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Healthcare in India:
Current state and key imperatives

Review of National Health Policy 2015 (draft)

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Foreword

Foreword - AHPI

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Director General | Association of Healthcare Providers (India)

Patient safety and affordable healthcare have emerged as major concerns all over the world and more so among the developing nations. Around 190 young women die out of 100,000 live births[1] and about 40 children die on the day they are borne out of every 1,000 live births[1] in India, mainly for want of adequate patient safety measures. India has about 9.5 million deaths a year[2]. Cardiovascular diseases account for nearly 27 per cent of the deaths[3]. Infectious and parasitic diseases account for nearly 20 per cent. Respiratory infection (pneumonia) with 11 per cent[3], respiratory diseases (COPD, Asthma) with nine per cent[3], and cancer with eight per cent[3], is some of the other causes of deaths. India has more than 60 million people with diabetes[4] and nearly 15 per cent population[5] has raised fasting blood sugar. Considering that about 50 per cent of our population is in the productive age group (16-45 years)[6], this is going to be a major concern.

As per WHO report, road fatalities will become world's fifth biggest killer by 2030[7]. Ninety per cent of deaths on world's roads occur in low and middle income countries[7], though they have less than 50 per cent of all registered vehicles[7]. India has very poor record, as it registers about 12 deaths per 100,000 population every year[8]. We urgently need to up-grade trauma care on our highways and evolve policies on emergency care through creation of National Road Accident Fund.

In order to encounter this voluminous disease burden, we need matching healthcare infrastructure. We have not been able to raise healthcare spending (public + private) more than five per cent of GDP[9], as compared to global average of 10.1 per cent[10]. We have nearly five beds per 10,000 of population as compared to 30 in the USA[11]. We have close to 400 medical colleges[12] which annually produce over 50,000 doctors[12] and about 20,000 specialists[13].

01 – Data, The World Bank, accessed on 3rd February 2015;
02 – Prospective Study of One Million Deaths in India: Rationale, Design, and Validation Results", PLOS medicine, February 2006;
03 – "Economics of Non-Communicable Diseases in India" , World Economic Forum, November 2014, Page 13;
04 – South-East Asia (SEA), IDF Diabetes Atlas website, accessed February 2015;
05 – "Impaired Fasting Glucose: A Study of its Prevalence Documented at a Tertiary Care Centre of Central India and its Association with Anthropometric Variables", Journal, Indian Academy of Clinical Medicine, September 2011;
06 – "Global Health Observatory (GHO) data", WHO website, accessed February 2015;
07 – "India leads world in road deaths: WHO", Times of India, 17 August 2009;
08 – "Road safety status 2013, WHO website, accessed February 2015;
09 – "World Data Bank – World Development Indicators – 2005-2013", The World Bank website, accessed on 3rd February 2015;
10 – "Human Development Report 2014, UNDP, pg191;
11 – "Health equipment", OECD website, accessed on 3rd February 2015;
12 – "Medical capitation fee zooms as seats go under knife", Business Standard, 28 June 2014;
13 – "Increase PG seats to end crisis of specialists: Doctors", Times of India, 22 October 2013;

Besides this about 21,500 dentists from 290 dental colleges[14], 1.2 lakh nurses from 2,400 nursing schools and 1,500 colleges[15], 30,000 Auxiliary Nursing and Midwifery (ANMs) from 1,300 schools and 70,542 pharmacists pass out from 1,211 schools/colleges[15]. We are still grappling with severe shortage of doctors, nurses and midwives, which is presently half of the norm of 24.5 healthcare professionals per 10,000 populations[16].

Complying with patient safety across the nation is going to be daunting task, more so when we do not have any uniform regulatory framework in the country. Introduction of NABH in year 2006 was truly a land mark event, which provided us with patient safety framework of global standards. During past nine years, only 300 hospitals have been able to get NABH accreditation[17]. Considering that we have more than 50,000 hospitals/nursing homes[17], we have long way to go. Presently there are no incentives for accrediting hospitals, in-spite of fact that they are required to put in huge efforts. Government need to urgently initiate measures by which all empanelment in the government insurance schemes and equally by private insurance companies are linked with NABH accreditation.

Next to patient safety, we have accessibility and affordability as major concerns. Large percentage of populations pays out of pocket for healthcare. With more and more state governments coming out with their insurance schemes, it is projected that more than 50 per cent population[18] will get covered by current financial year under some or other government scheme. These also include Central Government Health Scheme (CGHS), Ex-Servicemen Contributory Health Scheme (ECHS), Employee's State Insurance (ESI), Rashtriya Swasthya Bima Yojna (RSBY) and private insurance schemes. As we do not have effective template to fix rates for various medical procedures, it is going to be tough task to fix reimbursement rates under these schemes. In order to bring down the cost of healthcare, we need to enable our hospitals/nursing homes to apply modern management tools to improve the efficiency. Healthcare can pick up some of the tried and tested tools from manufacturing sector i.e. 5S, KAIZEN, LEAN, six-sigma, balance score card, total productive maintenance, etc. and apply in their operations. Green concepts can also help in improving efficiency through optimal use of resources and in cutting down of waste processes.

Healthcare sector is emerging at a healthy growth rate of around 15 per cent[19]. It has huge potential in providing employment more so to the women. The private sector is investing in a big way. Government need to incentivise and streamline the clearance process.

In time to come, we hope to see happy and healthy India under National Health Assurance Mission, launched by Government of India. The mission should be able to integrate promotive, preventive and curative segments and include associated subjects like safe drinking water, sanitation and sustainable environment. Government must accord priority to collect demography and disease related data to support policy and plans.

AHPI with its motto: '**Educating and Advocating for Well Being of Common Man**', will work with all stake holders including government, member hospitals and community at large, to achieve this mission. "

14 – "More dental colleges not good for the profession", Times of India, 22 September 2013;
15 – "Frontiers without doctors", The Hindu, 12 May 2013;
16 – "Human Resources Background Paper 1 - Situation Analysis of the Health Workforce in India", Public Health Foundation of India, 2012, pg3
17 – :AHPI newsletter volume 1", Association of Healthcare Providers (India) website, accessed February 2015;
18 – Government-Sponsored Health Insurance in India: Are You Covered?", The World Bank website, accessed February 2015;
19 – "Indian Healthcare Industry Analysis", IBEF website, accesses February 2015

Foreword - KPMG

Nilaya Varma,

Partner | Partner and Head, Government and Healthcare, KPMG in India

"Since independence, healthcare in India has been challenged by the issues of affordability and accessibility to quality healthcare. With around a quarter of the population living below poverty line and around 70 per cent dwelling in rural areas[20], providing healthcare to these section of society should be central to policies being drafted by the government. In this scenario, the concept of universal health coverage becomes imperative and core to the health development and needs of the people. Singapore model of social health insurance has created an environment that not only helps ensures quality but also an affordable healthcare, and this has won applauses across the globe. This model can inspire Indian policymakers to adopt a social health security model that aspires to deliver healthcare across four pillars - availability, affordability, accessibility and acceptability.

Today, Indian healthcare system stands at a cross-road. In the last one decade, even though Indian healthcare has taken leaps in terms of becoming a medical tourism destination, the delivery system both public and private, continues to remain elusive to the section of society with high healthcare needs. With efforts to meet health targets envisioned under Millennium Development Goals getting either off-track or dawdling, it becomes imperative for Indian healthcare stakeholders to revisit the policy and identify any gaps in the actions taken.

Deliberation of the current state of Indian healthcare is an integral step to begin with. This will help in identifying gaps and a structured approach under the policies being penned down. A thoughtful critique of the National Health Policy 2015 (NHP 2015) draft will enable the stakeholders to identify any challenges that remains to be answered.

This paper reflects on the current state of the Indian healthcare system, assesses gaps and explores recommendations to enable the National Health Policy achieve the aspiration of health for all."

20 – "Rural population (% of total population)", The World Bank, accessed February 2015

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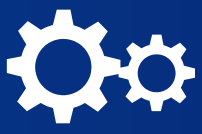
Setting the context



Setting the context

Year 2015 marks the end of the journey to achieve targets formulated under Millennium Development Goals (MDGs). With India lagging behind in majority of health targets aspired within MDGs, the need of a new policy becomes imperative.

India has drafted the third National Health Policy (NHP) in 2015, more than a decade after penning down the second policy in 2002. With NHP 2015, India is repositioning health as a major national agenda linking outcomes to the economic development of the nation. It has been formulated to recognise the gaps in the existing Indian healthcare system and provide an overarching framework to achieve health targets.

The new policy is being released at a time of growing demand of providing healthcare access to all not only in terms of availability and accessibility but also in terms of affordability and acceptability. Indian healthcare system continues to aspire for additional government support in terms of financial and reformed administrative structure along with policies and actions to respond to the emerging new challenges that Indian healthcare faces today.

On the demand side, the rise of non-communicable diseases, that pose as a major threat to health and economic security of the nation, are likely to alter India's treatment needs. At the same time, on the supply side, the rising delivery costs in private sector due to costly new technologies and drugs along with expensive infrastructure and operations cost, have resulted in widening the gap in accessibility and affordability to poor section of society. This has increased burden on already strained public infrastructures that are ridden with problems of quality and availability of services. Further, the slow development of healthcare infrastructure and sluggish improvement in physician numbers, as compared to population growth, have added strain on the system.

Objective of this position paper is to not only capture the current state of Indian healthcare and identify challenges plaguing the system, but also to review steps suggested under NHP 2015 draft. Further the paper aims to highlight gaps that remain un-answered in the NHP 2015 draft and provide suitable recommendations to bridge them. This is likely to enable India to achieve the dream of health for all.

