International Journal of Social Science and Economic Research

ISSN: 2455-8834

Volume:03, Issue:10 "October 2018"

HEALTHCARE COSTS AND QUALITY: AN INDIAN PERSPECTIVE

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ABSTRACT

Recent developments in Indian healthcare service delivery, healthcare costs and its quality have become significant areas of concern. The need for appropriate healthcare service is rapidly growing with rising population and varying levels of affordability for such services, same is the demand for quality healthcare services. Better quality of medical care is expected by anybody seeking the services but also tagged with higher costs of hospitalization. This research paper attempts to investigate the relationship between the cost of hospitalization and quality of healthcare services in India. The findings have indicated an optimistic association between the cost of hospitalization and physical infrastructure, while a pessimistic association between staff to patient ratios was observed. Both of these relationships affect and contribute to the better quality of healthcare, their impact of cost of hospitalization varies considerably.

Keywords: Healthcare service delivery, Healthcare costs, Cost of hospitalization, Quality services, Healthcare policies.

1. SCENARIO OF INDIAN HEALTHCARE

A large composition 73.2% of healthcare expenditure in India is met by out-of-the pocket spending by the individual, due to which about 7.3% population is hard-pressed below the poverty threshold year after year. The Union Cabinet recently approved the launch of the National Health Protection Mission which was announced during Budget 2018-19. The Mission aims to provide a cover of five lakh rupees per family per annum to about 11 crore families belonging to poor and vulnerable population. The insurance coverage is basically for hospitalization at the secondary and tertiary healthcare levels. This paper explains the healthcare financing scenario in India, which is dispersed across the individuals, states, and center.

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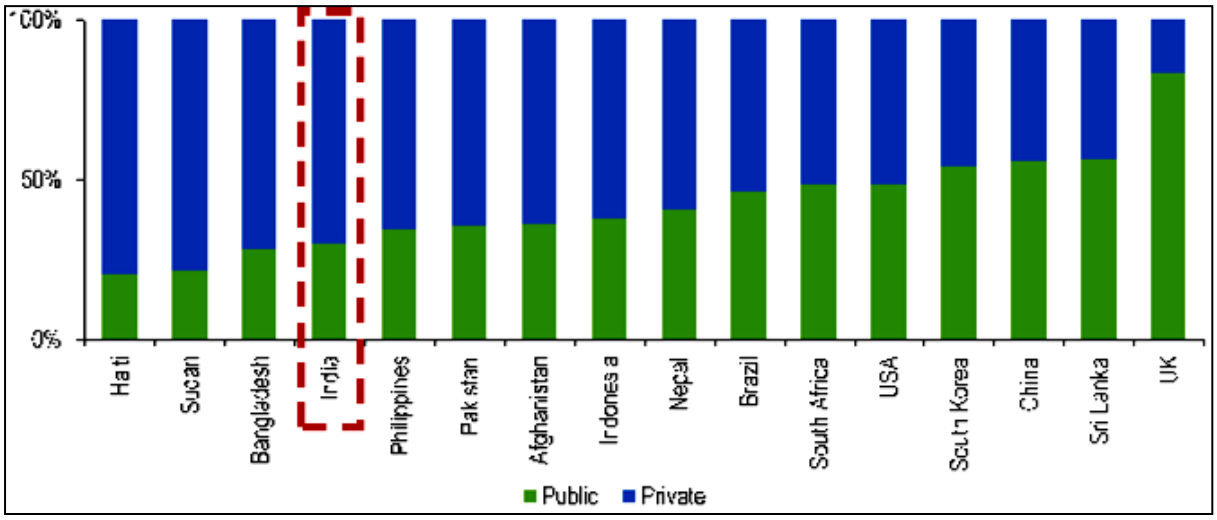
2. INDIAN HEALTH SPENDING IN CONTRAST TO OTHER COUNTRIES

The public health expenditure in India, including centre and state governments has remained unchanged at approximately 1.5% of the GDP between 2008 and 2016, and slightly increased to 1.6% in 2016-17. This is lesser than the world average of 6.2%. Note that the National Health Policy - NHP, in the year 2017 had proposed to increase this to 2.5% of GDP by 2025. Along with the private sector, the total health expenditure as a percentage of GDP is estimated at 3.8%. Out of the total expenditure, only about one-third 31% is contributed by the public sector in India. This contribution is far less compared to other developing and developed countries such as Brazil 46%, China 56%, Indonesia 39%, USA 48%, United Kingdom 83% etc. Following figure shows Public & Private split in the total health expenditure. *Source: WDI Health Systems, World Bank 2014*.



