



The assessment of the gap in demand and supply of healthcare services in India

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Abstract

India's healthcare system is characterized by a significant gap between the demand for healthcare services and the supply available to meet this demand. This research paper aims to comprehensively assess the factors contributing to the gap in healthcare service availability in India and to provide insights into potential solutions. The study examines the underlying causes, consequences, and potential interventions to bridge this gap, including policy recommendations for a more equitable and accessible healthcare system.

Keywords:Gap in demand and supply and Healthcare Services

Introduction

India, with its diverse population and complex healthcare landscape, faces a persistent challenge in bridging the demand-supply gap in healthcare services. The country's healthcare system is marked by disparities in access, quality, and affordability, which necessitate a thorough analysis of the underlying causes and potential solutions. An increase in investments in technology and the health workforce will add to the country's inclusive economic growth. Technology can play an important role in human resources and change India's healthcare system significantly. The worldwide population is expected to exceed 8.5 billion by 2030 and 9.7 billion by 2050. Besides, the rising ageing population is driving demand for healthcare services which, in turn, is leading to a shortage of healthcare professionals. At present, the healthcare sector in India and worldwide is undergoing enormous changes. In a recent report, the World Health Organisation (WHO) revealed that healthcare sectors in European countries are experiencing a widespread workforce shortage. Staff shortfall, insufficient recruitment and retention, and limited access to professional development opportunities are wreaking havoc on the systems. During the initial days of the

pandemic, the death toll among frontline workers left a serious impact with a scarcity of nurses and paramedics. Things grew more complicated because of a lack of data and analytical skills, poor management and strategic planning, and low investment in worker upskilling. If these issues are not handled properly in the future, they can cause poor health outcomes, delayed treatment, and even uncalled-for deaths. In the post-pandemic world, new diseases are emerging and forcing people to figure out how to handle them. For instance, the number of young people experiencing cardiac arrests has increased over the past few years. Additionally, the number of doctor visits by people over 45 has gone up vastly over the past decade.

Review Literature

The literature on the assessment of the gap in demand and supply of healthcare services in India underscores the multifaceted nature of healthcare access in a diverse and densely populated country. While various policies and initiatives have been implemented to address this challenge, there remains a pressing need for comprehensive efforts to alleviate disparities in access, enhance healthcare infrastructure, and improve health outcomes, particularly for underserved populations.

The assessment of the gap in demand and supply of healthcare services in India is a critical area of research and policy concern. India's complex healthcare landscape, marked by diverse demographics and healthcare disparities, has led to an extensive body of literature examining this issue. This literature review provides an overview of key themes and findings from existing research in this domain.

Numerous studies emphasize the urban-rural divide in healthcare access in India. Urban areas tend to have better healthcare infrastructure and a higher concentration of healthcare professionals, while rural areas often face shortages of both facilities and skilled staff. A recurring theme in the literature is the importance of strengthening primary healthcare. Expanding and enhancing the network of primary healthcare centers, especially in rural areas, is considered essential for improving access, promoting preventive care, and early disease management. Income disparities play a significant role in healthcare access. Lower-income individuals and marginalized communities often face barriers in accessing quality healthcare services, contributing to health inequalities. Research has shown that higher levels of education and health awareness are associated with improved healthcare-seeking behavior. Addressing health literacy and promoting awareness are recognized as vital steps to improve health outcomes. The literature consistently highlights the close connection between the healthcare gap

and maternal and child health outcomes. Access to skilled birth attendants, prenatal care, and postnatal care is crucial for reducing maternal and child mortality. India is grappling with an increasing burden of non-communicable diseases like diabetes and hypertension. Managing and preventing these conditions within the primary care setting is a major challenge explored in research. India faces a shortage of healthcare professionals, especially in rural and underserved areas. Strategies to incentivize healthcare workers to practice in these regions and increase the number of medical colleges have been examined. The emergence of telemedicine and digital health technologies has gained attention. Research underscores the potential of these technologies to bridge the gap, while recognizing the need to address issues related to digital infrastructure and equitable access.