Problem statement

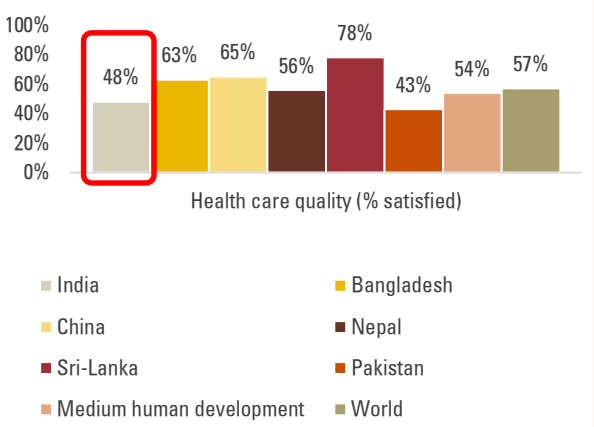
India currently ranks low on human development index reflecting below-par growth in health, education and GNI

While India has shown significant improvement in economic indicators such as GDP, the country is yet to improve its position on Human Development Index (HDI). According to UN India's Human Development Report 2014, India falls at the near-bottom of countries which have reached medium development and is ranked 135 among the total of 187 countries[1]. This is a slip of more than 15 ranks since 2010, from 119 to 135[2], reflecting sluggish growth across all the three parameters – health, education and Gross National Income (GNI) per capita.

HDI report year	India's HDI Rank
2010	119
2011	134
2012	135
2013	136
2014	135

Source: "Human Development Report 2014, 2013, 2012, 2011, 2010", United Nations Development Programme - Human Development Reports , KPMG in India analysis

Healthcare quality (% satisfied)



Source: "Human Development Index trends, 1980-2013", United Nations Development Programme - Human Development Reports, accessed February 2015, KPMG in India analysis

01 – "Human Development Report 2014, 12 June 2014", Page 162;
02 – "India ranks 119 on human development index", The Economic Times, accessed on 3 February 2015

The slow improvement in healthcare indices is further reflected in India's inability to meet millennium development goals

The promise of 'right to health' is central to every target envisioned under millennium development goals. Three major goals were included to ensure basic right of health to each individual – reduce child mortality to safeguard nation's future, improve maternal health to create a safe environment for deliveries and combat HIV/AIDS and other highly prevalent diseases like malaria and tuberculosis.

Indian government launched multiple programs and developmental policies like the National Population Policy 2000 (NPP-2000), National Health Policy 2002 (NHP- 2002)[3], National Aids Prevention and Control Policy 2004, and the Tenth Five Year Plan to achieve the targets set under the millennium developmental goals.

While the country witnessed some improvements in the initial years, the progress has been sub-optimal across majority of parameters over the period of time. Unless the government works in collaboration with other stakeholders on priority, India is likely to miss the targets set to achieve the basic right of citizens of the nation.

Assessment of millennium development goals[4]

Target description	Progress signs
Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate[4]	■
Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio[4]	■
Have halted by 2015 and begun to reverse the spread of HIV/AIDS[4]	●
Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases[4]	▼

● Achieved ■ Slow progression ▼ No Progress/ Regression

03 – "National Population Policy" data.gov.in, accessed February 2015;
04 – India - The Millennium Development Goals - Eight Goals for 2015", UNDP website, accessed on 3rd February 2015; KPMG in India analysis.

India ranks lower on most health indicators when compared to its peer BRICS nations

Low healthcare spending

- India spends less on healthcare than other middle income countries. At 4 per cent of total GDP expenditure on healthcare in 2012, spending on health care was half that of Brazil, South Africa and much lower than China and Russia[5].

Public share of healthcare expenditure remains low

- Public spending on healthcare in India, at 33 percent of the total healthcare spend[6], is one of the lowest in the world in spite of the fact that a quarter of Indian population lives below poverty line, taking in consideration an income of less than USD1.25 per day per head on PPP basis[7]. With only one-third coming from government, India ranks 184 out of 191 countries in public spending on health[5].

Comparison of India across health indicators with peer BRICS nations

Health indicators	India	Brazil	Russia	China	South Africa
GDP spending on healthcare, 2012 (%)	4.0%	9.3%	6.3%	5.4%	8.8%
Health expenditure, private (% of GDP)	66.9%	53.6%	39.0%	44.0%	52.1%
Health expenditure, public (% of GDP)	33.1%	46.4%	61.0%	56.0%	47.9%
Life expectancy at birth (years, 2012)	66	74	70	75	56
IMR (per 1,000 live births, 2013)	41	12	9	11	33
MMR (per 1,00,000 live births, 2013)	190	69	24	32	140

Source: "World Data Bank – World Development Indicators – 2005-2013, The World Bank website, accessed on 3rd February 2015, KPMG in India Analysis.

Low life expectancy

- Despite progress over the last decade, life expectancy at birth in India remains low.
- With many states' health systems suffering from shortage of spending and shortfalls in management, significant population is left without quality and affordable care.

IMR still among the highest amongst peers

- Even with healthcare advancements and government programs, IMR is still among the highest in India when compared to other emerging economies.
- The majority results from preventable situations such as pre-term birth complications, lower respiratory infections and diarrheal diseases, which account for 21 per cent of years of life lost due to diseases[5].

Maternal health safety still an issue

- India still accounts for 20 per cent of maternal mortality deaths in the world[8] with 190 deaths per 100,000 live births[6].
- The number is a result of low share of institutional deliveries with only 52 per cent of deliveries were attended by skilled personnel and only 41 percent institutional deliveries[9].

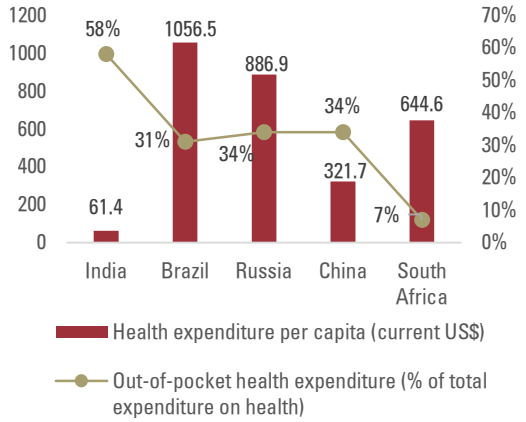
05 – "Improving Health Outcomes and Health Care in India", OECD Economics Department Working Papers, Page 5 and 16;
06 – Data, The World Bank, accessed on 3rd February 2015;
07 – Poverty and Equity, The World Bank, accessed on 3rd February 2015, KPMG in India Analysis;
08 – "Stunting and Marginalisation and Lack of Resiliency, International Journal of Social Work and Human Services Practice, Page 19;
09 – "SAARC Development Goals" - India Country Report 2013, Page 13.

Weak growth in improving infrastructure and human resource strength has been among the main reasons for India's poor performance as compared to other developing nations

Scarcity of beds remains a big challenge

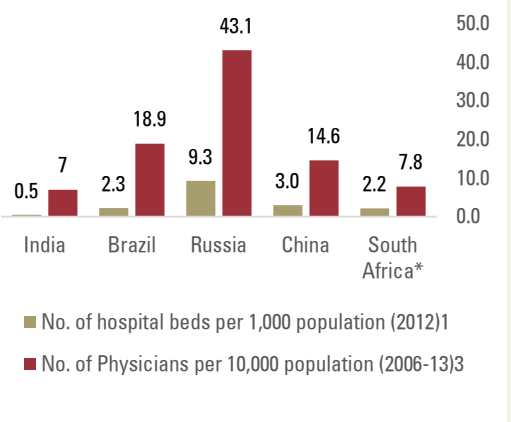
- Although India has witnessed the advent of several major hospital chains in the last decade, the total bed capacity still remains far from sufficient.
- Indian hospital bed to population ratio is the lowest among all BRICS countries with additional requirement of 0.5 million beds to reach the target of 500 beds per one million people[10].
- With low support from government to private sector and considering the time and investment needed to set up a hospital, it becomes imperative to incentivise private providers to participate in improving infrastructure.

Comparison of healthcare expenditure



Source: 1 - "World Development Indicators", The World Bank, accessed February 2015, KPMG in India Analysis

Comparison of infrastructure and human resource



Source:1 - "Health equipment", OECD website, accessed on 3rd February 2015; KPMG in India Analysis; 2 - "World Health Statistics 2014", World Health Organisation, 2014,Page 128; KPMG in India Analysis; *Note – South Africa data for number of hospitals beds is for year 2010

Human resource shortage

- Lack of skilled service providers is one of the biggest constraints in India. the country currently needs an additional 6.4 million healthcare resources to serve its population[11].
- The condition deteriorates as one moves from urban to rural areas. About 80 per cent of doctors, 75 per cent of dispensaries and 60 per cent of hospitals are present in urban areas when 72 per cent of India's population lives in rural areas[12].

Increasing affordability issues

- Rising healthcare costs is another major concern for India, with around 60 per cent[13]of the healthcare expenditure being out of pocket. Around 39 million[14] people are pushed to poverty every year because of ill health in India.
- Low insurance coverage and weak public healthcare system are driving up the average cost for healthcare and especially creating a burden for those with limited means.

