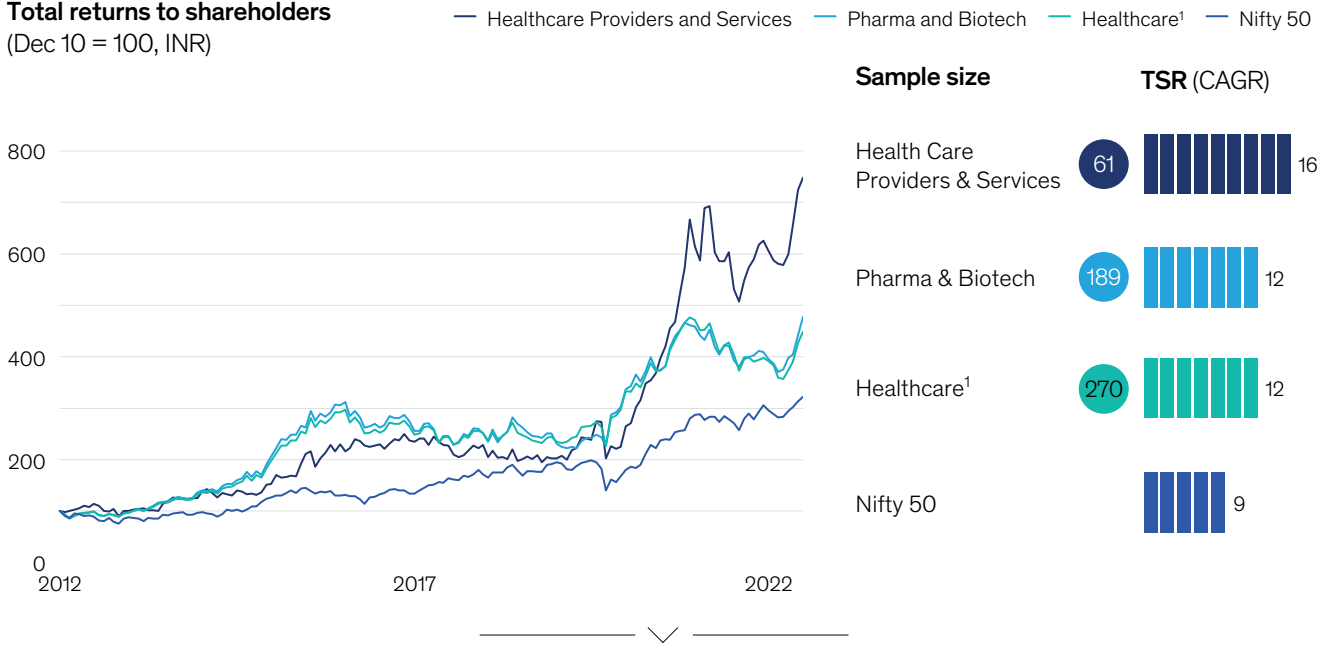
1. Comprises of ~45% domestic market and ~55% export market

Source: National health account India report; NHA, Crisil; Analyst reports; IBEF Healthcare sector report, McKinsey analysis

Exhibit 7

Investing to improve healthcare in this environment has also been financially attractive in recent years

Total returns to shareholders (Dec 10 = 100, INR)



Significant growth in the Indian healthcare market over the last 3-5 years has driven by

The pharmaceutical industry experienced a spike starting in mid-2020 driven by COVID-19 related domestic demand and shift of global supply chains away from China

