

Healthcare Services industry in India

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The healthcare services industry in India has grown over the years on account of an increase in demand for modern healthcare facilities, rise in awareness about diseases, health consciousness among people, increase in per capita income, changing lifestyle, transition in disease profile etc. However, the demand for healthcare services is led by households that have a spending capacity as the poor and vulnerable sections of society have restricted demand for such services.

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On the supply side, availability and advancement of modern healthcare facilities has also contributed towards the betterment of healthcare services industry in India. Regardless of this, the supply side constraint remains as public expenditure on healthcare is limited which in turn, provides an opportunity to private healthcare service providers. However, the very advanced and efficient healthcare services remains concentrated particularly in urban areas where people have a higher spending capacity. This enables the healthcare service providers generate revenues and get return on their investments. Not just infrastructure, India also faces supply crunch in terms of health human resource which is discussed in the report.

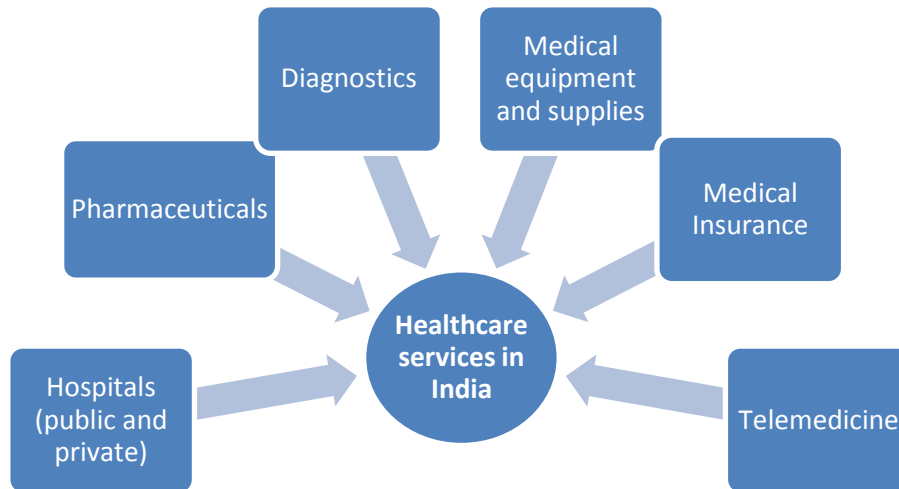
Here in this Report, we have attempted to provide a brief understanding on hospitals and diagnostics segments of healthcare services in India and the factors that have been driving the demand for these services in the country. Subsequently, we conclude that prospects are bright for healthcare services in India as demand for these services will continue to remain positive. However, prospects for the industry would be even brighter if the healthcare services get extended to the uncovered set of population.

Healthcare services industry in India

The Indian healthcare services industry's size is estimated at USD 160 billion in 2017 as per IBEF. The industry primarily comprises six segments:

Hospitals – This is the largest segment of the healthcare services industry in the country and accounts for about more than half of the industry's size. The services offered under hospitals reach the population through two routes, public and private. While the public sector provides treatment by means of sub-centres, primary health centres (PHC), community health centres (CHC), district hospitals and government-funded institutions, private sector provides services through clinics, mid-size secondary and tertiary hospitals.

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Chart 1: Structure of healthcare services industry in India


Pharmaceuticals – It involves manufacturing, formulating and processing of drugs and selling these medications in the market. This segment thus broadly covers making or manufacturing of formulations, API (Active Pharmaceutical Ingredients)/bulk drugs. Formulations can be consumed directly by patients and API/bulk drugs can be considered as inputs that are used in making of formulations. The domestic sales from this segment were about USD 18 billion in 2017. ***(We have a separate report on this segment).***

Diagnostics – Diagnostics segment comprises facilities that provide services which help a person determine the existence of a disease using specialised tests and equipment. This business is predominantly classified into imaging diagnostics or radiology and pathology tests and includes range of services that offers tests on conditions such as diabetes, heart diseases, viral infections, fever, cancer, infertility, health check-ups, allergy, HIV, hypertension among others.

Medical equipment and supplies – This includes companies that mainly manufacture medical equipment and supplies which consists of products like surgical sutures, suction units, medical microscopes, ophthalmic products, test kits, reagents and supplies, dental equipment, orthopaedic, ophthalmologic, laboratory instruments, endoscopy products etc.

Medical insurance – Under medical insurance, the insurer offers medical reimbursement for the treatment provided by hospitals or hospitalisation expenses incurred by the insured person on account of illness, diseases, sickness etc. This insurance primarily can be taken in the most basic form as individual or family health insurance plans.

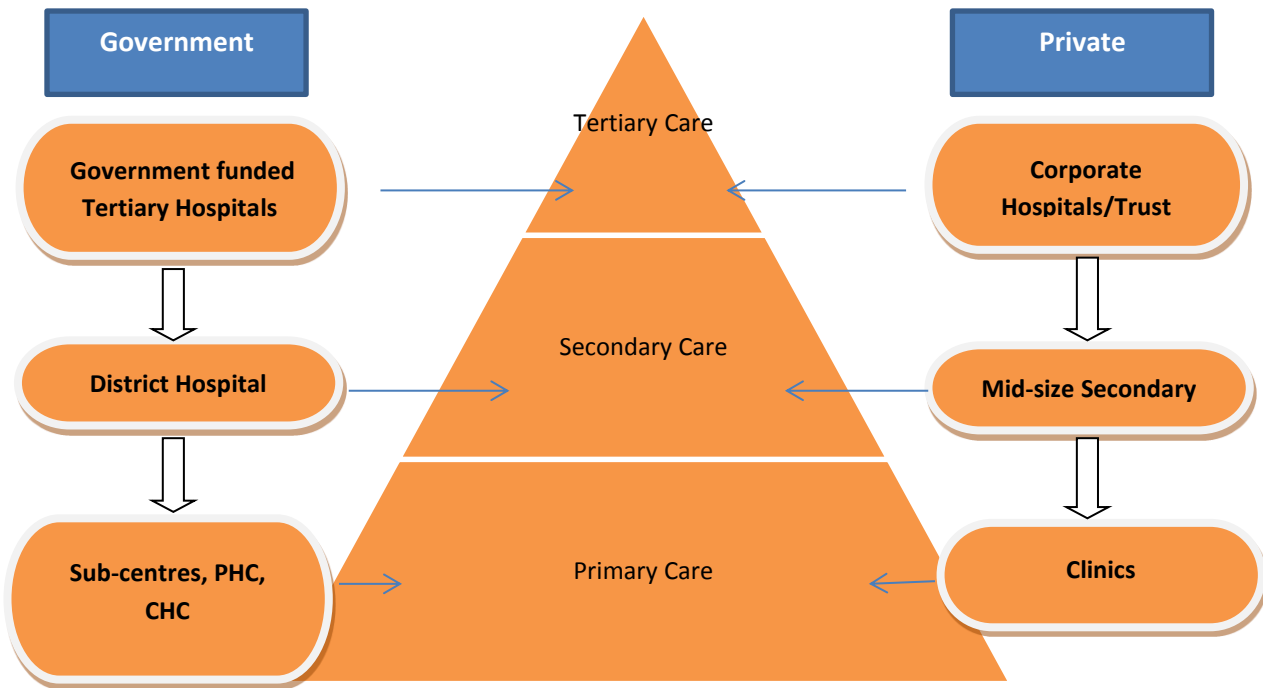
Telemedicine – Telemedicine makes the use of telecommunications technology to treat, diagnose, assess the condition of an individual who is located at a distant place. Thus telemedicine is of great use to meet the needs of those patients who are situated at rural and remote areas and who find it difficult to have access to the healthcare delivery system that is far off from their location.