3. CONSUMERS PAY OUT-OF THEIR OWN POCKET

With the private-public divide of healthcare expenditure, it is relatively clear that it is the private health sector expenditure which dominates. The individual consumer incurs the cost of their own healthcare. When we look at a further disaggregation of private spending and public spending, certain facts come to the light. During 2018-19, the Ministry of Health and Family Welfare received an allocation of Rs 54700 crore. There is an increase of 2.1% over 2017 to 2018. The National Health Mission (NHM) received the highest allocation at Rs 30200 crore which constituted 56% of the total Ministry allocation. Table below shows the major allocations under the ministry, INR in Crores. *Source: MHFW 2018-19, Union Budget*. From the table it is pretty clear that, despite a higher allocation, NHM has seen a downtrend in the allocation especially during 2017-18. Interestingly, in 2017-18, the amount spent on NHM is expected to be Rs 4100

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crore more than what had been projected earlier. This may indicate a greater capacity to spend than what was earlier allocated. A similar trend is observed at the overall ministry level where the utilization of the allocated funds has been over 100% in the previous three years.

Major Heads	2016-17 Actuals	2017-18 Revised	2018-19 Budgeted	% Change	% of Ministry's budget
NHM	22,454	30,802	30,130	-2%	55%
Of which:					
-NRHM	19,826	25,459	24,280	-5%	
-NUHM	491	652	875	34%	
-Others	2,137	4,691	4,975	6%	
Autonomous Bodies (AIIMS, PGIMER, etc.)	5,467	6,971	6,900	-1%	13%
PMSSY	1,953	3,175	3,825	20%	7%
National AIDS & STD Control Programme	1,749	2,163	2,100	-3%	4%
Rashtriya Swasthya Bima Yojna	466	471	2,000	325%	4%
Family Welfare Schemes	575	788	770	-2%	1%
Others	6,331	8,924	8,875	-1%	16%
Total	**38,995**	**53,294**	**54,600**	**2%**	**100%**

NITI Aayog report in 2017 stated that low income states with low revenue capability spend significantly lesser on social services like health. Moreover, differences in the cost of delivering health services have contributed to health disparities among and within states. Subsequently after the Fourteenth Finance Commission recommendations, there has been an increase in the states share in central collection of taxes and they were given greater autonomy and flexibility to spend according to their priorities. Despite the improved share of states in central taxes, the increase in health budgets by some states has been marginal. Figure given below depicts Health expenditure by states in 2014-15 and 2017-18 as a percentage of the total budget. *Source: State budget documents, RBI 2018.*

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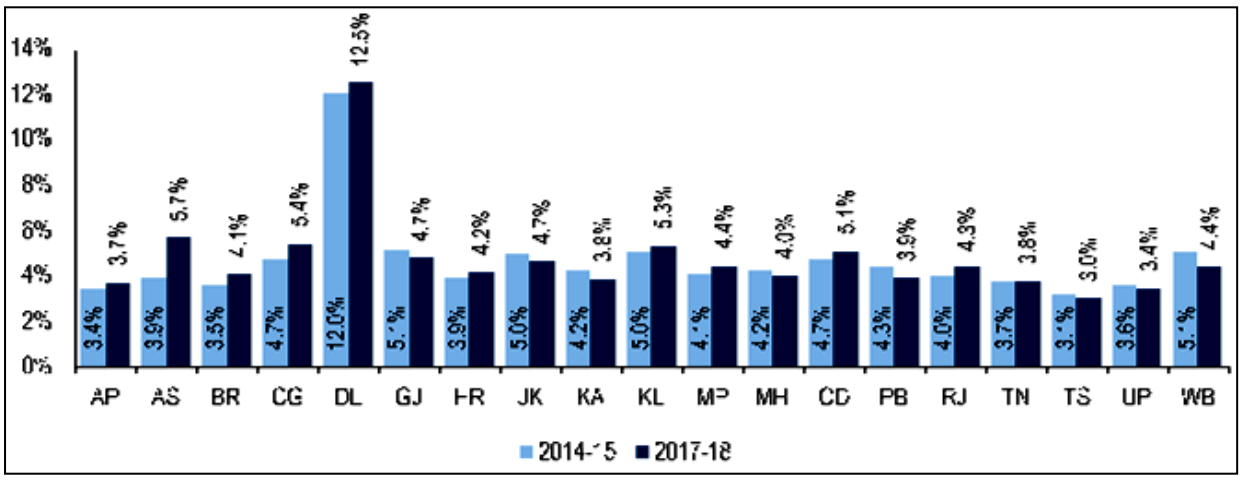

If cumulatively 31% of the entire health expenditure is incurred by the public sector, the rest of the health expenditure, i.e. approximately 71% is borne by consumers. Household health expenditures include out-of the pocket expenditures upto 94% and insurance 6%. Out-of-pocket expenditures are the payments made directly by the individuals at the service location, these are the expenses which are not covered under any financial protection scheme and they still dominate. The highest percentage of 53% out-of-pocket health expenditure is made towards medicines. Following figure shows out-of-pocket expenditure for major heads in the healthcare sector. *Source: Household expenditure in India, MHFW 2016*.