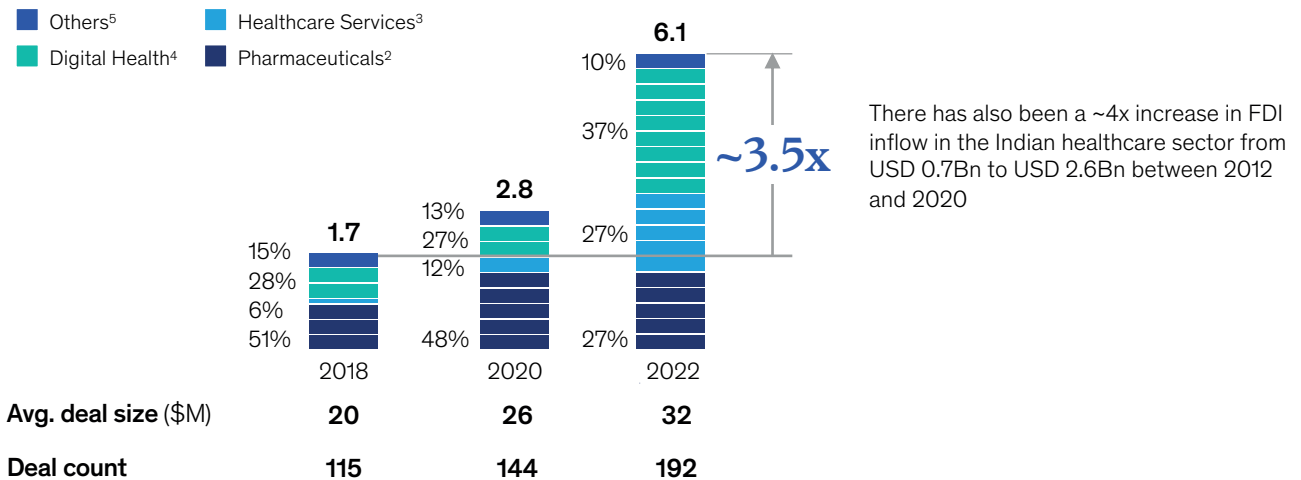
Spike in mid 2021 to early 2022 in healthcare services due to increase in utilization due to pent up demand

¹Also includes healthcare equipment and supplies, and insurance; sample set includes listed healthcare companies with data availability between 2010 - 2020
Source: S&CF Insights, Corporate Performance Analytics, S&P Global

Exhibit 8

Accelerating investor activity indicates confidence in continuing returns profile

PE/VC deployment in Indian healthcare sector¹ USD Bn



¹Includes announced, in-progress deals ²Pharmaceuticals includes active pharmaceutical ingredients (API), consumer health, generic formulations & biopharmaceuticals
³Healthcare services includes services and diagnostics ⁴Digital health includes online fitness platforms, chronic disease mgmt., healthcare SaaS
⁵Others includes health insurance, clinical research organisations, animal pharmaceuticals, healthcare financing, retail and devices

Source: VCC Edge, Pitchbook

03

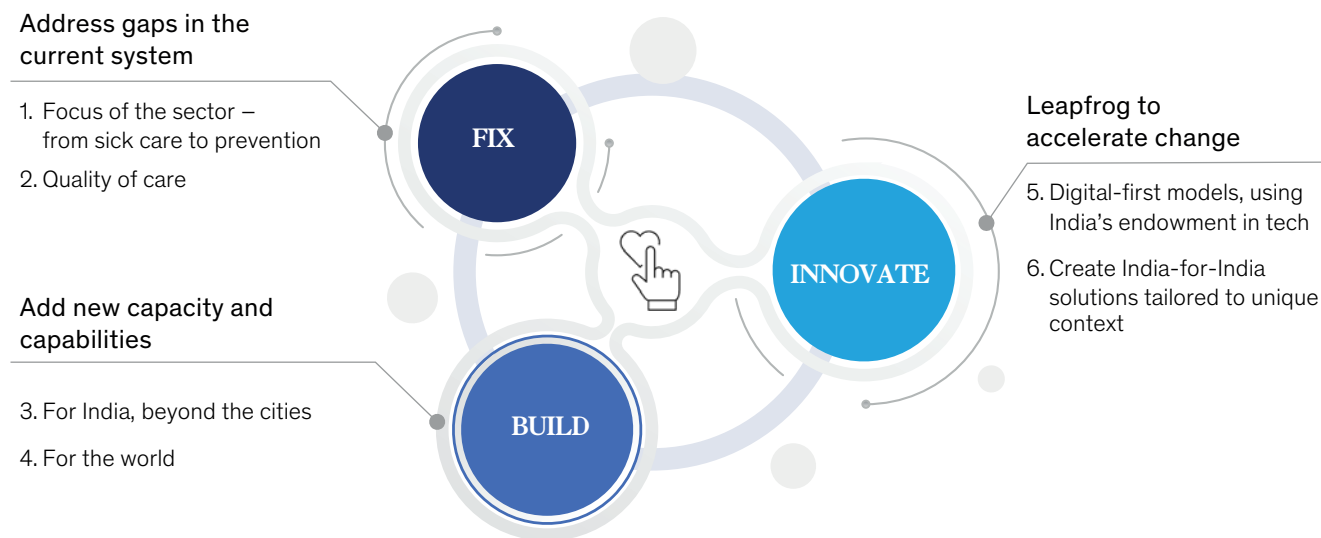
A potential path for acceleration

There are three main areas in which healthcare ecosystem participants can focus their efforts. First, addressing the gaps and inefficiencies in the current system, including access and quality. Second, There are three main areas in which healthcare ecosystem participants can focus their efforts. First, addressing the gaps and inefficiencies in the current system, including access and quality. Second, developing new capacity and capabilities, for both the Indian and global markets. Third, innovating solutions, particularly utilizing India's technological resources.