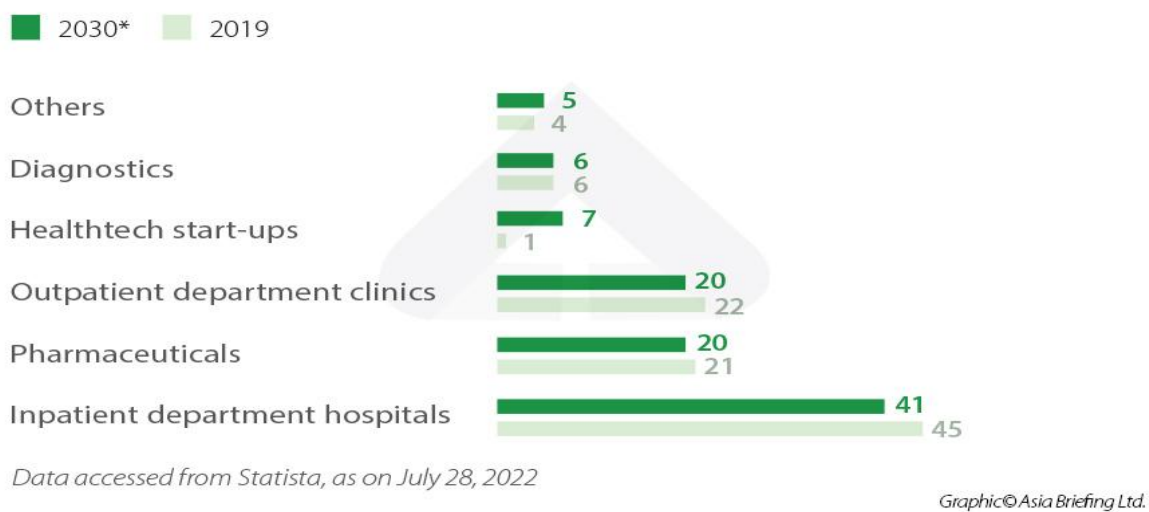


Fig 1 Healthcare Market Distribution In India (%)

The introduction of health insurance schemes, such as Ayushman Bharat, aims to enhance healthcare access and reduce financial burdens on families. Research evaluates the effectiveness and implementation challenges of such schemes. The role of the public and private sectors in healthcare delivery has been a subject of debate. Studies emphasize the need for increased government spending on healthcare and effective regulation to ensure affordability and quality in the private healthcare sector. The NHM, initiated in 2005, aimed to strengthen healthcare infrastructure in India. Research assesses its impact and offers recommendations for improvements. Launched in 2018, the Ayushman Bharat program is designed to provide financial protection and healthcare access to millions. Research evaluates its progress and outcomes.

Methodology

This research paper aims to:

1. Analyze the current state of healthcare demand and supply in India.
2. Identify the key factors contributing to the gap in healthcare service availability.
3. Assess the consequences of this gap on public health and economic development.
4. Propose policy recommendations and interventions to address these issues.

Results and Discussions

Physician Shortages: India has faced a significant shortage of healthcare professionals, particularly in rural areas. As of my last update, the doctor-patient ratio was significantly lower in rural areas compared to urban areas, leading to challenges in healthcare access.

Primary Healthcare Infrastructure: The availability and quality of primary healthcare centers varied widely across the country. While some urban areas had well-equipped facilities, many rural regions lacked access to basic healthcare services.

Urban-Rural Disparities: Urban areas generally had better healthcare infrastructure and a higher concentration of healthcare professionals, while rural areas faced shortages of both facilities and skilled staff. This urban-rural divide contributed to disparities in healthcare access.

Health Insurance Schemes: The Indian government launched health insurance schemes like Ayushman Bharat to improve healthcare access. These schemes aimed to provide financial protection and healthcare access to millions, particularly in low-income and vulnerable populations.