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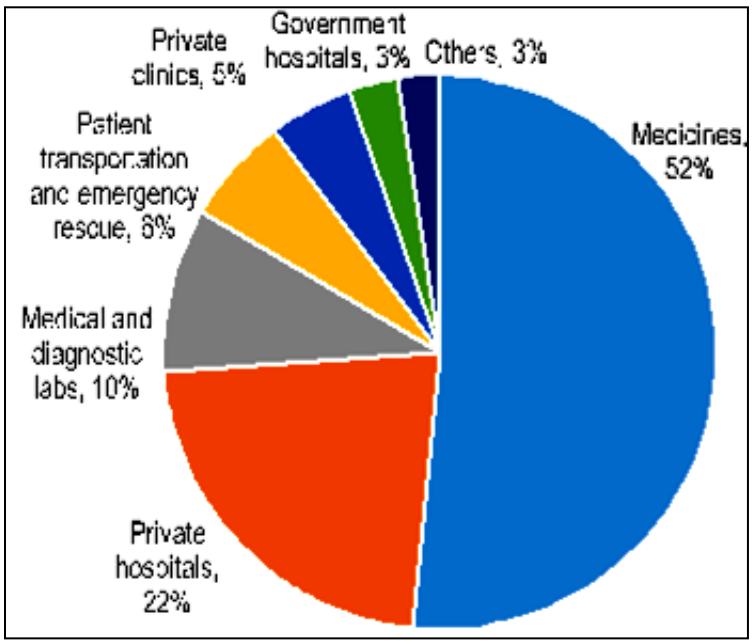

This is followed by 22% of the private hospitals, 10% of the medical and diagnostic labs, 6% of patient transportation and emergency rescue operations. 71% out-of the pocket expenditure is usually financed by household revenues. Following figure depicts the funds allocated on healthcare expenditure: *Sources of financing for current health expenditure. Source: National Health Accounts 2014-15.*

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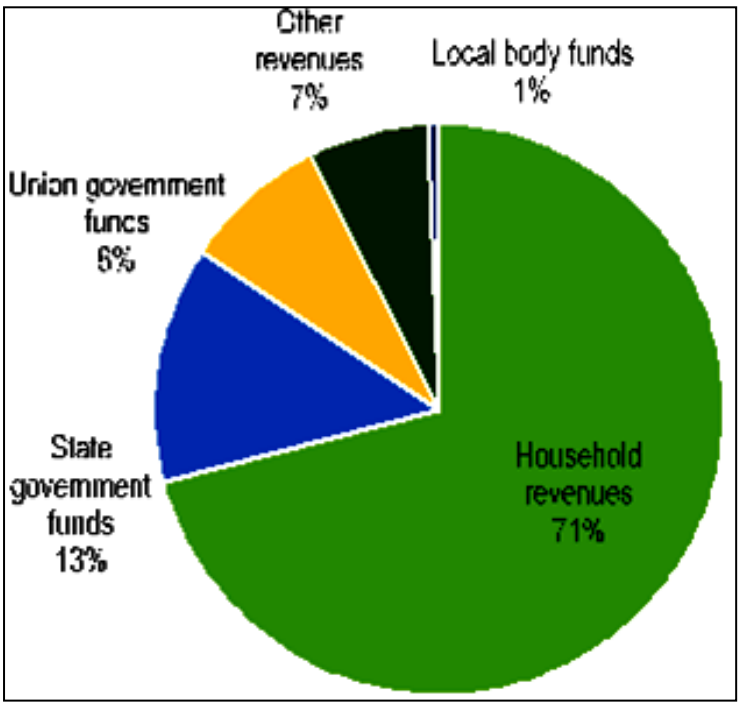