Each of these areas presents an opportunity for "leapfrogging" in terms of health outcomes, as well as industry growth, taking advantage of technological advancements, expanding public digital infrastructure, and widespread digital adoption among the population.



3 ways to participate in advancing healthcare in this decade



3.1. Fixing the gaps and inefficiencies in the current system

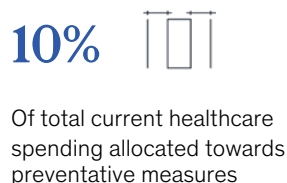
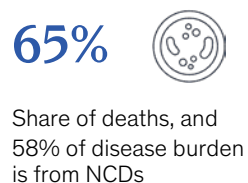
The current healthcare ecosystem in India could focus on two important issues: increasing the emphasis on preventive care and improving the quality of care.

From sick care to preventive care

Despite recent improvements in access to care, India's healthcare infrastructure remains complex and often overburdened, particularly in rural and smaller urban areas. With a growing burden of NCDs and an aging population, there is a pressing need to adopt a proactive, "prevention-first" approach to alleviate pressure on the system and improve outcomes. As many countries such as Thailand have demonstrated, preventive healthcare measures such as timely diagnosis, lifestyle changes, adherence, and vaccinations can lead to both, a healthier population and a more sustainable healthcare system.

FIX: Focus of the sector – from sick care to prevention

Shift focus of the sector from providing better care, to achieving better health



Source: Our World in Data, World Bank, NHA Estimates for India 2019-20

New solutions can be considered to address this need, such as:

- Introducing new care delivery models that address the holistic determinants of health, including social, behavioral, and therapeutic factors. Targeted solutions for specific illness groups, such as heart disease and diabetes, have proven effective globally.
- Developing viable pathways and insurance models to encourage the adoption of "outside the hospital" interventions that promote healthy lifestyles, reward adherence to treatment, and encourage timely preventive care.

- Creating patient-centric healthcare services that proactively address patient needs and improve outcomes.
- New collaborations between industry participants that better align incentives between providers, payors, diagnostics, pharma and other members of the ecosystem.

Raising healthcare quality

Despite improvements in healthcare access and awareness, the quality of care delivered remains a persistent challenge. Fewer than 2% of diagnostic labs country are NABH certified²⁹, and out of over 23,000 hospitals empaneled with the government's PM-JAY insurance program, fewer than 2% have been certified under the PM-JAY prescribed quality criteria³⁰. While interventions such as Indian Public Health Standards (IPHS) and National Quality Assurance Standards (NQAS) have been launched to improve quality services, the facilities meeting these norms remain a minority. These statistics highlight a systemic lack of focus on quality in the healthcare industry, which can be addressed to improve healthcare outcomes.

The ecosystem can support this imperative in several ways. Create foundational solutions that facilitate understanding, improving, monitoring, and reporting quality for organizations across the value-chain, with tailored solutions for sub-sectors ranging from pharmaceutical manufacturers to tertiary hospitals. Work on technology-led solutions and interventions that can assist medical talent in delivering higher and more consistent quality, particularly in rural and smaller urban regions.

Raising the average quality of care, and increasing the emphasis on prevention, have the potential to be the most effective way to substantially improve health outcomes in the medium term.

Exhibit 11

FIX: Quality of care

Improving quality of care, services and manufacturing across the country and narrowing the access and affordability gap



Source: NABH website, NSSO (2017-18), Rural Health Statistics 2018

²⁹ National Accreditation Board for Hospitals and Healthcare Providers website: Certified labs list

³⁰ AB-PMJAY website: Certified Hospitals list

3.2. Building new capacity and capabilities

As previously discussed in this report, there is a continuing need to build and scale healthcare capacity in India, across various sub-sectors. In addition, India has a unique opportunity to meet the evolving needs of the global population, building on the success of the pharmaceutical generics industry. The potential to build for India and from India for the world is large.