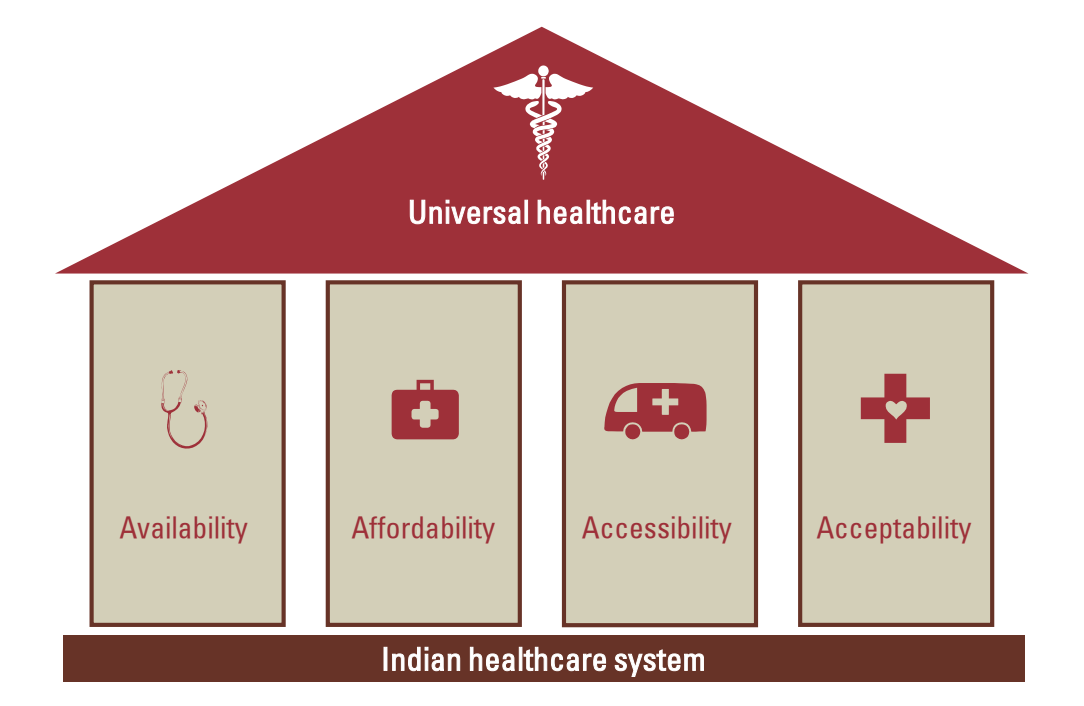
10 – "Healthcare woes: India has 1 govt hospital bed for 879 people", Indian express, 24 August 2013;
11 – "New dynamic for health services", Livemint, 10 September 2013;
12 – "Side-effects of poor public health", The Hindu BusinessLine", 19 November 2012;
13 – "World Health Statistics 2014", World Health Organisation, 2014,Page 141;
14 – "Poor health pushing 39 million Indians to poverty every year: Ghulam Nabi Azad:, Economic Times, 4 October 2012.

Analysing Indian healthcare sector – Key challenges

India needs to address the issues around availability, affordability, accessibility and acceptability of healthcare factors to provide access to larger population

Analysing healthcare sector within the four pillars of accessibility, affordability, availability and acceptability can help in identification of gaps and challenges currently faced by India.

The Indian healthcare infrastructure is not able to keep pace with the demands of growing population. An increasing number of people choose private healthcare facilities over the government ones due to availability of specialist doctors, diagnostic services and drugs thereby incurring more expenses and mounting the affordability challenge. Government has taken a few steps in this direction by taking initiatives such as RSBY to improve healthcare insurance coverage and increasing availability of cheaper medicines in government healthcare centres. However, the outcomes of these programs are still awaited.



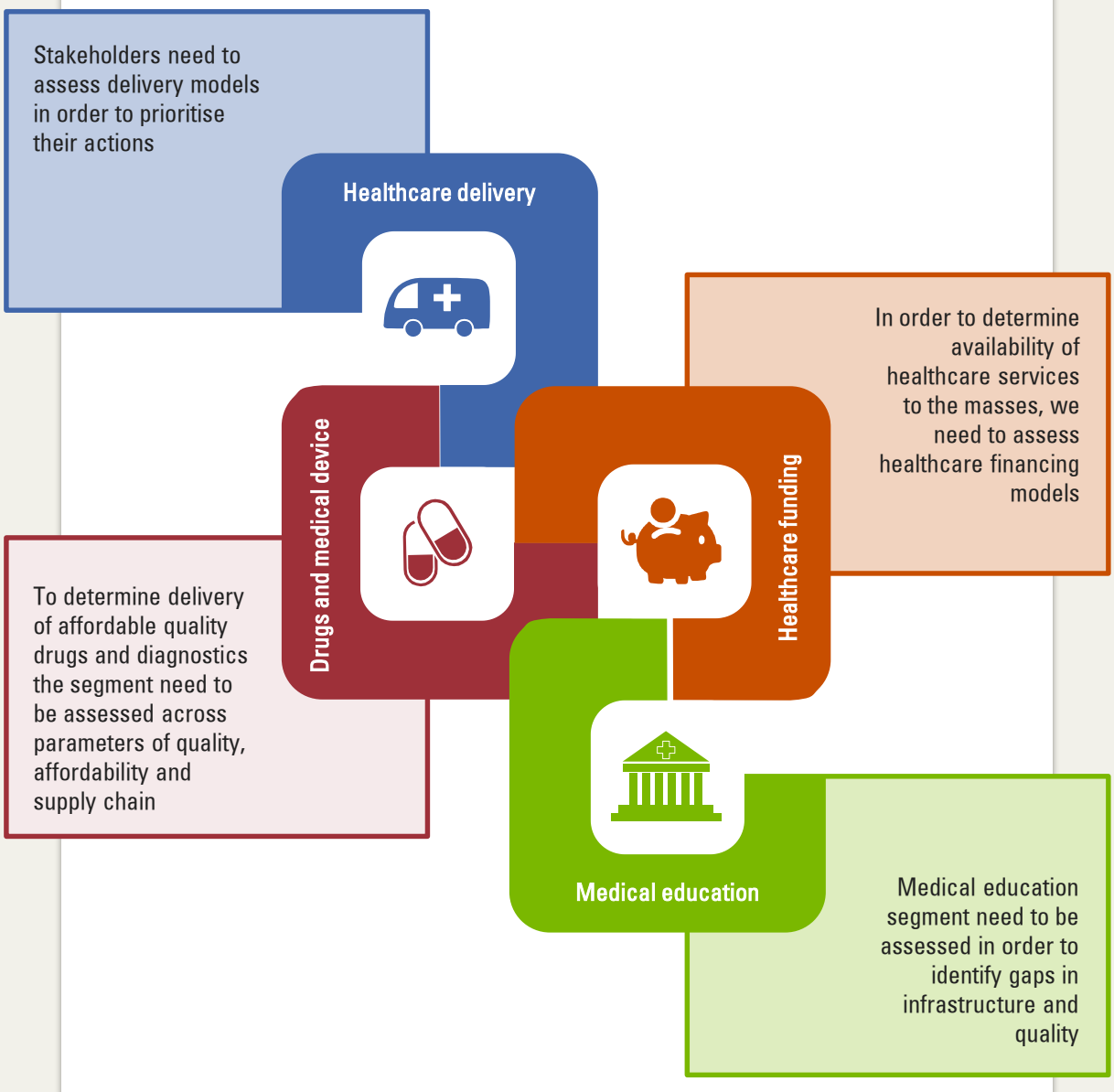
Source: KPMG in India analysis, 2015

Access to healthcare in India is limited by a combination of factors such as dysfunctional physical infrastructure, poor health financing and lack of adequate human workforce. Availability of healthcare facilities is highly skewed towards urban centres when the urban population accounts for only 28 per cent of the country's entire population[1]. The remaining 72 per cent has access to only one-third of the total beds available in the country[1]. India would need a combination of innovation and regulatory reforms in order to address this challenges. There is an urgent need for the government to work towards strengthening the public healthcare system in order to make healthcare available to the masses.

01 – "Study reveals rural India gets only 1/3rd of hospital beds", The Hindu, 19 July 2013.

Assessment of indicators of healthcare

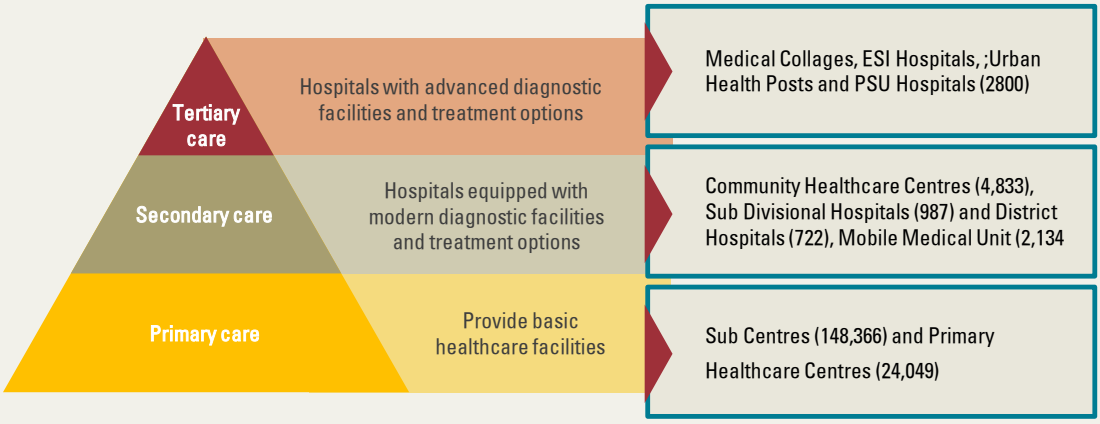
To address the question of delivering care on the four pillars India need to work across areas of delivery, drugs, education and funding



Source: KPMG in India analysis, 2015

Shortage of healthcare infrastructure and poor quality at primary level is one of the major hurdles in delivery

Healthcare delivery in India is classified under three categories – primary, secondary and tertiary care. All three levels need to work in a cohesive manner to help delivery of healthcare on all the four pillars.