From various exhibits we can understand that 87% of rural population and 83% of urban population are not covered under any health expenditure scheme and support. Due to high out-of-pocket healthcare expenditure, about 7% population is pushed below the poverty threshold year after year. Out of the total number of persons covered under health insurance in India, 67% three-fourths are covered under government-sponsored health schemes, and the balance 33% one-fourth is covered by private insurers. With respect to the government-sponsored health insurance, more claims have been made and settled in comparison to the premiums collected, i.e., the returns to the government have been declining. It is mainly due to the implementation of newly proposed National Health Protection Mission (NHPM). Firstly, the NHPM scheme seeks to provide coverage for hospitalization at the secondary and tertiary stages of healthcare. The High Level Expert Group set up by the Planning Commission in the year 2011 recommended that focus of healthcare provision in the country should be towards delivering primary healthcare. It observed that focus on prevention and early resolution of health problems can reduce the need for complicated specialist care delivered at the tertiary level. Note that depending on the level of care required, health institutions in India are broadly categorized into three types: primary care provided at primary healthcare centers (PHC), secondary healthcare is provided at district hospitals, and finally tertiary healthcare institutions are established at specialized hospitals like AIIMS. Secondly, the intention of the Mission seems to be on hospitalization which includes pre and post hospitalization charges. However, the majority

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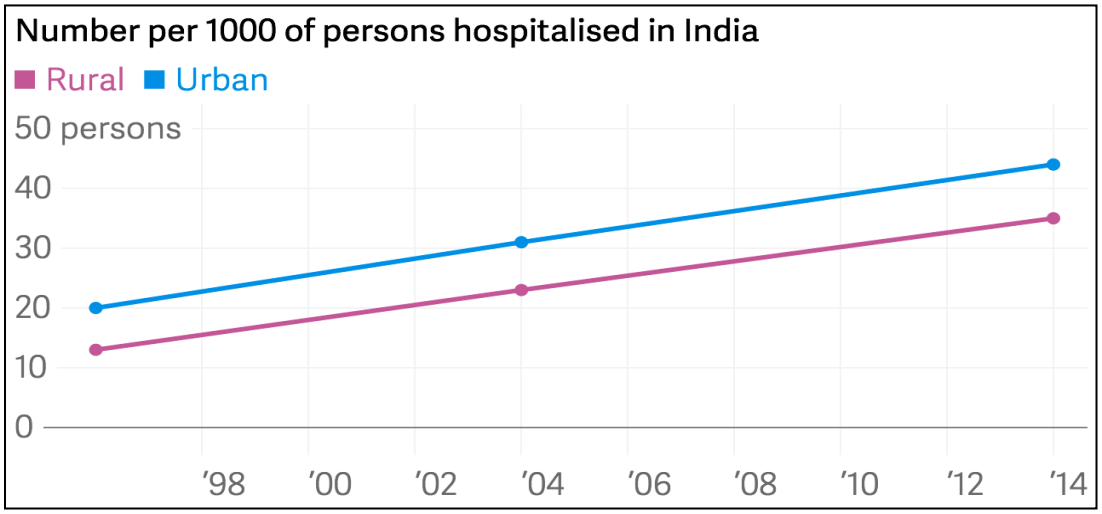
of the out-of pocket expenditure made by consumers is actually based on buying medicines up to 53% as discussed earlier. In addition, these purchases are generally made for patients who do not need hospitalization.

4. ASTONISHING HEALTHCARE COSTS IN INDIA

Indians are visiting hospitals in greater numbers than at any given point of time in the history and footfalls in the hospitals have increased in the present. Anything good for their health, may not be necessarily good for their pockets. Healthcare costs are rising exponentially since the last decade. A decade ago, about 32 out of every 1000 Indians in urban areas were hospitalized (childbirth is excluded) every year, according to the National Sample Survey Office's (NSSO) estimation in 2004. In 2014, according to the latest NSSO report, only 45 out of every 1,000 Indians end up getting hospitalized every year. The trend is constant in rural India, and represents the growth of healthcare facilities in both private and public, and the population's increasing ability to access healthcare services.



Up to 43% of rural patients visited public hospitals in 2014, a number that has remained stable since 2004. In urban areas, however, there has been a decisive shift towards private healthcare establishments.