Challenges in Managing Non-Communicable Diseases (NCDs): India has been experiencing a growing burden of non-communicable diseases like diabetes and hypertension. The management and prevention of NCDs have been significant challenges within the primary care setting.

Telemedicine and Digital Health: The COVID-19 pandemic accelerated the adoption of telemedicine and digital health technologies. These technologies showed promise in bridging the healthcare gap, especially in providing remote consultations and improving access to healthcare services.

Government Initiatives: The National Health Mission (NHM) and other government initiatives aimed to strengthen healthcare infrastructure and address healthcare disparities. These programs included efforts to expand primary healthcare services, build healthcare infrastructure in underserved areas, and increase the number of medical colleges.

Income Inequality and Education: Income disparities and education levels played a crucial role in healthcare access. Lower-income individuals and communities with limited access to education often faced barriers to quality healthcare services.

The demand-supply gap in healthcare persists because the government's infrastructure-building initiatives have not been adequate. The reasons include demand instability, cost recovery, and a lack of qualified human resources. But the larger issue is to recruit, retain and inspire health workers to enhance the efficiency of healthcare systems. The country's healthcare staff retention gets hampered because of several factors, including insufficient wages, unsafe working conditions, and a lack of incentives, among others.

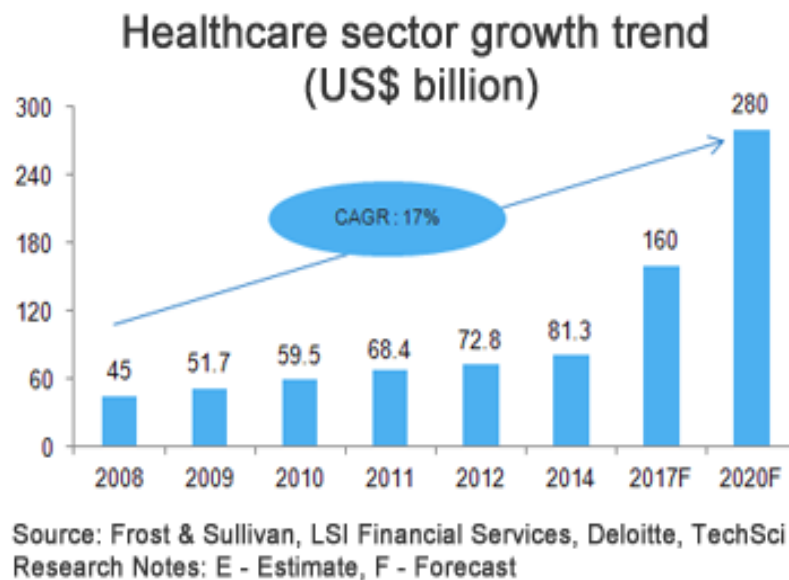


Fig 2 Healthcare sector Growth Trend

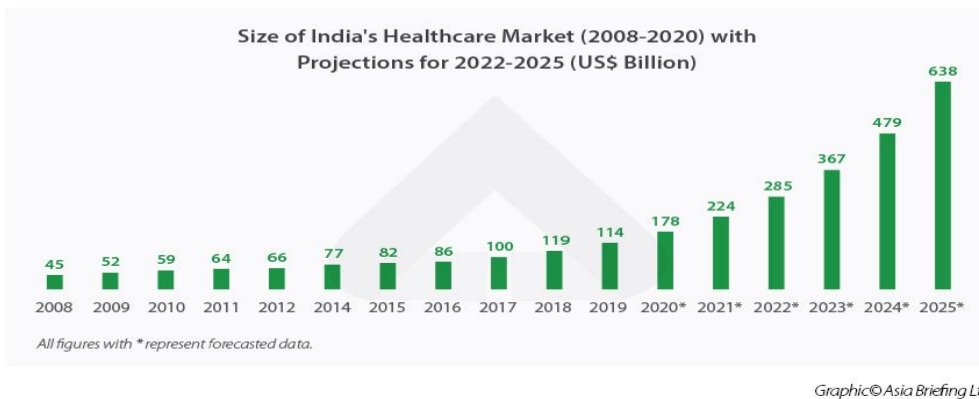
The industry faces a large talent gap in supply and demand, mandating the need to strengthen this cadre of health professionals.

