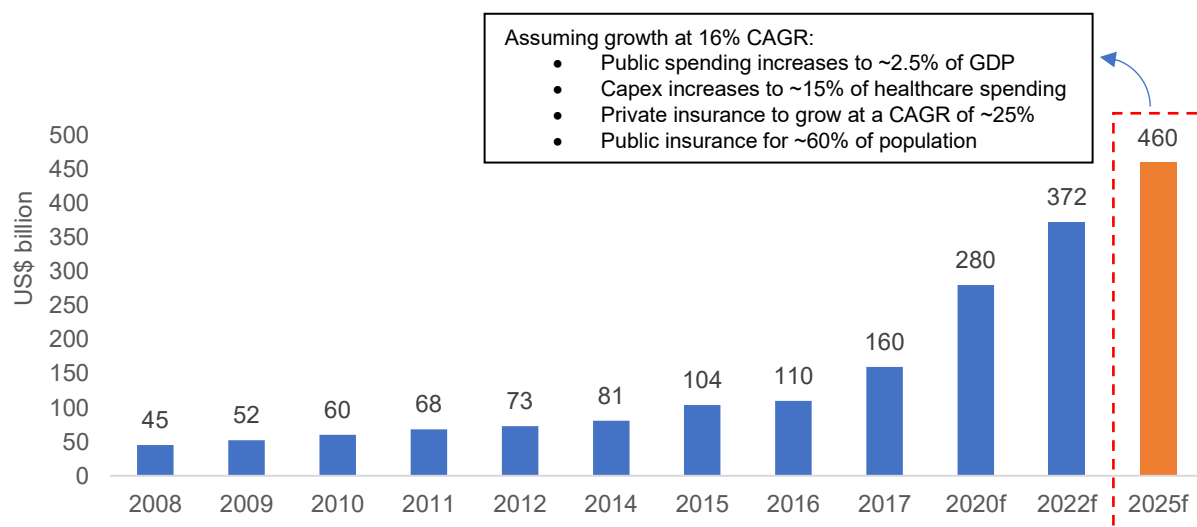


Industry Demand Projections in Healthcare Sector

A. Healthcare Service Delivery in India

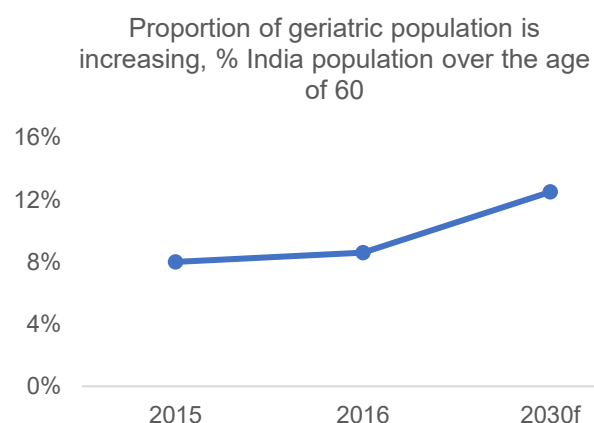
Healthcare in India is one of the largest service-sector industries. According to industry estimates, the Indian healthcare market is estimated at US\$74 billion in 2011 and is projected to reach US\$ 280 billion in 2020 growing at a CAGR of 16%. Though the forecasts may vary, the factors driving the growth include increasing population, growing lifestyle-related health issues, cheaper costs for treatment, improving health insurance penetration, increasing disposable income, thrust in medical tourism, focus on PPP models and others. Despite the above factors, low and inequitable health infrastructure and access, coupled with the shortage of healthcare workforce are few of the key forces that are decelerating the growth of healthcare in India. Indian healthcare sector needs to respond to the various existing gaps on multiple fronts.