Sources: Dun and Bradstreet - "Sectoral risk outlook - Hospitals" October 2014, via Thomson Research, accessed January 2015; "Rural Health Statistics in India2012", Statistics Division Ministry of Health and Family Welfare Government of India, 30 April 2013

Primary healthcare

Of the three categories, primary healthcare is one of the most important parts of the country's health system. Even after decades of independence, primary healthcare remains one of the major healthcare challenges in India.

- **Limited services and infrastructure:** Lack of robust infrastructure coupled with limited healthcare services provided at primary level has forced patients to seek substandard consultation and treatment for early stage illness, which has resulted in misdiagnosis and inappropriate treatment.
- **Human resource challenge:** Staffing is another major area of concern as a significant amount of the healthcare workforce prefers to work in urban areas due to higher pay and other facilities.
- **Disconnect with higher levels of care:** Concerted efforts are required to strengthen primary healthcare to integrate it with higher levels of care.

Few deficiencies in available infrastructure

% of sub-centres without ANM	3.2%
% of PHCs without doctor	3.8%
% sub-centres without regular water supply	25.5%
% sub-centres without electric supply	25.5%
% sub-centres without all whether motorable roads	6.6%
% of PHCs without regular electricity	8.0%
% PHCs without regular water supply	10.7%

Source: "The Challenges Confronting Public Hospitals in India, Their Origins, and Possible Solutions", Hindawi website, accessed January 2015

The secondary and tertiary care is feeling the burden of increasing population generating the need for interventions from stakeholders

Secondary healthcare

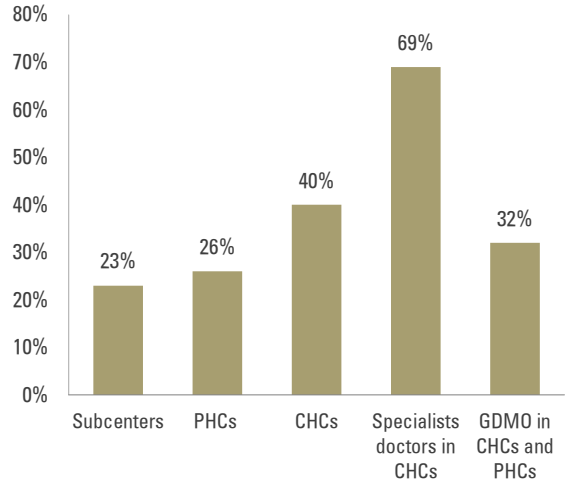
Secondary healthcare facilities play a key role in providing diagnosis and treatment services to a large part of Indian population. But in last decade, secondary health care infrastructure in India has not been able to keep pace with the burgeoning population and socio-economic changes.

Public secondary healthcare centres: These setups are under tremendous burden to deliver a quality care to masses.

- **Shortage of infrastructure:** Need to strengthen the public hospitals at district level in order to meet its goal of providing access to free drugs and diagnostics is acute
- **Non availability of skilled workforce:** Lack of specialists at this level especially in public hospitals force patients to go for expensive private healthcare.
- **Growing concerns around quality of care:** Quality of healthcare services is another growing concern that needs to be addressed. Currently, there is need for regular measurement of the quality of care in public hospitals.

Private secondary healthcare centres: On the other hand, the secondary healthcare centres under private sector face their own challenges related to staff, medical technology and scaling up of the operations.

Shortfall in healthcare infrastructure - 2012



Source: "The Challenges Confronting Public Hospitals in India, Their Origins, and Possible Solutions", Hindawi website, accessed January 2015

Tertiary healthcare

The country has witnessed considerable expansion in tertiary care hospitals in recent years especially in the private sector.

- **Rising cost to patient:** With the cost of tertiary care increasing rapidly, it is becoming a challenge for the poor section of the society to access quality care.
- **Shortage of infrastructure:** The government needs to strengthen the infrastructure by opening new centres of and improving district hospitals, while ensuring that the quality is maintained. Establishing new AIIMS like institutions will further enhance the availability and improve access to tertiary care.

Government has taken several steps to improve delivery of healthcare but the growing demand requires more substantial steps towards achieving health for all

Few initiatives from government[2]:

Government has taken a few steps such as establishment of health sub-centres in rural areas, National Rural Health Mission (NRHM) and Rashtriya Swasthya Bima Yojna (RSBY) schemes to overcome the availability, affordability and accessibility challenges. However, the country would need many such schemes as well as stringent implementation measures in order to fill the existing gaps in terms of infrastructure, access and quality.

The government has drafted guidelines for setting up a primary healthcare sub-centre at the 5,000 population level but at the same time, these facilities are not mandated to have a trained medical doctor. Therefore, they are not capable of prescribing scheduled drugs. At the same time, for primary care facilities at every 25,000 population level, it is part of the mandate to have a physician at each centre but then these facilities are often too far to reach by foot and thus out of reach for many patients residing in the rural areas.

02 – "The lack of primary healthcare in India", The Economic Times, 15 August 2012.

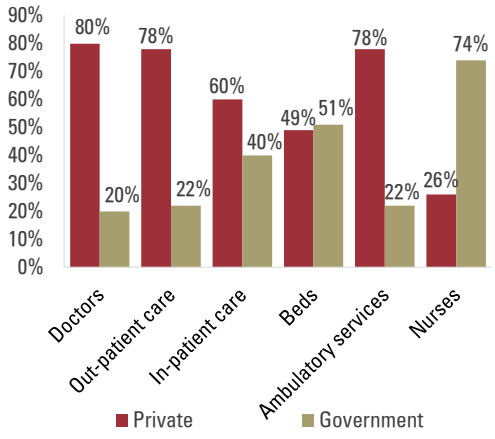
Regulatory hurdles and lack of incentives are barriers to the expansion of private sector in Indian healthcare

Private sector has played a major role in developing the healthcare sector in India.

Need for further government support:

- **Streamlining regulations:** The regulatory guidelines are often too complex and time consuming to comply with, thereby hampering the growth
- Need to revisit **Clinical Establishment Act, 2010** to bring all the stakeholders on the same platform for a nation wide adoption.
- **Transparency in insurance payments:** There needs to be transparency in CGHS scheme payments for the private sector to actively participate.
- **Need for fiscal and tax incentives:** Import duties on medical equipment are high and should be reduced to enable private players to import leading technologies and also reduce cost of medical devices, thereby decreasing their prices. Further utility (electricity, water, etc.) costs need to be subsidised for the sector to enable the providers to pass on the lower cost benefit to patients.

Share of private vs. government in healthcare, 2012



Source: "The Challenges Confronting Public Hospitals in India, Their Origins, and Possible Solutions", Hindawi website, accessed January 2015

New trends succeed in overcoming the primary challenges of accessibility/affordability/acceptability

Challenge	Impact	
Accessibility[3] A healthcare company (Mexico)	• Increased accessibility via telephone • Two-thirds of the queries are resolves via telephone	• One million households subscribe to this service • 90,000 calls per month
Affordability[4] A leading private hospital chain (India)	• The hospital provides quality healthcare at one-sixth the cost of the private clinic	• Perform three times as many surgeries as private clinics • Drives down costs, raises quality, extends access
Acceptability[5] A general medical and surgical hospital (USA)	• Leveraged health IT tools such as EHR, PMS, and health information exchange	• Improvements in quality of care through rapid access to patient information and better chronic disease management

03 – "MedStar m-Health Services ICT Application in Health Case Study of Health Hotlines", MedStar Healthline", 14 November 2013, p31; .
04 – "Life Spring hospitals provides quality healthcare at 1/6th the cost of the private clinic", Monitor Group, 16 June 2008, p4;
05 – "Cherokee Indian Hospital Authority – Leveraging health IT to provide quality care", NORC at the University of Chicago, June 2012, p2.

With increasing patient load, it is imminent for India to determine quality of delivery along with affordability

Quality of care

Patient safety is a growing concern in Indian healthcare system. According to Institute of Health Management Research, India accounts for 40 per cent of unsafe patient practices[6]. There are only 22 Joint Commission International (JCI) accredited healthcare facilities in India[7], reflecting the gap in following high quality standards across hospitals in India.