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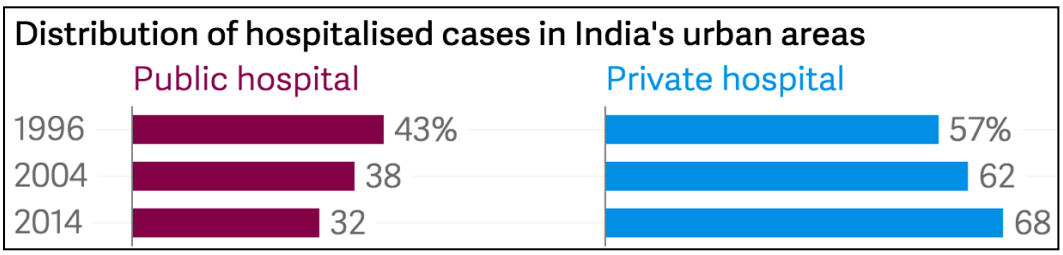
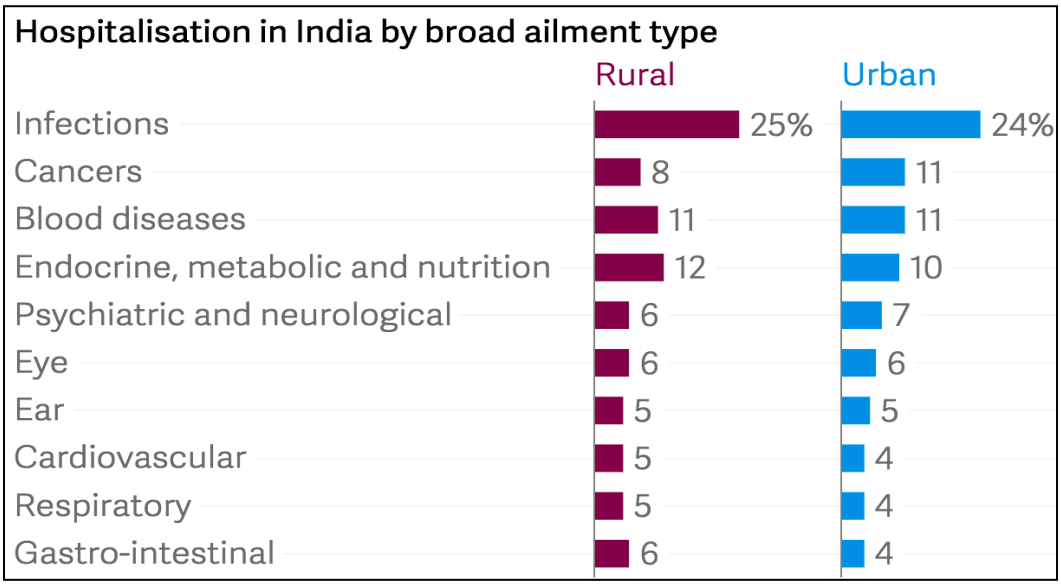


The majority of these hospitalizations were for infections, but a significant number were also for treatment of cancer and blood-related diseases.



The enhanced access to healthcare has also brought with it a enormous spike in costs. Between 2004 and 2014, for example, the average medical expenditure per hospitalization for urban patients increased by about 177%. For rural patients, it jumped by a little over 163%. During the same period, India's GDP per capita, based on purchasing power parity (current international USD$), grew by 121%.