The healthcare market in India is expected to grow to between \$350 billion and \$370 billion by 2022

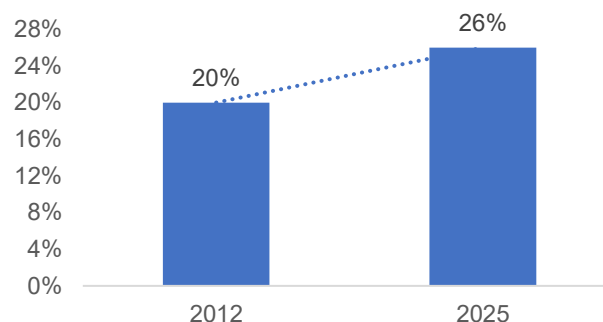


Source: industry reports

Changing demographics will place a higher burden on delivery infrastructure: rise in elderly population



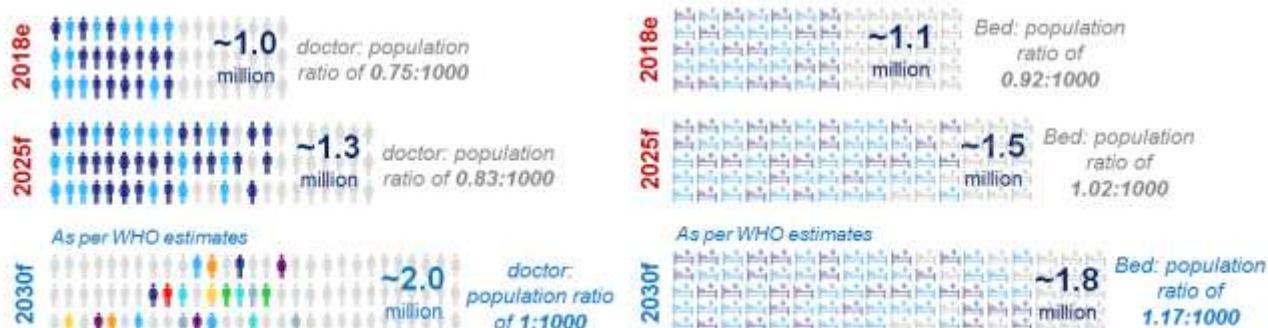
The elderly will likely place a high burden on care infrastructure in the future, Geriatric share (60+ years old) of hospitalisation cases



Source: NSSO; Euromonitor; CMS; IQVIA analysis

Healthcare continues to be under-served and under-consumed: shortfall of doctors, nurses and beds likely to continue till 2030

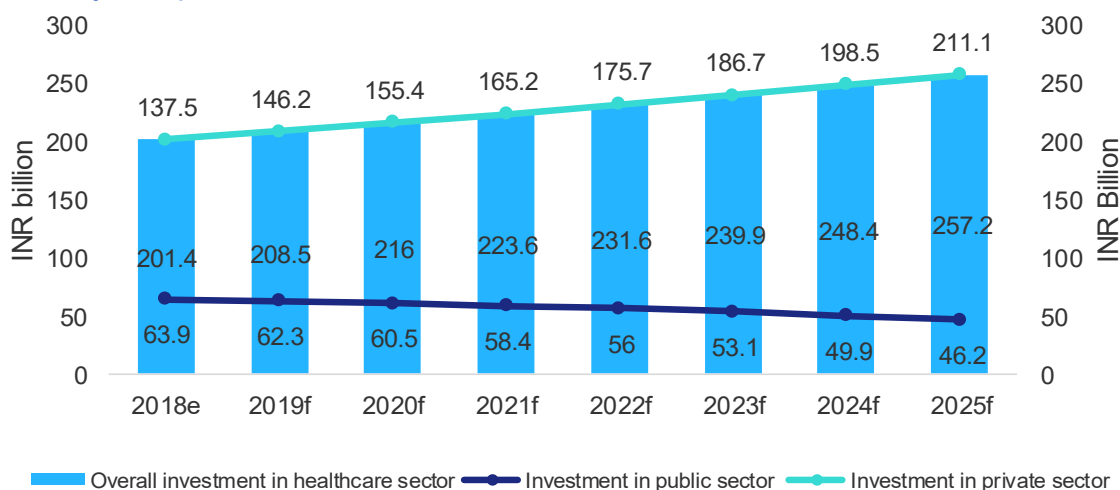
HOW B I G India's health infrastructure PROBLEM is?