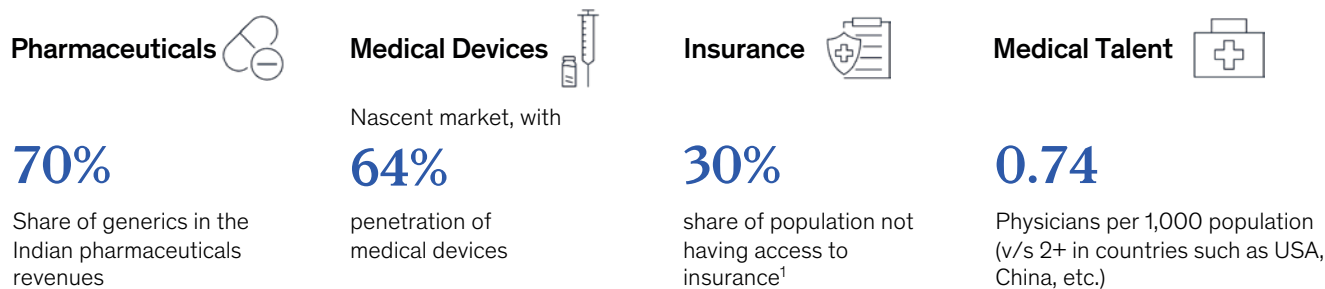
Building for India

Across domains, there is substantial unmet need in Indian healthcare that requires scale-up of current capacities. The exhibit illustrates this opportunity in many areas:

Exhibit 12

BUILD: For India

Shifting focus from cost reduction and volumes, to bringing new therapies, drugs and devices to India



¹ Based on NITI Aayog's "Health Insurance for India's Missing Middle" report

Source: Research and Markets, Forbes, TOI, World Bank, NITI Aayog

While India is the world's third largest market in volume, it is the eleventh largest by value, indicating the high use of generics and potential lack of access to newer drugs. While the Indian industry has played a critical role in improving world health outcomes by providing affordable and high-quality generic drugs, India could focus on moving up the value chain and expand its presence in the more attractive innovative pharmaceuticals space. Given the skilled medical and scientific talent available in the country, Indian players could focus on developing new therapies and drugs, especially for the unique challenges and disease burden in the country. The penetration of medical devices, while growing, is still at nascent stages and represents a large, untapped market for Indian players to provide affordable, high-quality products.

While India has made meaningful progress over the last decade in adoption of digital healthcare and improving financial protection, there is still a large, underserved population in India. Improving the health of this population can also be an attractive opportunity for healthcare players. Over 400 million people in India have no access to public or private insurance at present³¹. Reaching this population requires development of unique, innovative offerings and novel industry partnerships. The rural healthcare ecosystem can also be supplemented with additional programs such as further expansion of AB-PMJAY and enabling of the Accredited Social Health Activist (ASHA) workers to spread awareness and provide basic healthcare to this segment. Hub-and-spoke models, telemedicine centers, mobile health clinics, etc. can be implemented to provide quality healthcare in these communities. Physician and allied healthcare worker density can be improved with help of quality education across the country.

Building for the world

The Indian industry has played an important role in improving world health outcomes by providing affordable and high-quality generic drugs and vaccines. India has an opportunity to move up the value chain across sub-sectors to serve the global markets in a larger way. The healthcare industry has the potential to replicate what the technology services industry has achieved over the past three decades by benefiting from the country's skilled medical, scientific and technical talent base, along with the benefits of scale that the domestic market provides.

³¹ NITI Aayog: Health Insurance for India's Missing Middle, 2021

BUILD: For the world

Deliver platinum-care drugs and services, and have a world-leading healthcare sector

'Pharmacy of the world'



3rd

Largest pharmaceutical manufacturer in the world (by volume)

10%

Share of total pharma volume produced globally, and 11th largest exporter

Growing hotspot for technology and SaaS



2nd

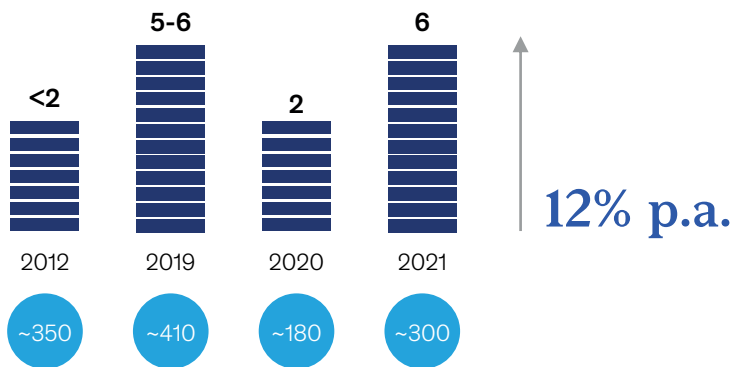
Largest SaaS ecosystem globally, with growing applications in healthcare