Here in this report, we attempt to provide a brief understanding on hospitals and diagnostics segments of healthcare services in India which are discussed subsequently.

Hospitals industry

The hospitals industry is the largest segment of the healthcare services in the country which has proliferated from primary healthcare centres to single and multi-speciality corporate hospitals over the years. The healthcare facilities are delivered to the population through public and private routes which is explained below.

Chart 2: Structure of healthcare delivery system in India



Primary Healthcare: This is the first point of contact between the populace and the healthcare service providers. This infrastructure offers basic medical and health prevention services and is further divided into Sub Centre (SC), Primary Health Centre (PHC) and Community Health Centre (CHC) which is more relevant to rural areas. SC is the most peripheral contact point between the primary healthcare system and community, PHC and CHC act a referral unit for 6 SCs and 4 PHCs, respectively, and are bedded centres.

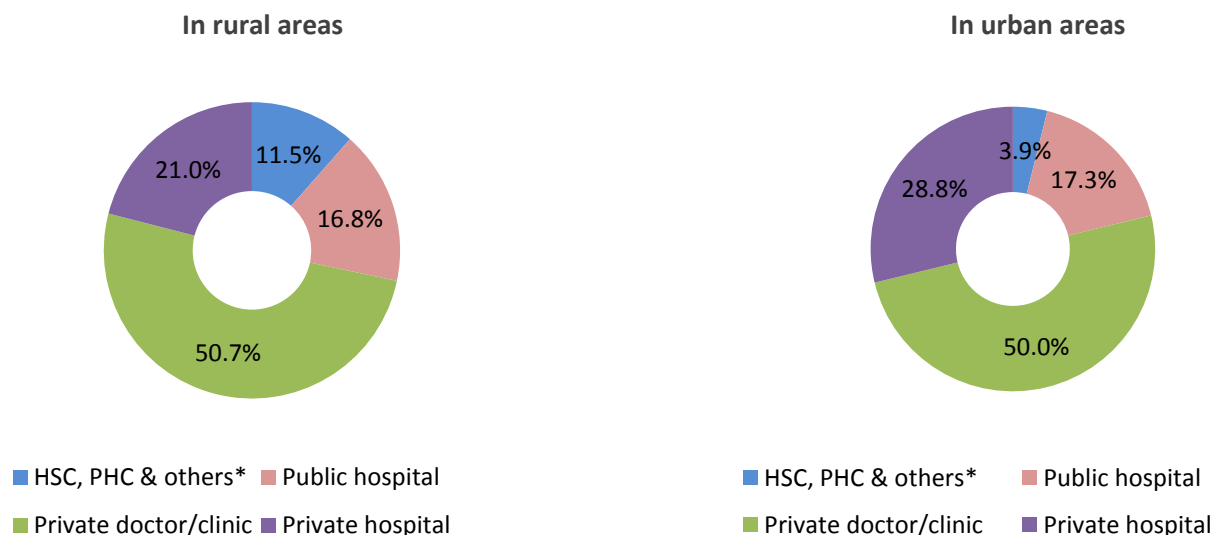
Secondary Healthcare: This infrastructure provides inpatient as well as outpatient medical services and includes simple surgical procedures. It offers medical specialities including internal medicine, paediatrics and provides limited coverage of other specialities that includes urology, cardiology among others. Patients to these hospitals are mainly referred by health professionals from primary level hospitals for specialised treatment. District hospitals that falls at secondary level have hospitals with a capacity of 31-500 beds.

Tertiary Healthcare: This is the third level of healthcare delivery system in the country. These hospitals are specialised consultative healthcare infrastructure which has referrals from primary and secondary health professionals. While there are tertiary hospitals that offer services for single speciality, there are multi-speciality tertiary hospitals that offer a number of services in the same hospital.

While healthcare services are offered by public as well as private sectors, people, urban as well as rural generally prefer private hospitals over public hospitals for treatment of diseases, illness and sickness (Refer Chart 3). This is primarily because

private hospitals are believed to have better healthcare facilities and infrastructure which, in turn, results in better or efficient treatments. This holds true despite the fact that services offered by private healthcare facilities are roughly three and a half time more expensive compared to the services provided by its public counterparts (Refer Table 1 below).

Chart 3: Percentage of spells of ailment treated by level of care



Source: MoSPI, NSS 71st Round (January-June 2014)

Note: Public sector includes HSC, PHC & others* and public hospital. Private sector includes private doctor/clinic and hospital
Others include ANM, ASHA, AWW, dispensary, CHC, MMU ¹

From the above chart, it is clear that population in rural as well as urban areas seek private sector treatment for their illness or diseases. Of all the levels of care mentioned here, private doctor/clinic is the single most important point of contact for treatment of ailments for rural areas (50.7%) and urban areas (50%). This is followed by treatments at private hospital, public hospital and HSC, PHC & others.

Table 1: Average medical expenditure per hospitalisation case (in Rs.)

Public hospital	Private hospital
6,120	25,850

Source: MoSPI, NSS 71st Round (January-June 2014)

Note: The table provides average of medical expenditure for various ailments. Thus, the medical expenditure may vary depending on the type of ailment. The medical expenditure for infections would be low compared to the medical expenditure for cancer, cardio-vascular ailments.

It can be seen from Table 1 that average medical expenditure for an individual could vary depending on the type of hospital (public or private) where the individual has undertaken treatment. While the average medical expenditure per

¹ Here the private sector includes private doctors, nursing homes, private hospitals, charitable institutions, etc. and public sector comprises government hospitals, clinics, dispensaries, Primary Health Centres (PHCs) and the Community Health Centres (CHCs), Mobile Medical Unit (MMU) and the state and central government assisted ESI hospitals and dispensaries. The lowest level of care viz. Health Sub Centre (HSC), Auxiliary Nurse Midwives (ANM)/ Accredited Social Health Activist (ASHA)/ Anganwadi worker (AWW) is also included here.

hospitalisation case in public hospitals is as low as Rs.6,120, the average medical expenditure for private hospitals is as high as Rs.25,850.

In spite of the higher cost, the population is dependent on private hospitals for treatment as these hospitals have been able to meet the service quality needs and demands of people. **Lower expenditure by government or public sector on healthcare facilities is one of the prime reasons that provide opportunity to private hospitals which, in turn, results in more consumption of private sector healthcare services.** As per the World Bank data, India’s total health expenditure as percentage of GDP stood at 4.7% for 2014. Of this, contribution by the government towards healthcare expenditure was 29.8%, thus public expenditure as percentage of GDP stood at 1.4% while the rest 70.2% contribution towards healthcare expenditure came through private route, which represents 3.3% of GDP.

The increasing need for healthcare services offers enormous opportunity to the private sector hospitals. Resultantly, these hospitals have encashed this demand and continued to grow. The private hospitals offer a number of services at secondary and tertiary level which the government hospitals generally lack. The performance of these corporate hospitals can be tracked or understood through the indicators that are mentioned below.