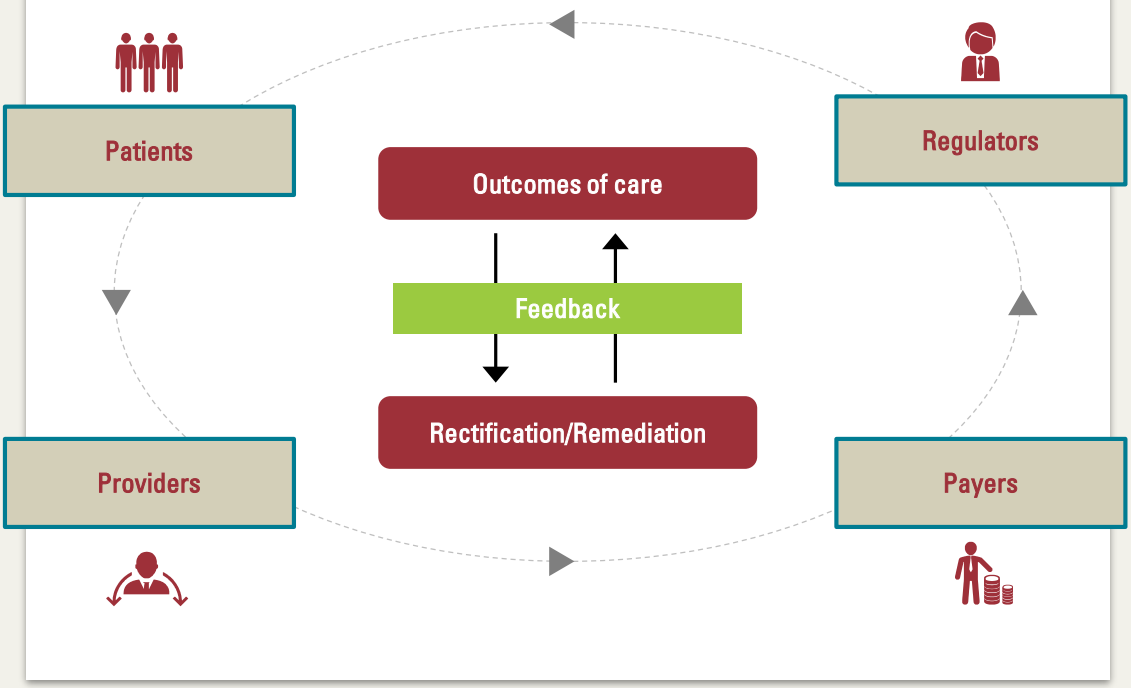
Patient safety practices:

- Adopting quality culture and patient safety practices could bring down the medication errors, hospital related infections and help prevent wrong diagnosis.
- Adhering to basic patient care measures such as hand hygiene can improve the quality of healthcare services in India.

Quality accreditations:

- Private hospitals are taking various initiatives to improve and maintain existing quality standards by adopting internal governance, structuring teams and processes, carrying internal audits and creating separate governance for clinical quality.
- The introduction of NABH standards has provided a quality framework of global standards. So far, around 300 facilities[8] have adopted NABH standards and there are still a large number of hospitals that needs to be encouraged to adopt these standards.
- Government setups also need to be encouraged to adopt quality audits or accreditations to attract patients.

Focus on **accurately reported outcomes of care** is important, as it can bring together patients, professionals, providers and those paying for and regulating care



Source: KPMG in India analysis, 2015

06 – "IIHMR concerned over Indian hospitals unsafe patient safety practices", 13 January 2015, Pharmabiz website, accesses January 2015;
07 – "JCI-Accredited Organisations", JCI website, accessed 6th February 2015;
08 – "Quality and Accreditation", Jaypee Journals website, accessed 6th February 2015.

Assessment

Healthcare delivery	Availability	Affordability	Accessibility	Acceptability
Public				
Private				
Rationale of assessment	• Availability of primary healthcare facilities is still a challenge in India	• Tertiary care cost is increasing and prohibiting common man to avail these services	• Access to free drug in public hospital is a challenge in India • Access to secondary and tertiary care is a challenge in India majorly for rural population	• Quality protocols are not followed in majority of government and private hospitals • No proper mechanism to check the outcomes of care

Source: KPMG in India analysis, 2015

Major concern area Medium concern area Low concern area

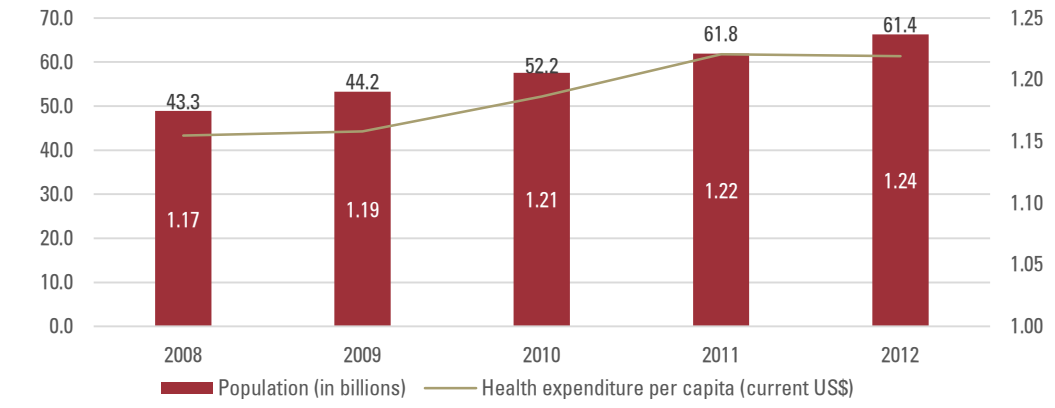
There has been no increase in GDP share expenditure on healthcare for past decade reflecting India's low emphasis on providing quality health

GDP healthcare spending not matching population growth

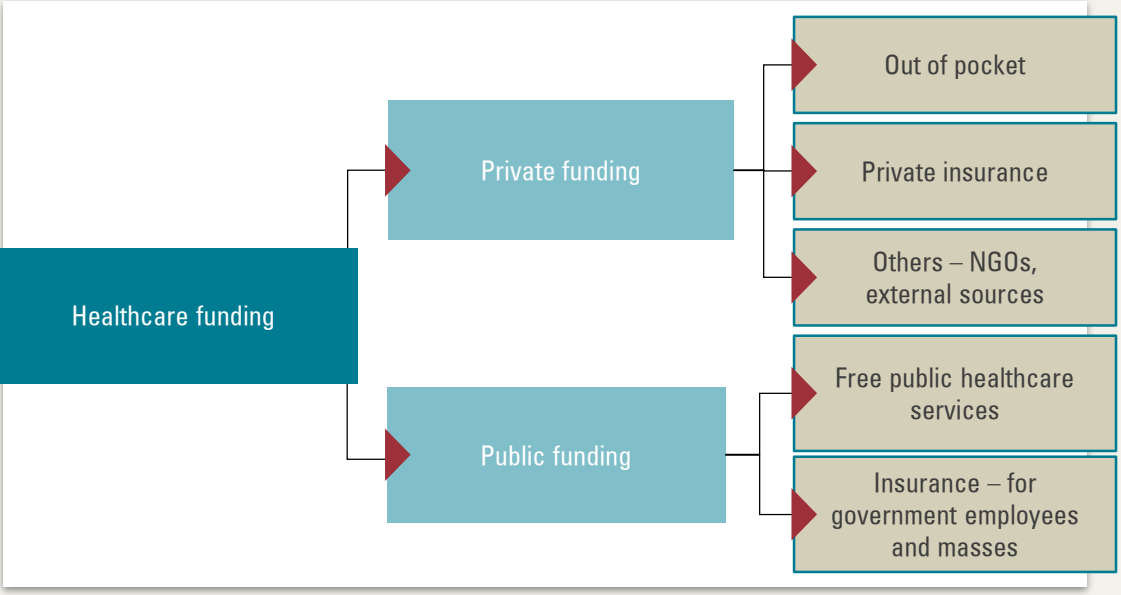
Even though population of India has grown by more than 15 per cent in last decade, GDP spending on healthcare have remained flat at four per cent[9]. This quantum disrupts the aim of India to make healthcare affordable and accessible to all its citizens.

The task is enormous with nearly three quarter of the country's population living in rural areas and close to quarter population below poverty level. The overall level of funding allocated for healthcare nationally is comparatively low (4.1 per cent of GDP) as compared to other BRICS nation, the government's contribution is even lower (close to one per cent of GDP) when compared to other emerging nations[9].

Per capita expenditure on health vs population growth



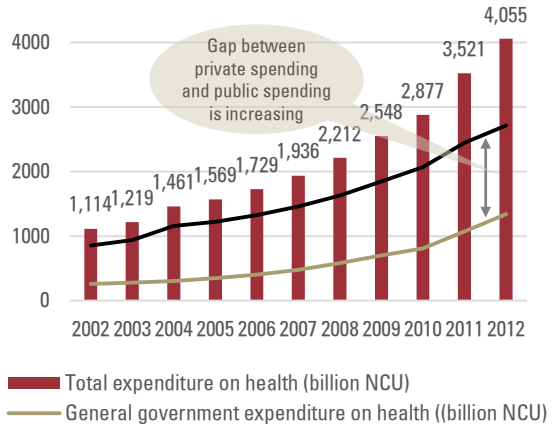
Source: "World Data Bank – World Development Indicators 2005-2013", The World Bank website, accessed on 3rd February 2015, KPMG in India Analysis



09 – Data, The World Bank, accessed on 3rd February 2015, KPMG in India analysis;

Out-of-pocket has been a major contributor to healthcare expenditure with public share being at minimum

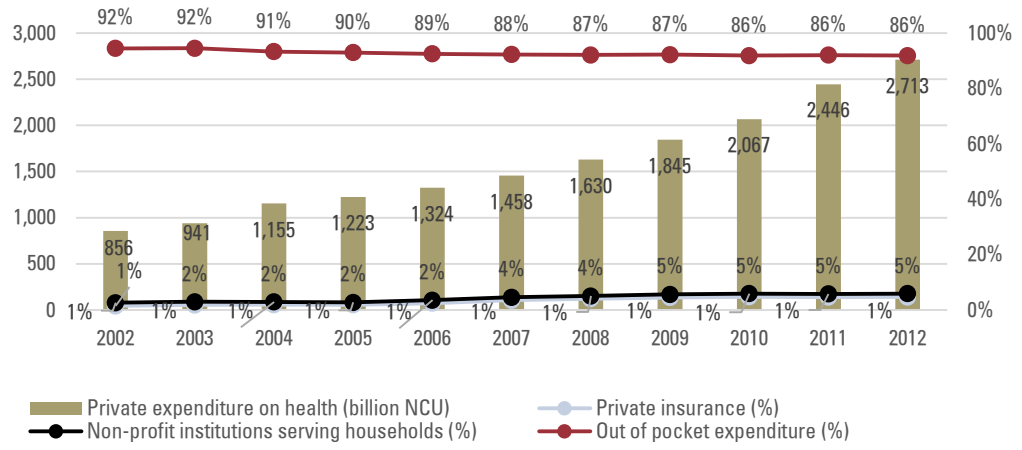
Contributors to healthcare expenditure



Source: "Global Health Expenditure Database", WHO, accessed 14 February 2015, KPMG in India analysis

- **Low government contribution:** Indian healthcare suffers from low public contribution to healthcare expenditure which contributes to only one-third of total spending[10].
- **High private share:** Private share constitutes 70 per cent[10] of overall expenditure. This creates a huge gap in healthcare funding leading to increase monetary burden on individual with no social coverage from government.
- **Low penetration of insurance:** There is low penetration of private health insurances as currently around five per cent of healthcare expenditure[11] is being financed by insurances.