Growing hotspot for medical tourism

Indian medical tourism industry (USD Bn)



● # of MT arrival in India (in '000)



Source: National Strategy & Roadmap for Medical and Wellness Tourism 2022, Ministry of Chemicals and Fertilizers, Business Today, World's Top Exports, "India Pharma 2020 Propelling access and acceptance, realising true potential" by McKinsey & Company"

The opportunity is clearest in three areas:

- **Pharma and med tech:** The pharma sector has the strongest endowment within healthcare to drive further growth. That requires a shift in focus volume to value, investing in research and innovation, and embracing quality. The med tech industry, while nascent, can benefit from the technical talent and the rapid growth in the broader software and hardware ecosystem being built in the country to develop novel and affordable solutions, and the recent policy focus and support for this sector.
- **Health services:** The medical tourism industry has been a niche area that has only been explored by a select few large hospitals, with notable success. India, with its high-quality healthcare services at affordable prices, has the potential to meaningfully expand this industry. However, this growth will require innovative service offerings that combine allied services such as travel and accommodation, a focus on quality, the establishment of new partnerships and service models, and the use of technology to better serve a global customer base.
- **Health tech:** The healthcare industry globally has lagged other industries in technology adoption. As the industry invests in closing this gap, India has the opportunity to become the global hub for health tech, building on its existing base of software talent and industry. The Indian software-as-a-service (SaaS) industry provides a useful parallel, having grown to \$2 billion in revenue over a decade and projected to reach \$50-70 billion in revenue by 2030 at a compound annual growth rate of over 30%³². Health tech has the potential to contribute materially to this growth.

Focusing on these areas can help India build a world-leading healthcare sector that serves not only the Indian population but also provides high quality affordable healthcare across the globe.

³² SaaSBoomi: India's SaaS revolution (2023)

3.3. Innovate on solutions and accelerate change

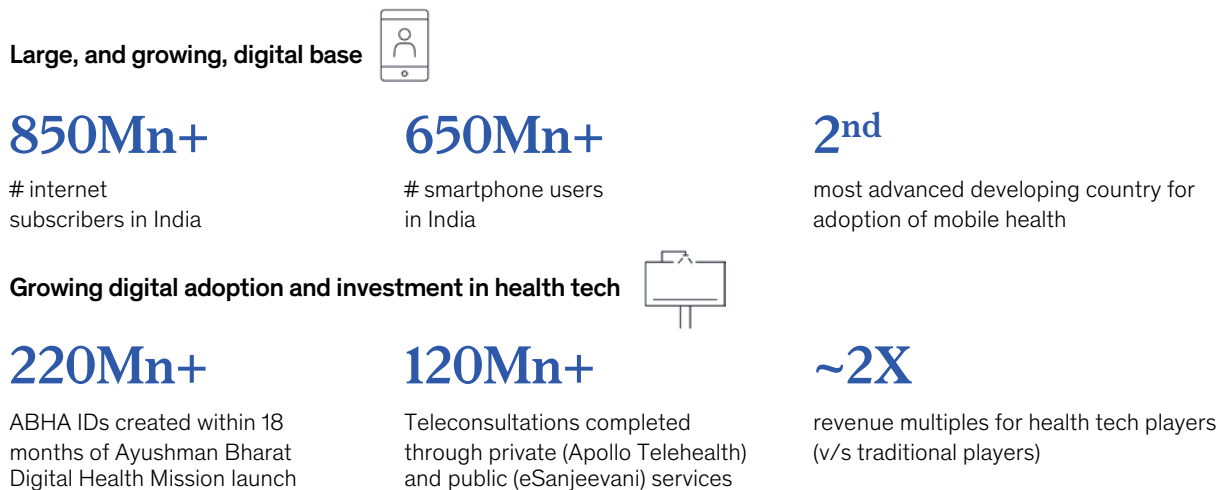
Over the past decade, the growth of India's digital economy has been a great success across several industries. With over 850 million internet subscribers, India's large and expanding digital base presents an attractive opportunity for the adoption of digital health solutions. In addition to the growing digital public infrastructure in the country, technological advancements, such as in wearables, precision medicine and AI are expanding the potential applications for healthcare. If utilized effectively, technology has the potential to help the healthcare sector in India leapfrog into the future, like the transformation that the payments industry went through in recent years. For instance, telehealth and remote monitoring solutions can rapidly bridge the access gap in rural India where capacity is constrained. AI medical assistants in the hands of healthcare workers can help address talent and quality gaps.