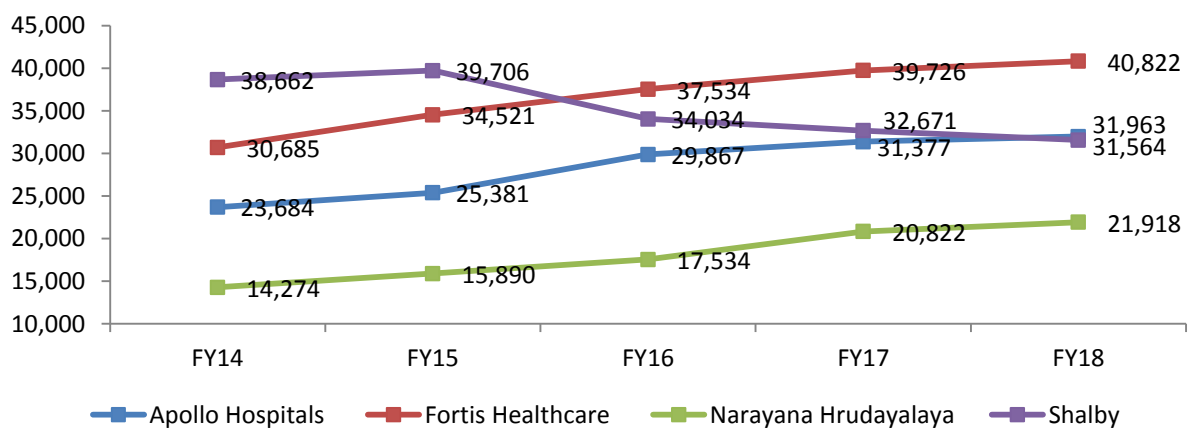
Performance indicators

The performance indicators that can be considered to understand the hospitals industry includes ARPOB (Average Revenue per Occupied Bed), ALOS (Average Length of Stay) and occupancy ratio. Here CARE Ratings have considered few of the top hospitals (in terms of sales) that provide information on the said indicators.

a. ARPOB

It refers to the average revenue realised by a hospital from every occupied bed. From Chart 4 below it can be seen that the ARPOB has been on a rise in each of the years from FY14 to FY18 for all the hospitals except for Shalby. The growth in ARPOB can be attributed to increase in healthcare cost services of the hospitals which, in turn, increases prices for the treatment. Besides, emphasis on advanced medical care, better utilization of operational theatres and medical equipments, case-mix and type of procedures are also believed to have supported the rise in ARPOB. For Shalby, the decline in ARPOB is on account of extension to uncovered geographies and growth in multi-speciality focus that modified the hospital’s speciality mix.

Chart 4: Average Revenue per Occupied Bed (ARPOB) (in Rs. /day)



Source: Company reports

Note: The ARPOB for Fortis Healthcare and Narayana Hrudayalaya have been normalised. The annual ARPOB reported by these hospitals is divided by 365 days to arrive at per day ARPOB.

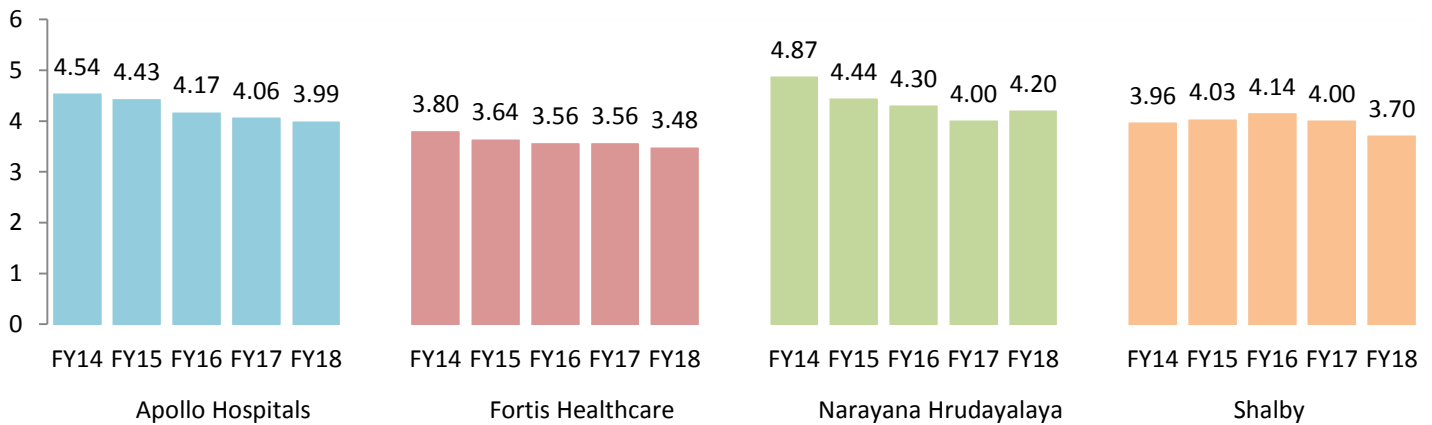
ARPOB depends on pricing of hospitals, location of hospitals (Tier I city, Tier II city), utilization rates of bed, maturity of hospitals and complexity of operations conducted in hospitals. More complex operations tend to increase ARPOB.

Case-mix: It refers to a system that collects data on patients and the procedures related to them. This information pertains to groups that depend on the type and mix of the patients treated. It contains data on diagnosis and procedures associated to the patient during the treatment.

b. ALOS

It refers to the average time spent by the patient under treatment in the hospital from Chart 5, it can be seen that the ALOS for each of the hospitals mentioned below have reduced in FY18 from what the levels were in FY14. Advancement and improvement in medical technology is one of the prime reasons for decrease in ALOS.

Chart 5: Average Length of Stay (ALOS) (in days)



Source: Company reports

Also it can be understood from the above chart that the hospitals have been trying to reduce their respective ALOS. Lower ALOS helps in faster turnaround of beds which result in more patients to be treated from the current facilities. In addition to this, it also helps the hospitals to increase their income as most of the revenues are made by hospitals in the initial few days of the patients' treatment.

ALOS depends on the approach undertaken by the hospital for patients' treatment and the case mix. It is also based on the technology of medical care employed and the kind of care offered by the hospital.

c. Occupancy rate

It refers to the proportion of beds which are used for treatments of patients for any time period. Occupancy rate gives an idea about the number of occupied beds in the facility. The occupancy rate for Apollo Hospitals and Fortis Healthcare remained in the range of 63%-75% during the last five years as shown in the table below.

Table 2: Occupancy rate (in %)

Occupancy rate	FY14	FY15	FY16	FY17	FY18
Apollo Hospitals	71%	68%	63%	64%	65%
Fortis Healthcare	73%	70%	72%	75%	70%

Source: Company reports

Occupancy rate for a hospital to an extent depends on the maturity of hospitals as mature hospitals tend to get more reference for treatments compared to lesser matured hospitals. **In addition to this, occupancy rate also depends on the availability of required hospitals, skills of the doctors, standard of the hospitals and the quality of results and treatment provided by hospitals.**

Diagnostics industry

The diagnostics industry has evolved over the years and serves as an important segment of healthcare services industry. The services offered by this segment helps determine the presence or absence of a disease and thus identify the condition of an individual which, in turn, helps doctors make informed decisions about patients. The services provided under this segment is divided into pathology services and imaging diagnostics or radiology with an approximate share of 70% and 30%, respectively, in the diagnostics market.

a. Pathology services

Pathology services involve examining and testing body tissues and bodily fluids. It engages collection of samples like blood, urine, stool etc. and studying these samples through the use of laboratory equipment and technology. This segment involves biochemistry, immunology, hematology, urine analysis, molecular diagnosis and microbiology. Thus it broadly covers testing of samples of blood, urine, stools and other fluids from the body. Examples also include biopsy, lipid tests among others.

b. Imaging diagnostics or radiology

This test makes detailed pictures of areas inside the body. Different forms of energy such as x-rays (high-energy radiation), ultrasound (high-energy soundwaves), radio waves and radioactive substances are used for imaging tests. Examples include computed tomography (CT), ultrasonography, magnetic resonance imaging (MRI), nuclear medicine tests, specialised tests such as PET-CT scans. This diagnostic test is used to diagnose disease, plan treatment, or find out how well the treatment is going. These tests help understand anatomical or physiological changes inside a patient's body. (Source: Thyrocare Technologies Limited DHRP and National Cancer Institute)

In India, the diagnostics market is largely unorganised and the players primarily deliver these services by three means: standalone centres, hospital based centres and diagnostic chains.