Private spending on health and its contributors



Source: "Global Health Expenditure Database", WHO, accessed 14 February 2015; KPMG in India analysis

- **OOP remains a major source:** OOP contributes close to 86 per cent of private expenditure and 60 per cent of overall healthcare expenditure[11]. Nearly 40 million people in India are in debt because of out of pocket expenditure on health[12]. It has been estimated that nearly a third of population admitted for their health needs are driven below poverty line due to OOP[13]. This has exposed the gaps in existing government health schemes which has limited access for the poor section of the society.

10 – Data, The World Bank, accessed on 3rd February 2015;
11 – "Global Health Expenditure Database", WHO, accessed 14 February 2015;
12 – "41252-012: Impact of Maternal and Child Health Private Expenditure on Poverty and Inequity", Asian Development Bank website, accessed February 2014;
13 – " What is the future of healthcare in India?", Quora, accessed 5th February 2015;

With announcement of universal health coverage, Indian population may see a decrease in economic burden due to healthcare spending

Indian government over the years have launched various insurance schemes covering health of masses apart from insurance schemes covering its employees. Rashtriya Swasthya Bima Yojna, Rajiv Arogyasri with aim to provide health insurance to poor, domestic workers, MGNERGA workers, building and other construction workers, and many other categories as identified by the respective states. Currently penetration of these schemes is very low.

New central government has embarked on an ambitious target of achieving Universal Health Coverage for all during twelfth Plan period. Every citizen will be entitled for comprehensive health security. This needs to be implemented in a well structured manner to ensure availability of adequate healthcare infrastructure, skilled health workforce and access to affordable drugs and technologies to ensure the entitled level and quality of care given to every citizen[14].

	Availability	Affordability	Accessibility	Acceptability
Healthcare finance				
Rationale of assessment	• Government insurance schemes still have to reach poor section of the society	• Private insurance schemes are not affordable by majority of population	• Majority of rural and urban poor have limited access to health insurances both government and private due to lack of knowledge and awareness of benefits	• Limited empanelment under government insurances leads to decrease acceptability by masses who later depend on OOP or private insurance to cover expenditure

Source: KPMG in India analysis, 2015

Major concern area Medium concern area Low concern area

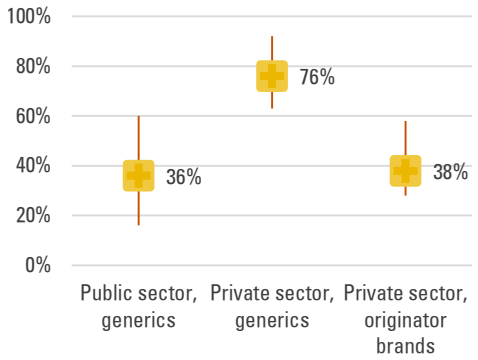
14 – "Universal Health Coverage Initiative for India", UHC India website, accessed February 2015;

Even with a strong pharmaceutical industry, Indian population faces a challenge of drug availability and affordability

The Indian pharmaceutical sector has come a long way in making the country self-reliant to meet its demand for medicines. It has now become one of the dominant suppliers of formulations and bulk drugs to global markets.

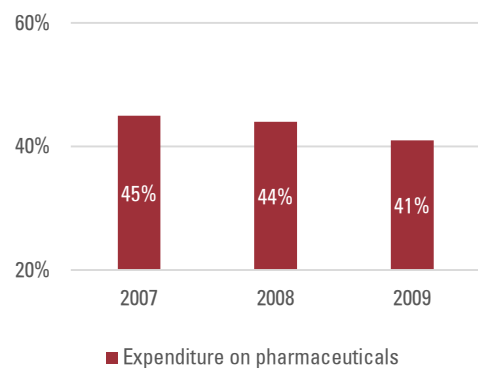
- **High drug expenditure:** Expenditure on drugs is the one of the largest constituent of household out-of-pocket (OOP) payments, and accounts for close to 40 per cent of overall spending for the poor on healthcare[15].
- **Interrupted supply of essential medicine in public healthcare set-ups:** One of the main drivers of the high share of OOP payments on drugs are often non-availability of free essential drugs in public hospital. The median availability of a sample of key generic medicines in public sector facilities was 36 per cent compared to 76 per cent in the private sector facilities[16]. This reflects low focus of government in ensuring both availability and affordability of drugs along with inefficient supply chain management and a weak drug procurement process.
- **Quality issues:** Apart from challenges of affordability and acceptability, India also faces a threat from spurious medicines. Even though there is no data available to quantify the volume of spurious drugs in the market, pharmaceutical industry feels that the issue of spurious drugs need to be addressed with priority.

Indian average of mean percentage availability of medicines, 2008



Source: "Medicine prices, availability, and affordability in 36 developing and middle-income countries: a secondary Analysis", The lancet, Page16, KPMG in India analysis

Expenditure on pharmaceuticals as percentage of total OOP expenditure on healthcare



Source: "Accessibility and use of essential medicines and health care in India", Journal of Pharmacology and Pharmacotherapeutics, Page 16

15 – "Accessibility and use of essential medicines and health care in India", Journal of Pharmacology and Pharmacotherapeutics, Page 16;
16 – "Medicine prices, availability, and affordability in 36 developing and middle-income countries: a secondary Analysis", The lancet, Page16;

Government has announced program to increase access to affordable drugs but the outcomes are still to be seen

Steps taken by government to improve drug availability and accessibility

At state levels:

The introduction of a centralised procurement system in Delhi and the state of Tamil Nadu has resulted in a drop in drug prices and increased drug availability in public health care facilities. Usage of these medicines by the hospitals run by Delhi government resulted in a sharp fall in procurement prices and a 30 per cent saving in annual medicine bill[17]. These savings led to more than 80 per cent availability[17]. Rajasthan has adopted scheme for the free distribution of around 400 generic medications under the 'Chief Minister`s Free Medicine Scheme' [18].

At national levels:

Central government attempts to regulate the prices of 348 essential medicines by introducing Drug Price Control Order (DPCO) with aim of decreasing monthly drug bill burden of patients being treated for chronic life-style disorders. With announcement of implementation of Jan Aushadhi from July 2015[19], government aims to ensure availability of quality medicines at affordable prices to all as part of universal health access.

	Availability	Affordability	Accessibility	Acceptability
Medicine				
Rationale of assessment	• Availability of cheaper generic version is still a challenge for poor citizens. • Poor DPCO implementation has resulted in shortage of essential medicines • Weak supply chain and procurement process	• With announcement of starting Jan Aushadhi program from July 2015, the issue of affordability can be solved but the impact is still awaited • It is essential to ensure wide scale implementation of Jan Aushadhi	• The problem of access to free or low cost drug in public hospitals is still a challenge for India with large population living below poverty line • Decreased access to new innovative drugs	• With presence of spurious drugs in market, the quality of drug is an issue for India

Source: KPMG in India analysis, 2015

Major concern area | Medium concern area | Low concern area

17 – "Essential Medicines in Healthcare in India, Journal of pharmacology and pharmacotherapeutics, 2013, p15;
18 – "Free drug distribution policy of government of India may lead to downsising in pharmaceutical sector", PharmaInterScience Publishers, p117;
19 – "Government to supply 500 low-cost Jan Aushadhi Drugs in local stores from July", The Economic Times, Accessed 4th February 2015.

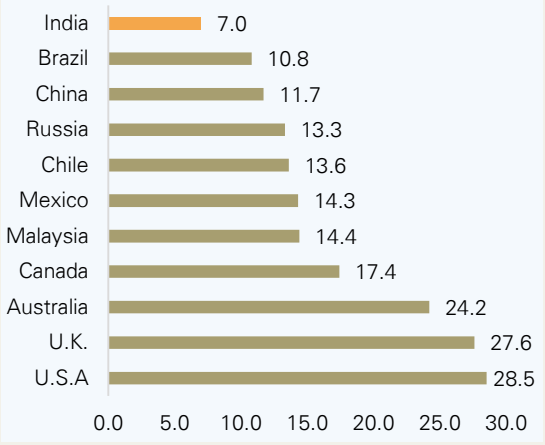
Further to the issue of affordability and availability to drugs, India also faces the challenge of decreased access to new innovative drugs

India's drug policies over the years have created an environment of dichotomy[20]. On one side, the aim behind policies is to increase access to affordable care, but on other it is not encouraging adequately to bring in innovation that address the growing unmet need of disease burden.