Allied Health Professionals constitute the majority of the healthcare workforce in the country (Health Sector Skill Council, n. d., Occupational Mapping Report: Allied Health and Paramedic Sector). AHPs play an important role across the healthcare value chain, providing healthcare or

supportive services pertaining to diagnostics, treatment, counselling, diet, and rehabilitation. Interactions with industry players indicate that there has been more than a 30% increase in the requirement for para-medical, patient attendants and other such AHPs as a result of the pandemic. However, there exists a large talent gap with demand being six times the current supply of AHPs (BCG & GAPIO 2020). Additionally, the existing infrastructure can only supply 4% of the demand for AHPs, leading to a deficit of 6.2 million professionals across the country. Even the existing supply of AHPs is unevenly distributed across geographies, inadequately trained, and lacks female participation. There is wide variation in the distribution of AHPs across states. Despite housing a majority of India's population, rural areas severely lack access to health professionals, compared to urban areas. Women are also underrepresented in allied health roles. Nearly half of the already scarce AHP workforce is also under-trained and under-qualified.

To effectively solve the challenge of the gap in skilled talent, it is imperative to design specific interventions for diverse job roles and skill levels.

The cadre of allied health workers is highly diverse with different levels of skills needed for varying occupations. The current discourse around the allied health workforce needs to shift from collective challenges faced by the occupational group, and evolve in response to the variety of job roles and their specific challenges. Three major categories are a) high-skill technical occupations which are highly aspirational but lack awareness and dedicated financing for high training fees b) low or semi-skilled technical occupations which carry the potential to generate mass employment but are mostly in the informal sector and have low pay and poor working conditions c) existing workforce where the challenge is primarily around lack of inclusion, recognition into the formal economy and up-skilling opportunities.



[Fig 3 India's Healthcare Ecosystem: Sector Highlights for Investors](#)

Bridging the talent gap in the allied health ecosystem will require systematic efforts from multiple stakeholders and can be focused on these four cornerstones:

- Policy interventions aimed at defining allied healthcare, easing regulations, incentivising private action and implementing policies robustly. The implementation of the recent National Commission for Allied and Healthcare Professions Act 2021 (NCAHP) needs to be expedited with a clear definition of the roles of different stakeholders in the allied health ecosystem. The state also needs to recognise the existing workforce and other diverse roles in the cadre of allied health providers, to ensure absorption in the formal economy. Additionally, easing private sector collaboration through more streamlining of centre-state policies and flexibility of regulations will be beneficial.
- Infrastructure interventions focused on investment in both physical and digital asset creation and management, with a special emphasis in rural areas. Strengthening the capacity of training centres and upgrading medical colleges with AHP facilities is a key area of action. Digital infrastructure interventions using platform technology to bring telemedicine to remote areas should also be explored.
- Knowledge and data interventions to improve the collection and dissemination of data on existing supply, demand and gaps to ensure well-targeted action by all stakeholders involved targeted policies and funding interventions. It is also critical to disseminate knowledge on varied AHP roles and demystify the occupations to increase awareness and attract talent.
- Finance interventions like dedicated and innovative financing tools to ensure accessibility to aspirations courses for low-income families along with strategies like clustered training centres to reduce capital expenditure.

Strategic and targeted financing of these interventions by philanthropic institutions is critical for achieving the winning aspiration of universal healthcare coverage and sustainable employment.