Standalone centres: Standalone centres refer to a single centre facility that offers basic test services that involves limited capital and area. These centres are generally a part of the unorganised market and they primarily cater to the needs of tier I and tier II cities. Most of the areas in these cities have a local and generic diagnostic laboratory that specially provides pathology services.

Hospital based centres: The hospital based centres involves in-house laboratories which is owned and also outsourced. These centres direct some samples to third-party laboratories in case the facilities available with the hospitals are not

sufficient to conduct certain advanced tests. In-patients as well as out-patients can make the use of services offered by hospital based centres.

Diagnostic chains: The diagnostic chains consider hub-and-spoke approach to widen or augment their reach which also results in economies of scale. This model involves sending of samples from collection centres to central laboratory. Some diagnostic service providers offer their services through large pan-India chains; some of them provide the facilities via regional chains.

Financials of hospital & healthcare services (108 companies)

Chart 6: Sales and y-o-y sales growth rate

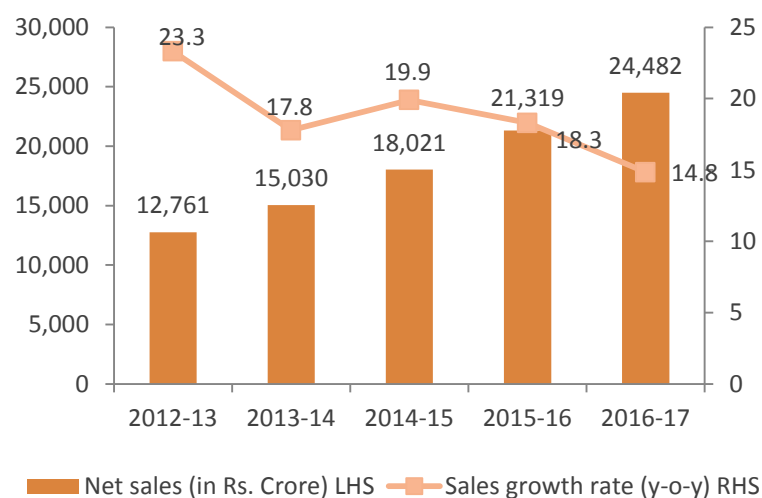
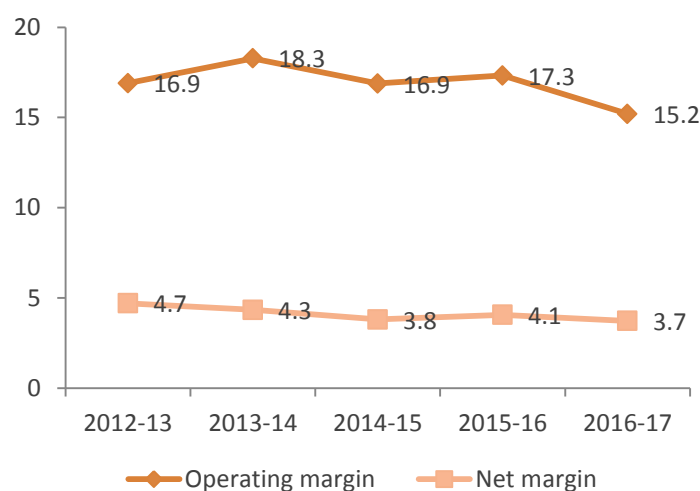


Chart 7: Operating and net profit margin (in %)



Source: Ace Equity

Sales of the hospital & healthcare services industry grew in double-digit in each of the financial years during 2012-17 on account of increasing demand for healthcare services, changing demographics, and rise in per capita income among others. However, the industry’s sales growth decelerated to 14.8% on a y-o-y basis during 2016-17 compared to sales growth of 17.5%-23.3% reported by the industry during the years 2012-16. The demonetization drive coupled with changing healthcare norms and the government’s attention towards cost control is believed to have had an effect on industry’s pace of sales growth in 2016-17. The industry’s performance was impacted on the profitability front as well during the year 2016-17. On a y-o-y basis, the aggregate operating margin eroded by 213 basis points to 15.2% and net margin contracted by 34 basis points to 3.7%. The industry’s operating margin was in the range of 16.9%-18.3% during 2012-16.

For the year 2017-18, aggregate sales of the hospital and healthcare services industry (14 companies) grew by 12.1% on a y-o-y basis. The industry’s operating margin remained almost stable at 13.6%, an erosion of 19 basis points and the aggregate net margin contracted by 171 basis points to 3.4% during the year.

Demand drivers for healthcare services

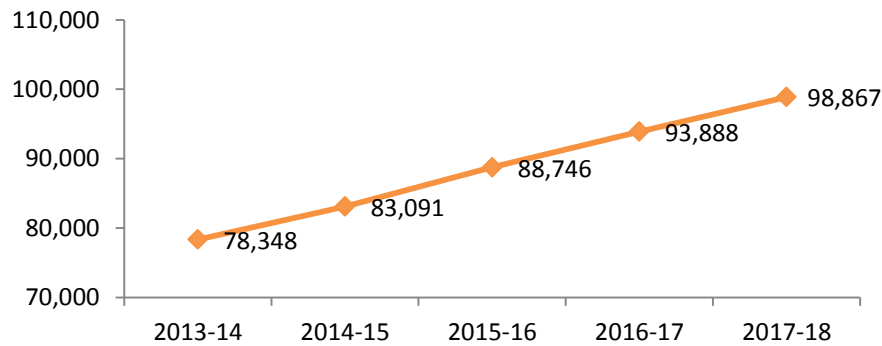
India’s demand for healthcare services is expected to remain higher in financial year 2018-19 backed by various factors that have provided adequate opportunities to the industry. The significant factors that will drive the demand for healthcare services are stated below:

a. Increase in per capita income

The per capita income of India is on an increase which paves the way for more demand of healthcare services as a rise in per capita income increases the ability of population to afford various expenses. This, in turn, supports the need of quality medical care that comes at a relatively higher price. The y-o-y growth in India’s per capita income remained in the range of 5%-7% during the last five years as depicted in Chart 8 below.

However, it becomes equally important to pay attention to the fact that an increase in per capita income does not necessarily imply that income from weaker sections of the society is on a rise as people in India are at different levels of income distribution. *Therefore, the improvement in healthcare expenditure is likely to be led by households that have a spending capacity.*

Chart 8: Trend in India’s per capita gross domestic product (GDP) at constant market prices (in Rs.)

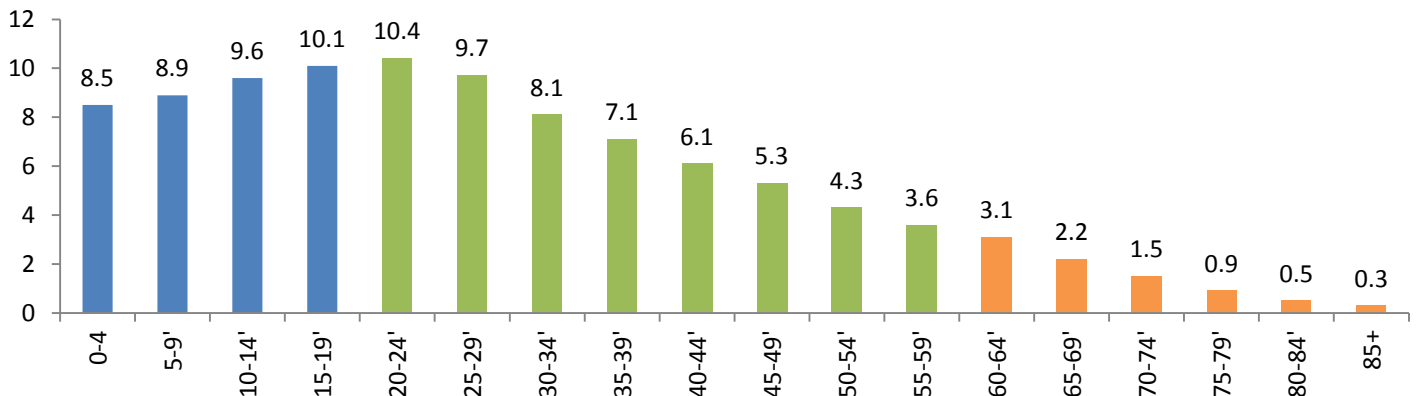


Source: CMIE, Base year 2011-12

b. Demographic situation

The share of India’s working age group (20-59 years) is 54.6% as shown in Chart 9, which is more than half of the total population in the country. *The productive demographic group would want to resort to modern and efficient healthcare services for treatments instead of relying on under-equipped facilities which, in turn, would augment the need of healthcare services. Moreover, increasing income from this age group will also serve as a major source of demand for these facilities.*