Indian pharmaceutical industry is challenged by weak patent laws and low incentives to for R&D investments that can answer the growing challenge from local diseases.

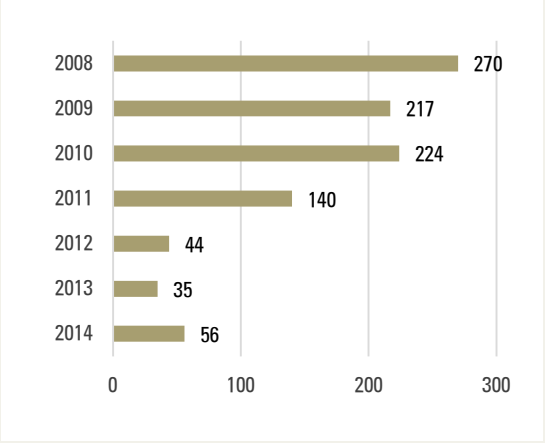
- **Weak patent regime:** The weak patent law is reflected in low IP index score for India which stands at bottom of ladder even lower than China and Brazil. This in turn has discouraged companies, which have invested millions of dollars, to launch new drugs in India. Further introduction of new pricing policies have made Indian market less attractive to big players to enter into essential medicines. Adding to the problems further is the policy of compulsory license.
- **Decrease in drug launch[21]:** Launches of new drugs in India have decreased by almost 90 per cent during the last five years. In 2008, 270 new drugs were approved for sale in India, whereas it dropped to 44 and 35 in 2012 and 2013, respectively. In 2014, only 56 new medicines were approved till November, government data shows.

International IP index scores, 2014



Source: "GIPC International IP Index", Global Intellectual Property Center website, Accessed December 2014

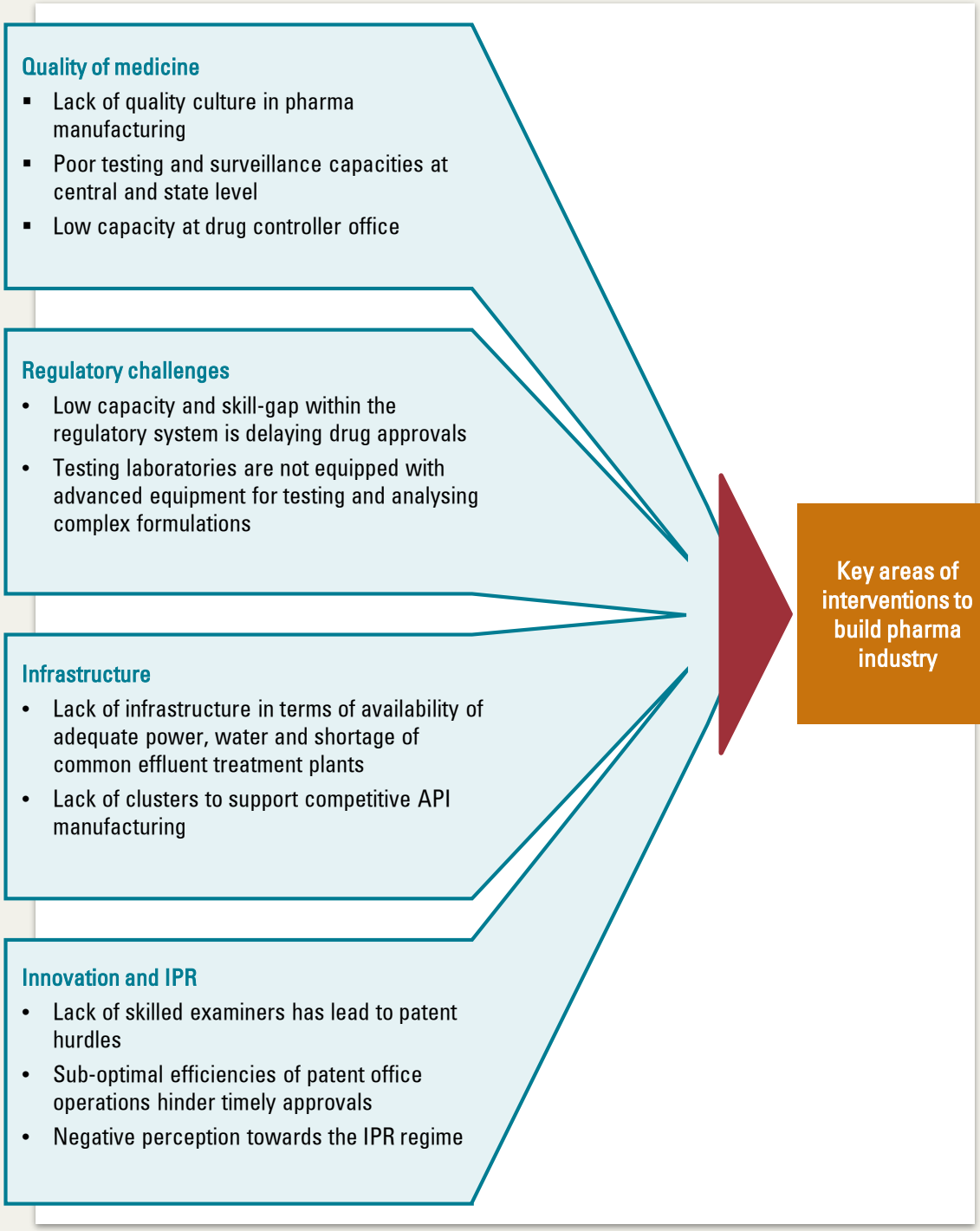
New drugs approved for marketing in India



Source: Central drugs standard control organisation, accessed 4th February 2015

20 – "Universal Health Coverage Initiative for India", UHC India website, accessed February 2015;
21 – Central drugs standard control organisation, accessed 4th February 2015

Indian pharmaceutical industry also faces the challenge of complex regulatory mechanism, compliance to quality and sub-optimal infrastructure



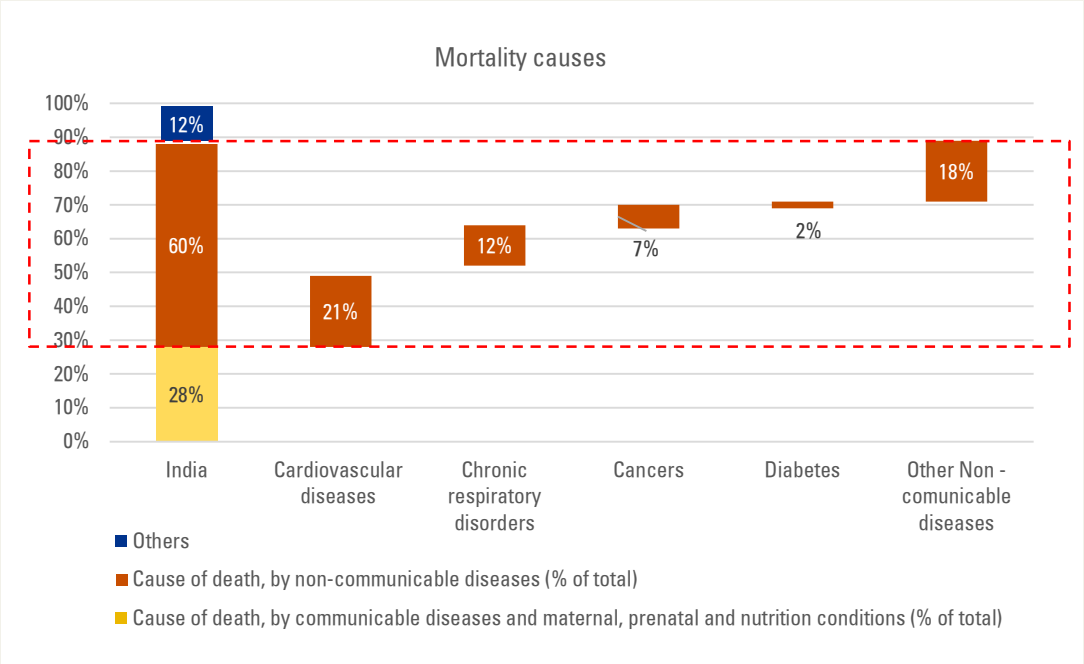
Source: KPMG in India analysis, 2015

There is shifting consumption emphasis due to growing NCDs burden and change in focus from cure to prevention

Growing burden of non-communicable diseases

Encumbrance of non-communicable diseases (NCDs) and resulting mortality, morbidity and economic burden is expected to increase many fold in coming years[22]. This paradigm shift needs to be addressed with focused approach from all stakeholders involved in serving the population for their healthcare needs.

- **Major cause of mortality and morbidity:** India is slowly moving away from the time when communicable diseases were the main concerns of Indian healthcare. Today, accounting for nearly 60 per cent of the death annually and for uncountable morbidity and disability, NCDs have become the foremost public health challenge for India. Non-communicable disease like cardiovascular diseases (21 per cent), chronic respiratory diseases (12 per cent), cancer (seven per cent) and diabetes (two per cent) are the leading causes of mortality in India[22], ahead of injuries and communicable, maternal, prenatal, and nutritional conditions. Adding to mortality burden is morbidity affliction, as NCDs account for 40 per cent of all hospital stays and approximately 35 per cent of all recorded outpatient visits[22].