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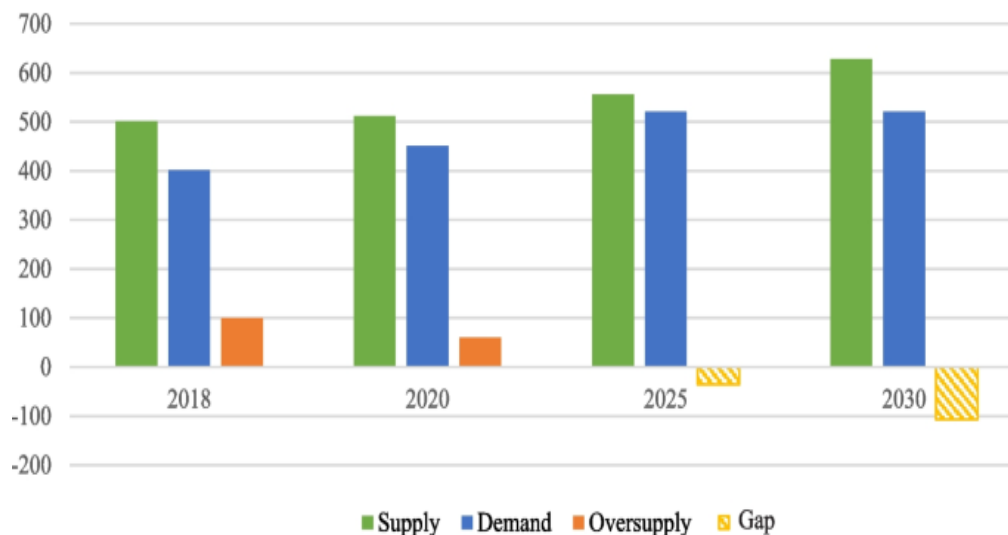


Fig 4 Healthcare services gap analysis

Given the systematic shifts required to bridge the talent gap, philanthropy has a critical role to play in catalysing action toward the four cornerstones. Philanthropic institutions can play a role in mobilising funds to finance students, strengthen infrastructure and address some of the key gaps in data and knowledge by funding research and technology solutions.

Additionally, they could promote collective action through policy advocacy and strengthen the central discourse on the need to invest in the skilled allied health workforce.

Conclusion

This research paper concludes that addressing the gap between healthcare demand and supply in India is a complex challenge that requires a multifaceted approach. Sustainable and equitable healthcare delivery necessitates the cooperation of government, private sector, and civil society. Through comprehensive policy interventions, improved funding, and investments in healthcare infrastructure and technology, India can move towards a more inclusive and accessible healthcare system. The healthcare industry is one of the most important sectors in the country in terms of both employment generation and revenue. It has grown at a CAGR of 22% since 2016, employing more than 4.5 million people. The sector has the capacity to create nearly 500,000 new jobs every year. In contrast, doctors represent a diminishing share of that workforce.

The major concern is the lack of skilled physicians, nurses, and paramedics. This shortage was felt more acutely during the 2020 pandemic. Small towns have low demand and poor paying capacity, pushing the burden onto cities. The healthcare sector experiences a high turnover rate

where 40% 50% of the workforce leaves their jobs every year. There is a distinct need to provide more flexibility and it is tech-enabled platforms that offer the best solutions to these challenges. The time to act is now.

India's healthcare market is likely to touch \$372 billion by end-2022, thanks to rising income, improved health awareness, lifestyle diseases, and more access to insurance. The urgency now is to increase the number of nurses in the health sector and employ trained staff. At present, the skill mix is doctor-centric, with very few nurses. Efforts should be made to boost the supply and retention of nurses. Shifting of tasks and its impact on patient care and well-being should be brought more into focus. To compensate for the lack of human resources in public sector units, especially at the primary level, hiring processes should be streamlined by employing workers on contractual or flexible engagement terms.

Covid-19 highlighted how emerging technologies can be used more effectively to improve care delivery, facilitate speedy and effective communications and improve access to treatment through e-health and m-health interventions. Investments in technology and workforce training are important in this perspective. Complete overhaul of data on healthcare workers with live registrations, including regular updates is now of the utmost importance. This will help in making quick decisions and planning for the future of the workforce. It will also ensure that the quality of registered professionals remains of a high standard.

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