Chart 9: Percentage distribution of estimated population by age-group, 2016



Source: National Health Profile 2018

c. Transition in disease profile

Over the years, there has been a substantial change in the disease profile of Indians. As shown in Table 3 below, the share of communicable, maternal, neonatal, and nutritional diseases for death decreased to 27.5% in 2016 from 53.6% in 1990 and that of non-communicable diseases increased to 61.8% in 2016 from 37.9% in 1990. *This represents the transition or shift in the disease profile of population in India which provides an ample scope of opportunity for healthcare services in the country as the non-communicable diseases tend to be of long duration which, in turn, increases the need for healthcare services with respect to non-communicable diseases.* Malaria, dengue fever, common cold, cholera etc. are referred to as communicable diseases and diseases like cancer, diabetes, cardiovascular diseases and stroke etc. are referred to as non-communicable diseases.

Table 3: Contribution of major disease group to total deaths in India

	1990	2016
Share of communicable, maternal, neonatal, and nutritional diseases	53.6%	27.5%
Share of non-communicable diseases	37.9%	61.8%
Share of injuries	8.5%	10.7%

Source: Health of the Nation's States 2017: India Council of Medical Research

d. Increase in health insurance market

Health insurance encourages the demand for healthcare services as the insured pays premium for policy which is reimbursed by the insurer in case he/she has to undergo treatment on account of illnesses, sickness or diseases. *This insurance thus to an extent covers the health expenses of an individual which eventually reduces his/her burden of healthcare costs. Therefore, an expected increase in health insurance market will drive the demand for healthcare services.*

Chart 10: Trend in health insurance premium

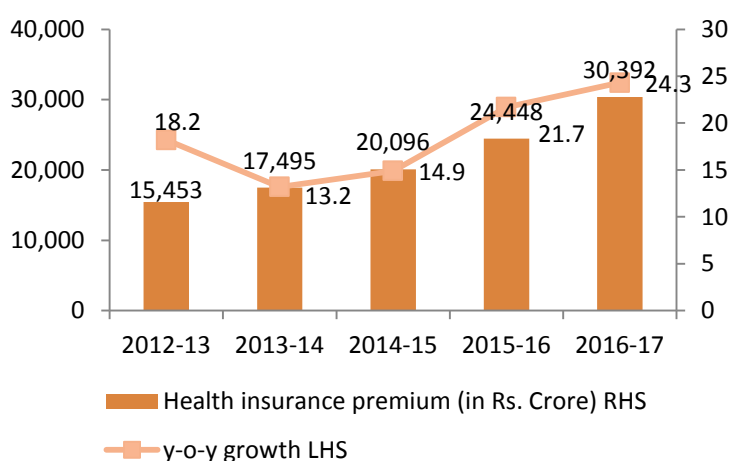
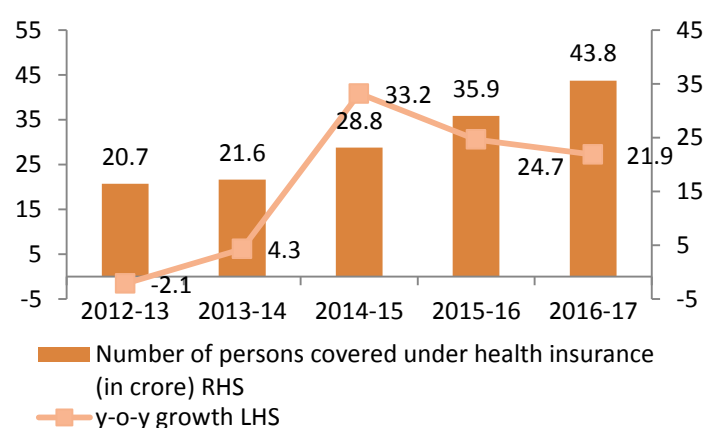


Chart 11: Trend in number of persons covered under health insurance



Source: IRDAI

From the above charts, it can be seen that the market for health insurance is on a rise. The health insurance premium and the number of persons covered under health insurance almost doubled to what their levels were in 2012-13. In 2016-17, the health insurance premium stood at Rs.30,392 crore and the number of persons covered under health insurance stood at 43.8 crore persons. The health insurance premium grew in double digits in each of the years during 2012-17 and the coverage of

persons under health insurance also increased in each of the years during 2012-17 except for 2012-13 where the coverage declined by 2.1% on a y-o-y basis.

However, it is to be noted that insurance penetration in India fails to keep pace with the world insurance penetration rate as shown in Table 4 below.

Table 4: Comparison of insurance penetration for calendar year 2016 (%)

	Total	Life	Non-life
India	3.49	2.72	0.77
World	6.28	3.47	2.81

Source: IRDAI

Note: For India, data relates to financial year 2015-16 & 2016-17

Insurance penetration is measured as ratio of premium (in US\$) to GDP (in US\$)

An increase in demand for quality healthcare services backed by an expected rise in per capita income and health insurance market coupled with a favourable demographic situation as explained above would augur well for the growth of healthcare services in India. Moreover, a shift in disease profile of the country is likely to increase the requirement of treatments for non-communicable diseases which would also support the demand for healthcare services. Resultantly, we expect the healthcare services industry in India to grow at a pace of 13%-15% during financial year 2018-19.

While hospital & healthcare services industry has grown throughout the years and is likely to continue to witness the trend, there is still a significant set of population that remains uncovered due to their lower spending capacity on healthcare, lack of proper healthcare facilities and awareness about the illness among others. Given that the healthcare services get extended to this set of population, the industry will witness tremendous growth. However, this will depend to a great extent on government and private participation **to develop a healthy India.**

Concluding remarks

- Lower expenditure by government or public sector on healthcare facilities is one of the prime reasons that provide opportunity to private hospitals which, in turn, results in more consumption of private sector healthcare services.
- The increasing need for healthcare services offers enormous support to the private sector hospitals. Resultantly, these hospitals encash this demand and continue to grow.
- The performance of corporate hospitals can be understood through indicators like ARPOB, ALOS and occupancy ratio.
 - It is seen that ARPOB for most of the hospitals have been on a rise over the years which indicate higher average revenue realised by a hospital from every occupied bed.
 - Also it is observed that the hospitals have been trying to reduce their respective ALOS throughout the years. Lower ALOS helps in faster turnaround of beds which result in more patients to be treated from the current facilities.
- The healthcare services industry in India is expected to grow at a pace of about 13%-15% during financial year 2018-19 on account of a likely rise in per capita income and health insurance market coupled with favourable demographic situation and a transition in disease profile of the country.