Source: WHO, Global Health Observatory; World Bank; Euromonitor

The governments at all levels need to address the twin challenges of inadequate infrastructure and manpower shortages as sum part of the whole. In this context, investment by private sector and launch of Ayushman Bharat are a key link to solving India's burgeoning healthcare burden

Proposed investments in Healthcare sector by 2025, based on incremental growth in number of beds (public and private)



Source: IQVIA Analysis; the contribution of private sector in total incremental growth in beds will increase from current 67% to 82% by 2025, whereas contribution of public sector will see a declining trend from current 32% to 18% by 2025. This trend is due to increase in urbanization in India.

B. Human Resource for Health

Supply Side: Estimating the imbalances in the allied health workforce in India

It has been widely acknowledged that it is necessary to augment both volume and skill of healthcare workers at all levels of the sector to ensure continuous delivery of quality services and to provide improved access to health care services to all. Many committees and experts have simultaneously highlighted the importance of allied health in healthcare delivery in the past, including the National

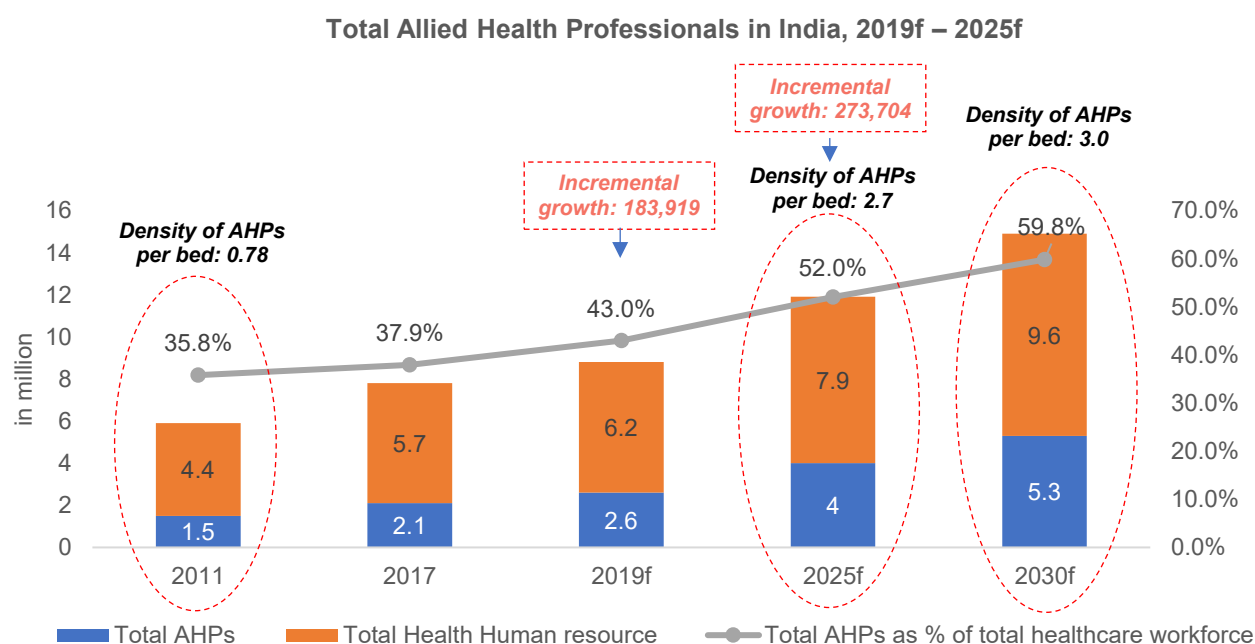
Knowledge Commission, National Health Policy 2017 and Ayushman Bharat, which have placed more importance in producing AHPs to immediately bridge the gap between demand and supply.

i. Allied Health Professional

Healthcare services are expected to generate demand for 15 million to 20 million new jobs for doctors, nurses and allied health professionals by 2025.