The Indian government has set an ambitious digital healthcare objective through the Ayushman Bharat Digital Health Mission. The COVID-19 pandemic served as a catalyst for the initial push, with both government and private initiatives, such as eSanjeevani and Apollo Telehealth, experiencing notable success. However, progress in digital health is still in its early stages in terms of participation from the private industry, facilitating of care interactions, health data and financial exchanges, and improving the

Exhibit 14

INNOVATE: Digital-first delivery, using endowment in tech

Double down on technology to improve patient experience and ecosystem productivity



Source: Telecom Regulatory Authority of India (TRAI), Ministry of Health and Family Welfare, pib.gov.in, Press search

Exhibit 15

INNOVATE: India-for-India solutions across the spectrum

Large financially unprotected base

400Mn people in the "Missing Middle" bracket¹ in India with no financial protection for health

High fragmentation in the market

<10% Hospital beds in India in the corporate hospital segment	~10% Pharmacies in India in the organized sector	<5% share of e-pharmacies in the Indian pharmacy market
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...accelerating the need for innovative, tech-based solutions leading to high growth of health tech market

Expected health tech market

\$25Bn

Indian health tech market by 2025

¹ Based on NITI Aayog's "Health Insurance for India's Missing Middle" report

Source: NITI Aayog, TOI, Press search

pressing challenges of the industry. Exhibit 15 illustrates the extent to which technology solutions can meaningfully address these unsolved problems.

Health technology organizations have a unique opportunity to address gaps in healthcare access, affordability, scale and coordination, quality, and talent shortage. There are opportunities in five areas that are particularly promising:

- **Improving access and capacity:** Potential solutions include those that expand telehealth beyond virtual visits to include remote monitoring, tele- acute care, and other areas.
- **Promoting prevention and condition management:** Technology solutions that target prevention or management of the key NCDs driving the disease burden shift, such as cardiovascular diseases, diabetes, and cancer, have substantial potential.
- **Reducing cost-to-serve:** Given the low technology and AI usage inside organizations across the healthcare value-chain, solutions that enable business and clinical processes to drive productivity of talent and assets and reduce the cost to serve are valuable.
- **Improving quality and experience:** Capturing, analyzing and sharing of quality data, and creating tools to monitor and improve quality, is an important area for technology interventions across the sector. As the industry matures, the need for, and adoption of, such solutions is likely to grow substantially.
- **Driving innovation:** From health services to drug discovery, usage of technology, in particular AI, can speed up innovation in the healthcare products and services offered by the Indian industry. From new business models for the rural populations to novel therapies, this can unlock new segments and value pools for the industry.

Together, these ideas represent an agenda that has the potential to transform healthcare in India into a system that provides high-quality, affordable, and equitable healthcare for all.

04

Conclusion

The healthcare sector has taken important strides forward in recent years, with outcomes and infrastructure steadily closing the gap with India's peers among emerging economies. Now is an opportune moment to further accelerate this progress by focusing on equity, quality, capacity, and the growing burden of NCDs. Effectively addressing these challenges has the potential to materially enhance the health and wellbeing of Indians within this decade.

The sector presents an attractive proposition for investors and entrepreneurs, combining the opportunity to advance healthcare for millions with the prospect of good financial returns. The industry is expected to nearly triple in size by the end of this decade, with growing insurance coverage, rising spending power of the population, and an improving policy environment. The resulting growth in demand for innovative and high-quality healthcare services and products presents a favorable opportunity for new organizations to enter or expand in the industry.

Together, these opportunities offer India a path to leapfrog the country's health ecosystem system by a generation, improving lives and livelihoods in India, while positively contributing to the resilience of healthcare globally. Realizing this potential will require a bold approach that puts innovation and technology at the center, and capitalizes on the unique endowment and momentum that India has at this moment.



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