- *An increase in per capita income does not necessarily imply that income from weaker sections of the society is on a rise as people in India are at different levels of income distribution. Therefore, the improvement in healthcare expenditure is likely to be led by households that have a spending capacity.*
- *It is to be noted that insurance penetration in India fails to keep pace with the world insurance penetration rate. While the total insurance penetration rate for world stood at 6.28% in 2016, it was 3.49% for India.*

In the appendix attached below, we have discussed about the healthcare situation and expenditure in India which highlights details as to where do India stands compared to other countries on various parameters. Also, the appendix has some details on Ayushman Bharat scheme.

Appendix

Insights on healthcare situation and expenditure in India

Importance of healthcare in an economy

The most important resource that any economy can have is its population and therefore it becomes important for a country to continuously invest towards the development of manpower in terms of health and education. Healthy and skilled population can drive the growth of an economy. Thus, looking after the well-being of this resource is one of the primary responsibilities of any government. This responsibility, in turn, marks the importance of healthcare system in a country.

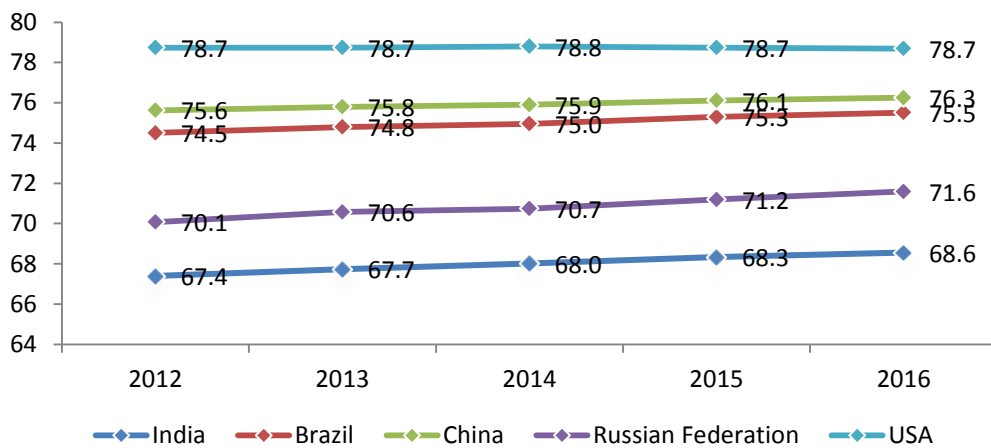
The report highlights the health and healthcare situation in India compared with other countries through some of the below mentioned indicators.

Life expectancy at birth

Life expectancy at birth refers to the number of years a new born infant would survive given the pattern of mortality at the time of infant’s birth was about to remain the same throughout the infant’s life.

For India, the life expectancy at birth has increased over the years and has improved from 67.4 years in 2012 to 68.6 years in 2016. The improvement in life expectancy can be attributed to better nutrition, comparatively better healthcare facilities and treatment over the years, more awareness about diseases etc. in the country. Despite this, the country lags behind when compared on international front as clearly stated in the below chart.

Chart 1: Country-wise Life Expectancy at birth (in years)



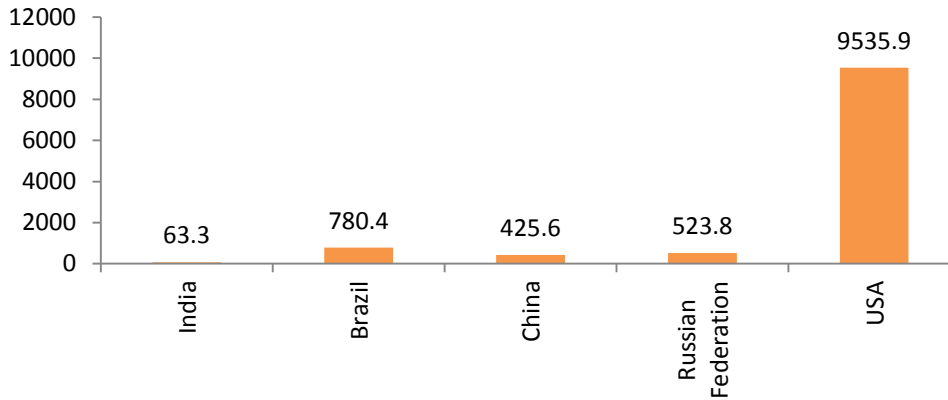
Source: World Bank

The life expectancy at birth for all the countries mentioned above (Brazil, China, Russian Federation – developing nations and USA – developed nation) have remained higher compared with India. For USA, the life expectancy was as high as 78.7 years in 2016 and for developing nations including Brazil, China and Russian Federation the life expectancy at birth was 75.5 years, 76.3 years and 71.6 years, respectively.

One of the reasons for lower life expectancy in India can be lower per capita expenditure by the country towards health as depicted in Chart 2. For year 2015, India’s health expenditure per capita was as low as USD 63.3 compared to health

expenditure per capita of Brazil, China and Russian Federation that was in the range of USD 420-USD 785. For USA, this expenditure was as high as USD 9,535.9.

Chart 2: Current health expenditure per capita in 2015 (in current US\$)

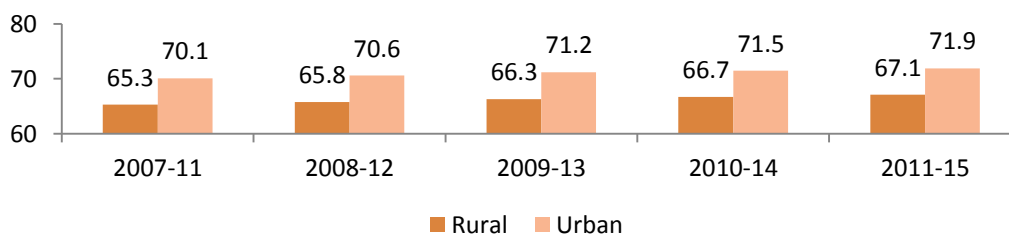


Source: MoSPI

Poverty is one of the reasons for lower health expenditure in India. As per National Health Profile 2018, 21.9% of the total population in India falls below poverty line (it represents data for percentage of population below poverty line 2011-12) and it is very likely that this population is unable to spend sufficiently on healthcare treatments. This is also coupled by lower medical care expenditure by rural population (that accounts for about 68% of the total population in India) compared to urban populace. For 2011-12, the monthly per capita expenditure on medical care for rural population was Rs.95, while for urban population it stood at Rs.146.

In addition to this, concentrated healthcare facilities in urban areas also compound the problem as these facilities are not so easily accessible and within the monetary reach of most of the people living in rural and remote areas of the country. These problems are also visible when we compare the life expectancy of population in rural and urban areas as shown in Chart 3.

Chart 3: Life expectancy at birth for rural and urban areas (in years)



Source: National Health Profile 2018

As can be seen, life expectancy has grown over the years for both the areas, rural and urban. However, it has remained higher for urban areas compared to rural areas. For 2011-15, while the life expectancy for rural areas stood at 67.1 years, for urban areas it stood at 71.9 years.

Apart from these issues, drinking water facilities, nutritional intake, sanitation facilities, awareness about diseases etc. are also important factors that influences the health of a person and urban areas are believed to have a better score on these parameters when compared to very rural and remote areas in the country.