- As per our estimates, the total health human resource in India will reach a projected figure of 7.9 million in 2025 and 9.6 million by 2030 from the current figure of 5.9 million (2018).
- The total allied health professionals as a percentage of the total healthcare workforce will reach 48.2% in 2025 and 55.9% in 2030 from the current figure of 39.1% (2018).
- The total allied health professionals in India (based on per bed population) is currently estimated at 2.3 million (2018e) and is projected to reach 4.0 million in 2025 and 5.3 million by 2030; *witnessing an addressable gap of 1.3 million from 2019 – 2025.*

Increase supply: expansion of allied health professional supply to bridge the healthcare skill gap



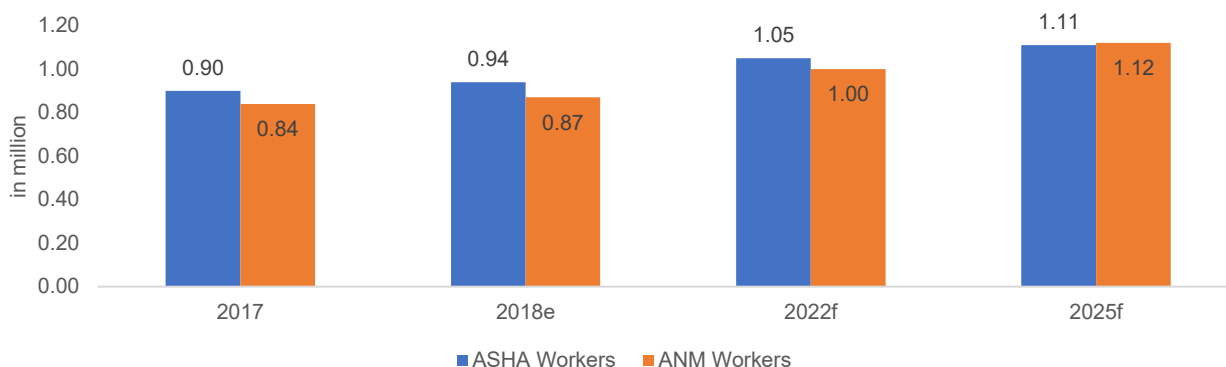
Seeing the projected growth of beds in India which is directly proportional to the growth in hospitals and population, we have based the incremental growth of AHPs as per number of beds; Source: IQVIA analysis

ii. ASHA/ANM

Increase in ASHA and ANM: ASHA and ANMs has been a key figure in contributing to the positive outcomes of increases in institutional delivery, immunization, and improved breastfeeding and nutrition practices.

The government's National Health Policy 2017 launched the idea for **upgrading 150,000 sub-centres into health and wellness centres across the country** - will witness the requirement for 2 ANMs and 1 Multipurpose Health Worker (MPW); **witnessing an additional demand for 1.5 lakh Multipurpose Health Worker (MPW).**

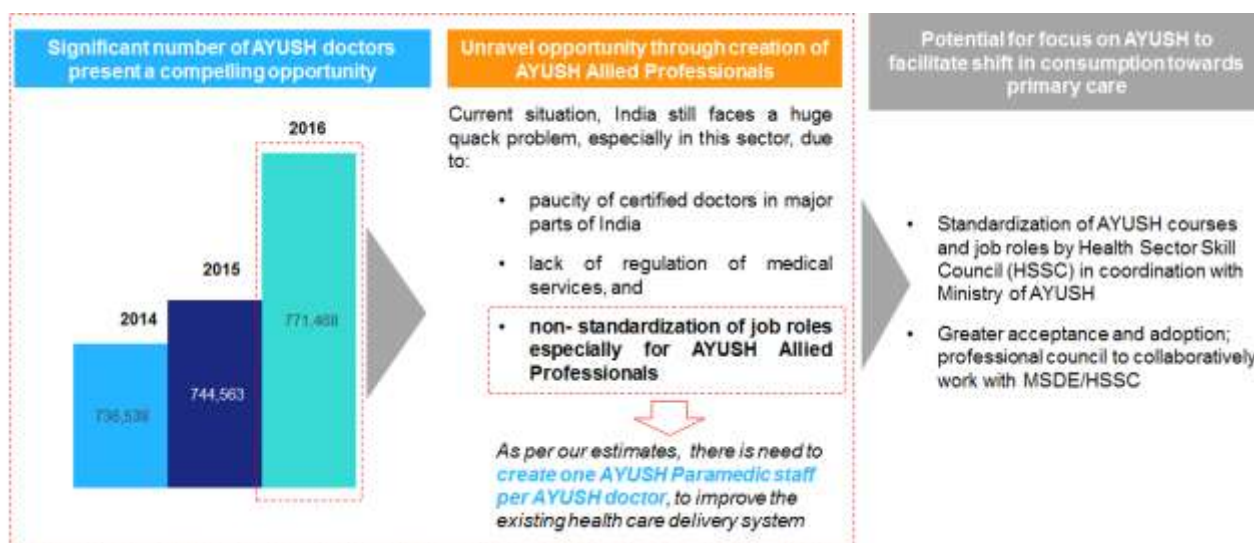
Increase supply: ASHAs and ANMs will see an upsurge with proposed wellness centres