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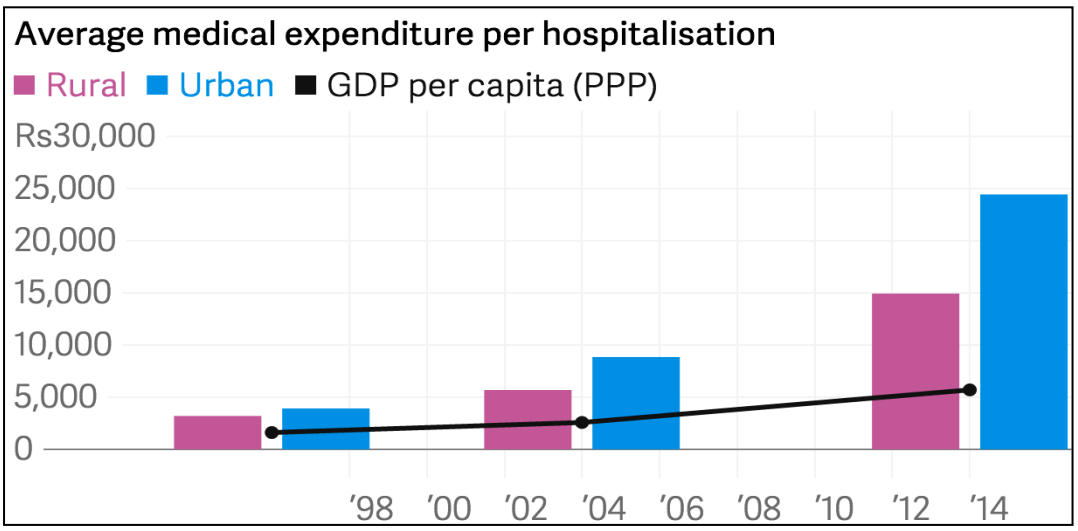
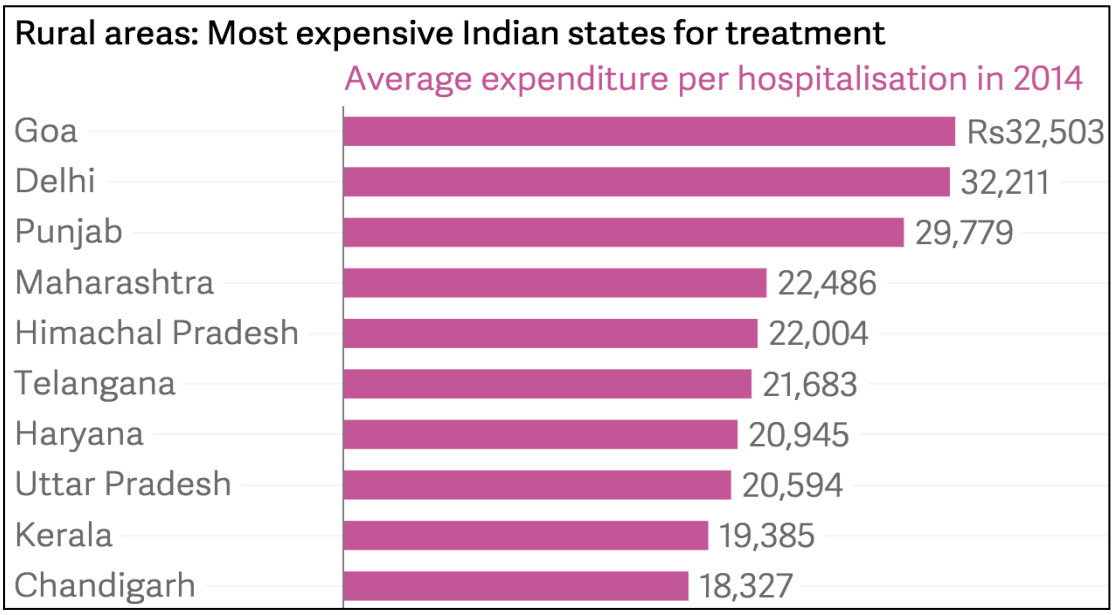


There is, however, substantial disparity in the cost of healthcare across states, for both urban and rural areas.



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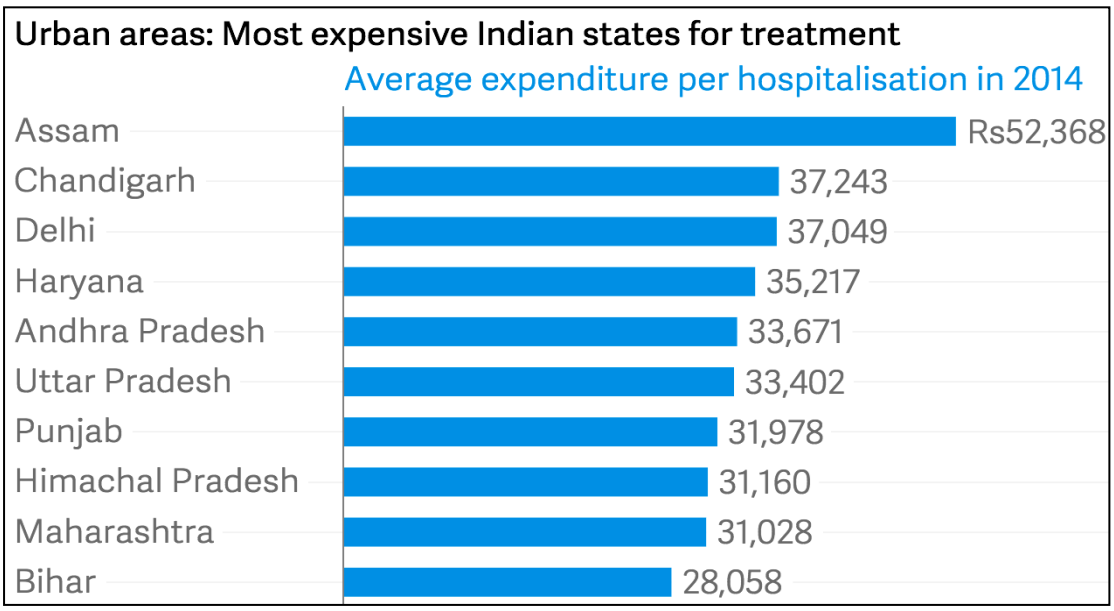

Moreover, this ranking hasn't remained static. The list below consists of the 10 most expensive states for hospitalization in rural areas in 2004, which have subsequently seen costs grow by anywhere between 83% and 265% over the past 10 years.