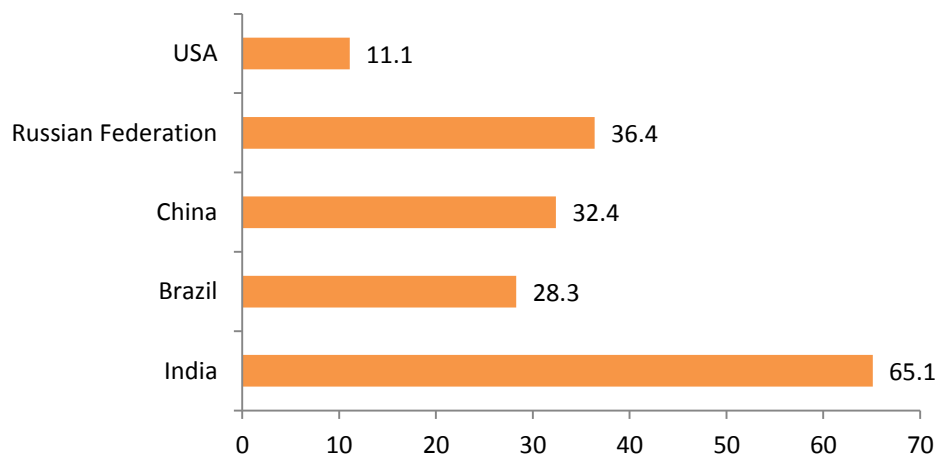
While the factors mentioned above influences the health expenditure of the country, higher out of pocket expenses also affects the spending capacity of the total population.

Out of pocket expenses (OOP)

Out of pocket expenses are a part of private health expenditure and are those expenses which are not covered under insurance or by government and therefore are not reimbursed.

Of all the countries mentioned in Chart 4, out of pocket expenses are the highest for India accounting for 65.1% of the total expenditure on health. It implies that Indians pay the highest from their pockets on health among these countries. For Brazil, China and Russian Federation, this expense stood in the range of 28%-37%, while for USA the expense was as low as 11%.

Chart 4: Out-of-pocket expenditure in 2015 (% of current health expenditure)



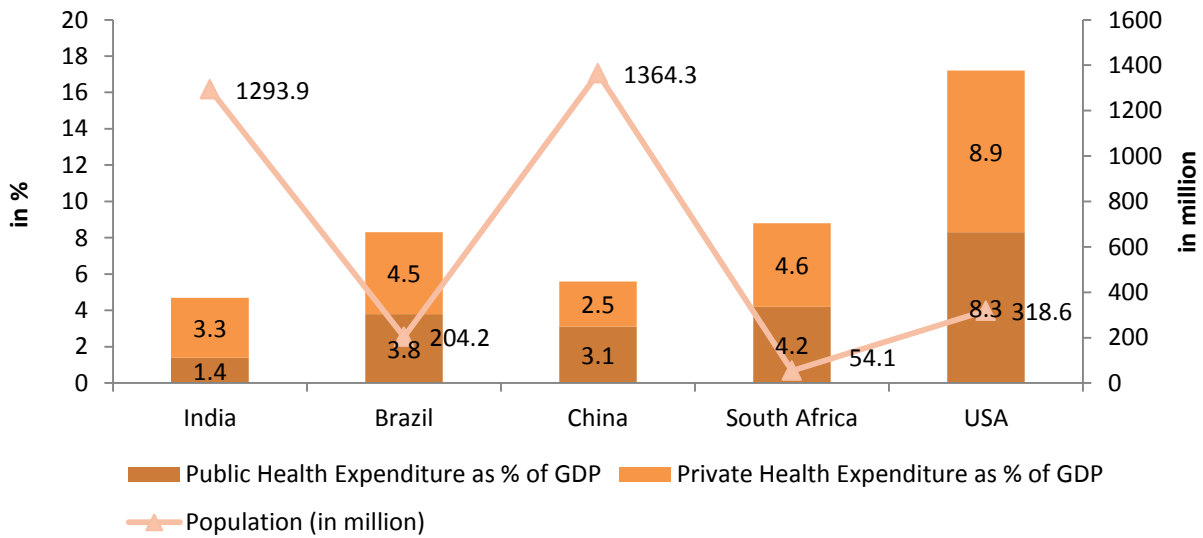
Source: World Bank

Lower expenditure by India’s government towards health can also be considered as one of the reasons as to why the country has such high out of pocket expenses. One more reason could be that fewer people are covered under insurance.

Public health expenditure

India’s health expenditure as percentage of GDP is the lowest compared to the countries mentioned in the chart below. India’s total health expenditure as percentage of GDP is 4.7% for the year 2014 which caters to the population of 1,293.9 million. Of this, contribution by the government towards health expenditure is 29.8%, thus public expenditure as percentage of GDP is 1.4%. The rest 70.2% contribution towards health expenditure is through private route.

Chart 5: Country-wise total (public and private) health expenditure as % of GDP and population in 2014



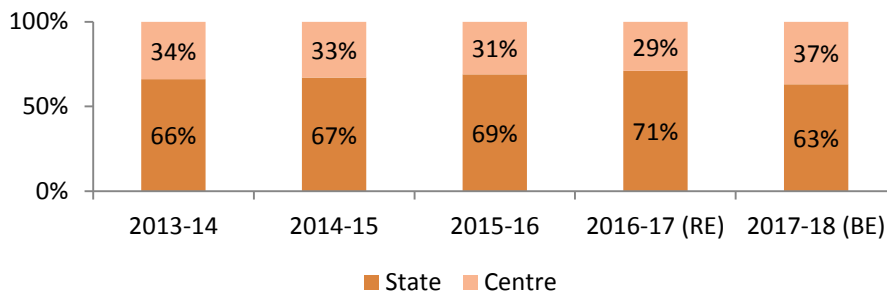
Source: World Bank

For USA, the total health expenditure as percentage of GDP is a stupendous 17.1% that caters to a total population of 318.6 million. Of this, the public health expenditure as percentage of GDP for the country stood at 8.3% during 2014.

Financing of public health expenditure

The Indian public health expenditure is financed by the central government as well as the state governments. Contribution of the centre and state governments towards health expenditure is mentioned below.

Chart 6: Trends in centre-state share (%) in total public expenditure on health



Source: National Health Profile 2018

From the above chart, it can be seen that the contribution of the centre towards health expenditure has remained in the range of 29%-37% during 2013-18 while majority of the contribution has come from the state governments. As per the April 2017 official press release, of the total Rs.1,80,656.8 crore budget estimated for the financial year 2016-17 on health sector, Rs.1,30,782.4 crore was contributed by the state governments and union territories while the government of India contributed Rs.49,874.3 crore towards health sector.

In the Union Budget 2018-19 as part of public expenditure, the central government announced two major initiatives under **Ayushman Bharat** programme. These two initiatives are Health and Wellness Centre and National Health Protection Scheme.

Health and Wellness Centre

An allocation of Rs.1,200 crore has been made for 1.5 lakh health and wellness centres which will help bring health care system closer to the homes of general population and also these centres will provide free essential drugs and diagnostic services.

National Health Protection Scheme (NHPM)

The announcement of this scheme has created many headlines and is something that has created buzz around healthcare services. Under this scheme, over 10 crore poor and vulnerable families (covering approximately 50 crore beneficiaries) will be covered and a coverage up to Rs.5 lakh per year per family for secondary and tertiary care hospitalization will be provided. The government added that the scheme will be funded adequately for its smooth implementation. The announcement of this scheme is laudable as it would broaden the coverage and provide better insurance cover. However, implementation of this scheme is very likely to face various challenges which are discussed in the report.

Implementation of NHPM

Implementation of the scheme will be led by the central government through Ayushman Bharat National Health Protection Mission Agency (AB-NHPMA) and the states/Union Territories (UTs) would be implementing the scheme by setting up a dedicated entity called State Health Agency (SHA). The states can implement the scheme either through insurance company, trust model or integrated model.

Under the insurance company model, the state government would invite bids from insurance companies where the insurers would quote a premium which is to be paid by the state governments to them. The trust model will not require dealing with insurance companies and the state government would set the price here and the integrated model is a combination of both, insurance company model and trust model.