For ASHA Workers, calculation is based on the goals and target set as per the 'Key Performance Indicators' (KPIs) of the National Health Policy, 2017, the goal is to have 1 ASHA for 750 rural population by 2025; For ANM, as per the NRHM guidelines, 1 ANM worker per sub-centre for 5000 population in plain areas and for every 3000 population in hilly/tribal/difficult areas is assumed for calculation; Source: IQVIA analysis

iii. AYUSH practitioners and AYUSH Allied Professionals can help improve care both at rural and urban areas

As of 2016–17, a total of 3,590 hospitals providing AYUSH treatment are functional in the country, with a total 7,71,468 AYUSH practitioners. However, India still faces a significant problem of unqualified, unregulated base of practitioners, in this sector.



C. Emerging Areas for Allied Health Professionals

Healthcare workforce (Geriatric Workforce) for ageing population – Global

The world's population is ageing: virtually every country in the world is experiencing growth in the number and proportion of older people in their population.

Population ageing is poised to become one of the most significant social transformations of the twenty-first century, with implications for nearly all sectors of society, including labour and financial markets, the demand for goods and services, such as housing, transportation, and social protection, as well as family structures and intergenerational ties.

According to data from World Population Prospects: the 2017 Revision, **the number of older persons — those aged 60 years or over — is expected to more than double by 2050 and to more than triple by 2100, rising from 962 million globally in 2017 to 2.1 billion in 2050 and 3.1 billion in 2100. Globally, population aged 60 or over is growing faster than all younger age groups.**

Currently, the health workforce is trained to respond to pressing health needs associated with acute illness and communicable diseases, rather than to proactively anticipate and counter changes in people's intrinsic capacity (physical and mental). The workforce is rarely trained to work with older people to support them to increase control over their own health. Medical trainees fail to learn the comprehensive bio-psycho-social approach that needs to be taken when working with older populations. Barriers to training the health workforce on gerontology and geriatrics include insufficiently qualified faculty/instructors, lack of funding, inadequate time built into the curricula, and poor recognition of the importance of such training.

For example, in India

- The total senior population of India's 50 largest cities is going to increase by 21.64% from 2016 to 2021. In 2016, 2.38 million people belong to the category of the senior population and it is estimated to reach 5 million seniors by 2021.
- In 2016, the total addressable market was estimated at ~US\$ 1.6 billion and is projected to reach ~US\$ 4 billion by 2021. (the addressable market is defined as seniors suffering from dementia & Alzheimer, physical immobility, end stage cancer)¹

Innovation in healthcare industry: Medical Technology and Devices

India has been witnessing an upsurge of product innovations by almost all relevant stakeholders of the healthcare industry including but not limited to areas of medical equipment and devices, health insurance, medical infrastructure (diagnostics and service delivery), treatment of chronic diseases and launch of patented products.

Seeing the investments proposed in medical technology in India, it is imperative to consider a corresponding increased demand for specialized professionals to handle the new equipment. This in turn will require:

- Designing curriculum and explore possibilities for on-line/ e-learning modules to meet specific requirement of medical device segment
- Engaging with Vocational Training Providers as well as potential ITIs, Polytechnic and other institutes for skill development
- Set up satellite training campus around manufacturing hubs for skill upgrading

¹ Estimates by Health Sector Skill Council (HSSC)