State	2004 (Rs)	2014 (Rs)	Increase
Punjab	12,755	29,779	133.47%
Uttarakhand	10,731	27,883	159.84%
Uttar Pradesh	9,417	20,594	118.69%
Himachal Pradesh	8,867	22,004	148.16%
Haryana	8,548	20,945	145.03%
Rajasthan	8,294	15,609	88.20%
Bihar	7,413	13,626	83.81%
Karnataka	6,271	16,118	157.02%
Andhra Pradesh	6,237	15,411	147.09%
Maharashtra	6,160	22,486	265.03%

Such spikes do no favours to India's massive, uninsured population. Over 85% of Indians in rural areas and 82% of urban residents have no health expenditure support. "On the whole, the poorer households appear unaware or beyond the reach of such coverage, both in rural

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and urban areas," the NSSO explained in its report. That's why the Narendra Modi government's push for the National Health Protection Scheme, which provides a cover of Rs1 Lakh per family, as a possible measure to fix India's creaking healthcare system, makes sense. But given the incredible rise in costs in the last decade alone, Rs.1 Lakh for a family of four may not amount to much.

5. RISING HEALTHCARE COSTS DRIVE 5.6 CRORE INDIANS BELOW POVERTY LINE

India is considered as the world's pharmacy bowl, but ironically a large chunk of its population slips below the poverty line due to exorbitantly priced medicines, mostly for cancer, injuries and heart ailments. A study published in *British Medical Journal* (BMJ) points out that the proportion of the population reporting out-of-pocket (OOP) payments on medicines has increased from about 60% in 1993-1994 to 80% in 2011-12. The study, the first ever attempt to link health expenditure to disease conditions, was released on June 6. In 2011-12, OOP for medicines pushed about 3.8 crore persons into poverty, of the 5.5 crore that were impoverished due to total health costs, including lab tests, diagnostics, doctor and surgeon fees. Among the leading cause of diseases that caused significant OOP payments are cancers, injuries, cardiovascular diseases, genitourinary conditions and mental disorders, according to Health Economics, Financing and Policy, at the Public Health Foundation of India (PHFI). Households incur the highest monthly per-capita OOP on account of cancer followed by injuries and cardiovascular diseases. For example, the average maximum retail price (MRP) of the top three leading brands for Bortezomib injection, an anti-cancer drug, is Rs.11,420. A patient has to make repeated purchases of the drug over the period of treatment. According to the State-specific poverty line defined by the Tendulkar Committee as ranging from a person earning Rs.695 a month in Odisha to Rs.1019 a month in Kerala, the percentage of households falling below the poverty line increased from 4.18% in 1993-94 to 4.49% in 2011–12, the study states. Apart from Rajasthan and Tamil Nadu, no State has an effective drug supply chain. Strengthening government intervention in providing medicines free in public health facilities can reduce spending on medicine.

6. ADDRESSING INDIA'S RISING HEALTHCARE COSTS

The Indian healthcare sector needs to adopt innovative measures to reduce the overall cost of services. Promotion of health insurance, digital healthcare including IT-based solutions and quality asset management can reduce out-of-pocket expenditure considerably.

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India aspires to provide quality and affordable healthcare to all. Challenges are many, which range from a rise in diseases, both communicable and non-communicable, to maintaining quality access and affordability, health infrastructure, financing, rational pricing of essential devices, trust deficit, policies and regulatory framework. The National Health Policy (NHP) of 2017 envisages Universal Health Coverage (UHC) for all. However, high cost of medical services is ailing this sector and we need to address this challenge. Approximately 63 million people fall into poverty each year due to lack of financial protection for healthcare needs. With a 23% shortage of primary health centers and 33% shortage of community health centers, it is estimated that 50% of beneficiaries travel more than 100 kms to access quality care. India has only 1.1 beds per 1000 population in India, compared to the world average of 2.7. Out of pocket expenditure constitutes more than 62% of all health expenses, a major drawback in India where a large segment of the population is below the poverty line. Reducing cost of healthcare services needs to be given top priority if the country aims to achieve UHC by 2030. India needs a holistic and balanced approach to bring down the cost of healthcare services through rational policies, health schemes, innovations and solutions. Apart from price control measures, we need to explore other mechanisms to ensure affordable services through overall asset management by taking innovative 'digital health' initiatives and systematically focusing on 'prevention and wellness'.

7. MAKING HEALTH INSURANCE MANDATORY

Currently, only around four per cent of the country's population has health insurance coverage. This has essentially led to a situation where out of pocket healthcare spending constitutes 86 per cent of total healthcare spends. The reason for the low penetration of health insurance is because currently, it is optional. While the Government has taken laudable steps to introduce health insurance scheme for economically weaker sections of the society and senior citizens in the last Budget, it can also explore making health insurance coverage mandatory for all citizens in a phased manner, initially covering the organized sector.