Implementation of the scheme is dependent on various parties that involve states, insurance companies and hospitals. Resultantly, any inconsistency or discord with any of these parties could affect execution of this scheme and that calls for a major challenge.

Challenges associated with implementation of scheme

States: The centre aims to roll out the scheme for the entire country on 25th September 2018. However as of 27th August 2018, 29 states and UTs have signed Memorandum of Understanding (MoU) for implementing Ayushman Bharat scheme as per the official release. Some states may not want to enrol for this scheme and would want to continue with their state government schemes citing more benefits under them like Odisha. Also, some of the state governments may not want to roll out the scheme under centre's name. It is to be noted that many states are opting for trust model.

Insurance companies: If scheme is implemented through insurance company model, the states will have to consider the quotes the insurers give for premium. On the other hand, the central government estimates the premium to not exceed Rs.2,000 per year which may not go well with the private insurers and will act as a barrier considering roll out of the scheme. The premium will be funded in the ratio of 60:40 by the centre and state governments, respectively. For 8 north-east and 3 Himalayan states, funding of the premium will be in the ratio of 90:10 for centre and states, respectively.

Hospitals: Under this scheme, all the public hospitals with inpatient facilities (Community Health Centre and above) shall be deemed to be empanelled and the private healthcare providers (both for profit and not for profit) which provide hospitalization and are eligible for empanelment under Pradhan Mantri Rashtriya Swasthya Suraksha Mission (PMRSSM) would be considered.

For execution of the scheme, the centre has set rates for 1,350 treatment packages which cover cardiology, orthopaedics, urology, general surgery, burns management, neo-natal, paediatric cancer, oncology among others. However, some private hospitals that represent Industry Bodies and Professional Association have requested to increase the package rates for hospitals under the scheme. The treatment packages for coronary bypass, knee replacements and stents among others are cheaper compared with packages under the Central Government Health Scheme (CGHS). Under the tender for Ayushman Bharat, the rate given for coronary artery bypass grafting (CABG) is Rs.90,000 whereas the rate under CGHS 2014 for Bangalore was at Rs.1,25,300 (non-NABH) and Rs.1,44,095 (NABH). Thus revision or non-acceptance of package rates by hospitals will also hamper rolling out of the scheme.

The private as well as public hospitals are expected to charge the same rates as mentioned in the treatment package though it is a known fact that the treatments in private hospitals are much more expensive compared with public hospitals. To offset this or to provide some relief to the private players, the private hospitals may get up to 40% higher rates given they fulfil certain conditions.

- The hospitals can charge 10% more if they are NABH accredited hospitals
- The hospitals that offer PG courses can add 10% more
- The hospitals in 115 backward districts can charge another 10%
- Also the states can offer 10% more on the rates offered by Ayushman Bharat

Financing of the scheme

The government has mentioned in the Union Budget 2018-19 that it will be funding the scheme adequately so that it functions smoothly. However, the government has made no clear allocations towards the scheme that will subsume Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS).

While the coverage provided under RSBY is Rs.30,000 per annum for the unorganised sector worker and his family (a unit of five members), the coverage under Ayushman Bharat scheme is a sharp increase to Rs.5 lakh per annum for a family of five members. This, in turn, will definitely increase the premium cost and thus the expenditure by the centre. In the Union Budget 2018-19, the government has allocated a total budget of Rs.2,000 crore for RSBY, this is a stupendous rise of 325.1% compared with Rs.470.5 crore allocated for 2017-18 revised budget for the scheme. More allocation of the funds towards RSBY indicates government's intentions to spend towards Ayushman Bharat scheme.

On the other hand, if we consider premium of Rs.2,000 per annum as expected by the government for 10.74 crore families, the outlay would come at Rs.21,480 crore per annum. Of this, around 60% of the payment is to be made by the centre, thus the central government will have to bear the cost of about Rs.12,888 crore. While we see an allocation of Rs.2,000 crore towards this scheme, the allotment for the remaining funds is not very straightforward.

Government claims

As per media reports, the government has decided to allocate funds of Rs.10,000 crore for the scheme. Also, in the Union Budget 2018-19, the 3% cess on education was replaced by 4% health and education cess. This fund is also likely to be used for implementation of Ayushman Bharat scheme.

As per the National Health Profile 2018, India spent 1.02% of GDP as public expenditure on health during 2015-16 and the government has committed to increase the public expenditure on healthcare up to 2.5% of GDP by 2025. The Sustainable Development Goals (SDG) 2017: Agenda 2030 recommended increasing health spending to at least 5% of GDP.

The difficulties in implementing the scheme would not just be limited to the factors mentioned above like agreement of all the parties and financing of the scheme but would also be hindered by lack of health infrastructure and health human resource.

Health infrastructure and health human resource: a challenge

It is not just with healthcare expenditure that India is not at par with various countries, the country also lags behind in other parameters as well like health infrastructure and health human resource.

Table 1: Rural Health Infrastructure

Indicator Rural population (Census 2011) covered by a:	National norms		Status (2017)	
	General	Tribal/Hilly/Desert	General	Tribal/Hilly/Desert
Sub Centre (SC)	5,000	3,000	5,337	3,327
Primary Health Centre (PHC)	30,000	20,000	32,505	23,315
Community Health Centre (CHC)	1,20,000	80,000	1,48,248	91,264

Source: National Rural Health Mission

From the above table it can be seen that the rural population covered by SC, PHC and CHC exceeds the national norms. This indicates that there is a need to develop and dedicate infrastructure for this population because it will help provide better treatment to them.

As per National Health Profile 2018, the number of sub centres, PHCs and CHCs functioning in India are 1,56,231, 25,650 and 5,624, respectively, as on 31st March 2017.

As per World Health Statistics, for the primary data 2007-2016 the density of physicians per 1,000 population for India stands at 0.8 which is very low compared with the USA number that stands at 2.6. As per National Health Profile 2018, India has a density of 30.2 skilled health professionals (physicians/nurses/midwives) per 10,000 population and the Sustainable Development Goal (SDG) target set is a density of 44.5 per 10,000 population. In terms of infrastructure, India has 7 hospital beds whereas the USA has 29 beds to serve per 10,000 population, this is for the primary data 2006-2012.

To achieve the ratio reported by the USA with respect to density of physicians, India will require addition of around 24.4 lakh physicians in the country.

In the Union Budget 2018-19, the government allocated Rs.1,200 crore for 1.5 lakh health and wellness centres for the benefit of general population. Apart from this, the government announced setting up of 24 new government medical colleges and hospitals by upgrading existing district hospitals in the country. *While allocation has been made keeping in view lack of infrastructure and human resource, the critical problem on these parameters will continue to remain as solving this issue is not an overnight process and will need tremendous efforts from the central and state governments.*

Healthcare consumption in India

The Ayushman Bharat scheme will reduce OOP expenditure to some extent as this scheme subsumes RSBY. Under RSBY, 3.63 crore families were covered in 278 districts of the country and they could avail medical treatment across the network of 8,697 empanelled hospitals during 2016-2017. The newly announced scheme as such aims to cover 10.74 crore families and to provide a coverage of Rs.5 lakh per annum for each family. *The augmentation in coverage will help to increase consumption from poor and vulnerable sections of the society who otherwise restricts their healthcare expenditure due to economic concerns.* However, execution of the scheme will be a challenge as discussed in the report.

OOP expenditure in India is over 60% which leads to nearly 6 million families getting into poverty due to catastrophic health expenditures. Thus there is urgent need for the government to increase the healthcare expenditure towards this segment of people. Nevertheless, demand for healthcare services would continue to be led by households that have a spending capacity backed by an increase in per capita income, health consciousness, and rise in health insurance market among others as briefed above.

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