8. ROLE OF HEALTHCARE TECHNOLOGY

NHP 2017 envisages UHC and recognizes the criticality and importance of technology in driving the growth of this sector. The Med Tech sector plays critical role in achieving UHC with high spending in R&D and innovations in order to provide quality and safety in patient care. To help encourage domestic manufacture of MRI devices, as a part of the 'Make in India' strategy and make technology more accessible and affordable, there is a need to lower the existing rate of customs duty as it would take around 2-3 years for domestic manufacturers to introduce this technology to India, given the need for investments. It is also important to create an environment supportive of domestic manufacture of essential items, but care must be taken to import high-

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tech medical equipment, like Linear Accelerator, PET-CT, MRI, heavy duty blood testing automated analyzers and their reagents, at nominal rate of import duty so that high quality diagnostics and treatment are available to the masses at affordable prices.

9. ENGAGING PRIVATE SECTOR NETWORK'S CAPACITY

Given the enormity of the challenge, there needs to be a way forward to fully engage entire private network's capacity, skill and knowledge. The private sector can play an effective role in supporting this endeavour. While unethical profiteering is deplorable, it has been proved that new solutions and innovations offer enough scope for the private sector to cut down prices to a reasonable level, which can help achieve accessibility and affordability without compromising on the minimum standards of quality. For private sector, cost of service delivery has gone up several times. However, with proper asset management, activity-based costing and new IT-driven solutions in admission transfer and discharge and focus on other areas can bring in the desired reduction in costs.

10. THE IMPACT OF GOODS AND SERVICE TAX (GST) FACTOR

The sale of healthcare equipment, devices and services to healthcare service providers, such as hospitals and diagnostic clinics, is chargeable to indirect taxes. However, the final sale of patient care / diagnostic services by the hospitals / clinics is exempt from indirect taxes (such as VAT and service tax). This results in accumulation of indirect taxes at the level of hospitals and clinics. Since healthcare providers are unable to pass on these taxes to their final consumer - the patient, they will have no option but to bake these taxes into their fees/charges that they charge to the patient. This will lead to an increase in healthcare costs for the patient. Hence, it is recommended that the GST on sale of healthcare equipment / devices, healthcare insurance and other services be put under 0 to five per cent slab and the process to avail input credit should also be simplified. Currently, products and services offered by the healthcare sector mostly fall under the 12% or 18% GST slab.

11. CONCLUSION

Cost of healthcare services depend upon a plethora of modalities including the health condition of patients, insurance cover, age of the patient, etc. In addition, cost of healthcare is subjected by other institutional factors like differentiated services, treatment modalities, brand image of the hospitals, quality service delivery etc. Defining quality of care is quiet difficult and one-sided, quality parameters may be used to review the overall quality of healthcare services. Studies have shown that there is an association between quality and hospital charges. This implies that the lowest quality service will have the lowest price and as the quality improves, the hospitalization charges are bound to rise. Certain studies conducted in the United States, reported that there was

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no relation between patient satisfaction levels and the expenditure made on healthcare services. Looking at the observations from the United States, optimal utilization of resources plays a decisive role in controlling costs in healthcare organizations.

Quality indicators like staff ratios, physical infrastructure and value of equipments, quality control and accreditation procedures can be used to determine the quality of healthcare service delivery. Patient satisfaction surveys have also played a vital role in assessing the quality of care provided by the healthcare organizations. Patients appreciate superior quality of medical care services. Though numerous organizations use patient satisfaction reports to estimate the quality of healthcare services, the findings are often not very convincing. Patients are time and again biased towards reporting satisfaction depending upon various factors depending upon their underlying health condition, customs, age, progress in the health condition etc. However, appropriate and careful assessment of patient satisfaction surveys might also act as a critical quality indicator which can provide insights into areas of improvement. Though additional factors like standardized mortality rates, diseases of patients, etc their application is constrained due to statistical limitations and technical issues.

This paper attempts to answer several questions concerning healthcare costs and services by evaluating the various quality indicators and their association with cost of hospitalization. The findings have indicated the role of every possible indicator in cost of hospitalization, but still fail to answer the significant question linked with quality of service delivered to the patients especially in rural India. Some quality indicators evaluated in the study shows the impact of overall quality of healthcare, with varying degree of intensity. This makes it hard to estimate the contribution of each specific indicator to quality of healthcare, which again results in failure to understand the overall association of quality of care and cost of hospitalization.

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