Source: World Data Bank – World Development Indicators 2005-2013", The World Bank website, accessed on 3rd February 2015; " Economics of Non-Communicable Diseases in India" , World Economic Forum, November 2014, Page 13, KPMG in India Analysis

- **Huge economic burden:** Individuals have to bear a huge cost of the disease as treatment cost is almost two-fold for NCDs as compared to other conditions and illnesses[22]. Indian economy on the other hand is set to lose USD4.58 trillion before 2030 due to NCDs and mental health conditions[23]. Cardiovascular diseases, alone will be responsible for 50 per cent of this economic burden, accounting for USD2.17 trillion, followed by mental health conditions which will account for USD1.03 trillion[24].

22 – "Age and Sex Pattern of Cardiovascular Mortality, Hospitalisation and Associated Cost in India", Plos One website, accessed February 2015;
23 – "Burden of non communicable diseases in India: Setting priority for action", International Journal of Medical Science and Public Health, 2013 ;
24 – " Economics of Non-Communicable Diseases in India" , World Economic Forum, November 2014.

Government has already announced programs to combat the rising threat but incentives to private players is needed to help a complete approach

Government of India keeping in mind the growing burden of NCDs, had pro-actively launched various programs to address the mounting problem. National Cancer Control Program, National Tobacco Control Program, National Program for Prevention and Control of Cancer, Diabetes, CVD and Stroke (NPCDCS) and the National Program for Health Care of the Elderly (NPHCE) etc. are few aimed at prevention of NCDs.

Need for strong monitoring and evaluation system is required to determine successful implementation of these programs[25]. Government must strengthen public health facilities for providing services of screening; early diagnosis and treatment of NCDs[25]. Joint effort with private sector can help and achieve this goal[25]. Establishing clinical practice guidelines like Indian Public Health Standards (IPHS), and integrating NCD training into training curricula of health workforce can go a long way[25].

Risk factors that may further increase the burden of NCDs in coming decades.

1. **Rapid urbanisation**: India is likely to experience significant urban growth. This shift from rural to urban geography could potentially expose individuals to urban risk factors for NCDs, which could contribute to an increase in disease burden and related economic losses.
2. **Ageing population**: In addition to urbanisation, demographic changes may also drive the numbers for NCDs.
3. **Growing use of tobacco and alcohol:** With increase in usage of tobacco and alcohol, and decreasing age of usage, the growth in burden of NCDs is looming.

25 – "Burden of non communicable diseases in India: Setting priority for action", International Journal of Medical Science and Public Health, 2013.

Shortage of medical education institutes and geographical disparity are some pf the key challenges related to medical education in India and need active participation of private players

Low doctor count

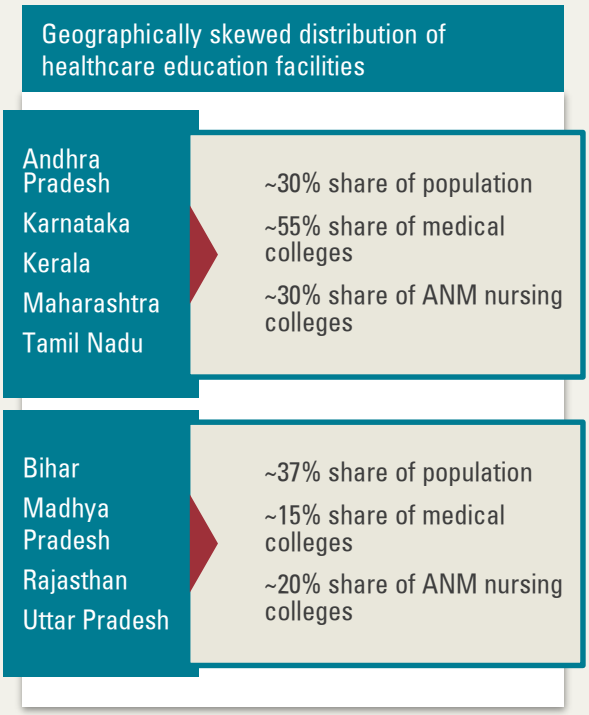
Currently, there is only one doctor per 1,700 people in India whereas WHO stipulates a minimum ratio of 1:1,000[26]. There are around 6 to 6.5 lakh doctors available[26]. An additional four lakh doctors would be required by 2020 to fulfil healthcare goal[26].

Requirement of more medical institutes:

To meet the gap in human resource number, more medical institutes will be required. As of 2014, there are only 381 registered medical education institutions in India with a total of 50,078 seats[27].

Geographical imbalance:

The problem is aggravated with the fact that many of the high quality medical education institutions in India are concentrated in urban areas with a mere 4.6 per cent of the total seats[28], belonging to the institutes located in rural areas. Moreover, majority of medical colleges are located in five states in India[29] leading to disparity in healthcare services across the country.



Source: Population census 2011, Medical council of India website and Indian nursing council website, accessed January 2015, KPMG in India analysis

Quality is still a concern: Further, the quality of medical education is an area of growing concern and require steps such as implementation of an updated curriculum and stringent quality accreditation process.

State of staff in public health in few key states- 2012

Staff*	Required	In position	Shortfall
ANM	56,365	49,740	6,625
Doctors at PHC	10,744	8,388	2,356
Specialists at CHCs	19,332	5,858	13,474
Nurse staff at CHCs and PHCs	24,834	12,661	12,504

Source: 1- "Rural Health Statistics in India2012", Statistics Division Ministry of Health and Family Welfare Government of India, 30 April 2013; KPMG in India analysis

Note*:
1. For ANM data, following states are taken in consideration – Chhattisgarh, Gujarat, Himachal Pradesh, Kerala, Tamil Nadu and Uttar Pradesh
2. For doctors in PHC data, following states are taken in consideration – Chhattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Odisha and Uttar Pradesh
3. For specialists at CHCs, all India data is taken excluding Chandigarh
4. For Nurse staff at CHCs and PHCs, following states are taken into consideration – Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha and Uttar Pradesh.

26 – "India has just one doctor for every 1,700 people", Indian Express, 22 September 2013;
27 – "Medical capitation fee zooms as seats go under knife", Business Standard, 28 June 2014;
28 – "Increase MBBS seats but...", Hindustan Times, 7 February 2014.
29 – Population census 2011, Medical council of India website and Indian nursing council website, accessed January 2015, KPMG in India analysis.

Assessment

Medical education	Availability	Affordability	Accessibility	Acceptability
Public				
Private				
Rationale of assessment	• With the current number of medical colleges in the country it is difficult to match the WHO stipulated standard of doctor-population ratio to 1:1,000[29]	• The fee charged by private medical colleges is very high leading to affordability issues	• Majority of medical institutes are located in urban areas and are difficult to access by rural population for advanced treatment options	• Quality of medical education is a growing concern in India

Source: KPMG in India analysis, 2015

Major concern area Medium concern area Low concern area

26 – "India has just one doctor for every 1,700 people", Indian Express, 22 September 2013;

Summary of key challenges

Parameters		Availability	Affordability	Accessibility	Acceptability	Key problem areas identified
Healthcare delivery	Public					• Shortage of healthcare infrastructure at primary, secondary and tertiary level • Insufficient staffing especially at primary level • Lack of proper implementation of quality standards • Need for policy on healthcare PPP models to improve infrastructure developments • Low usage of ICT tools and data collection practice
	Private					• Regulatory hurdles and lack of fiscal and tax incentives to establish centres • High cost of infrastructure in terms of land, medical devices leads to high delivery cost • High cost of operations to maintain quality adds to delivery cost and pricing
Healthcare funding						• Absence of national health insurance policy for all to decrease OPP expenditure • Private insurance very expensive and out of reach of masses • Government policies announced so far have not reached full potential due to poor implementation
Drugs						• Drug prices is a major concern • Availability of essential drugs in public healthcare facilities remains a challenge • Quality control needs to be strengthened to counter spurious drugs • Regulatory hurdles hindering innovation
Medical education	Public					• Need for policy around opening of medical colleges as the current number of medical colleges and medical seats are inadequate to fulfil the demand • Staffing problem is getting acute • Nursing and para-medical education is lagging behind both in number and quality
	Private					• High fee structure makes accessibility a challenge • Quality of education is below at par government colleges in terms of research and specialist education

Source: KPMG in India analysis, 2015

Major concern area Medium concern area Low concern area

National Health Policy 2015: Gaps identification

National Health Policy 2015: Healthcare delivery

	Key challenges of Indian healthcare	Key action points suggested in NHP 2015 draft	Areas where further strengthening required
Infrastructure	• Shortage of healthcare delivery infrastructure at almost all levels • Regulatory hurdles and lack of fiscal and tax incentives to establish centres • High cost of infrastructure can lead to high delivery cost in private • Lack of PPP models at almost all levels	• Recognised need for increasing hospitals beds at all levels of care • Strategic purchase of secondary and tertiary care from private sector • 15 new AIIMS along with firming up of 58 medical colleges and upgrading 58 district centres to become medical institutes[1]	• Need to increase focus on addition of more new infrastructure and beds • Steps to ease the regulatory regime and tax incentives for private need to be laid out clearly • Need for clear policy envisioning PPP models at primary and secondary level
Services	• Limited services at primary level • Interrupted supply of free drugs and diagnostic services in public hospitals	• Primary healthcare facilities to provide comprehensive services • Health card initiative to avail primary healthcare • Recognises importance of providing free drug and diagnostic services in public hospitals	• Steps required to supply free drugs and diagnostics need to be substantiated enough from a supply chain perspective
Use of technology	• Lack of use of technology tools at almost all levels to deliver and monitor healthcare delivery to increase access and acceptability of healthcare	• Usage of ICT tools like mobile health and electronic health records to support healthcare delivery teams • Recognised importance of e-Health as a source that could facilitate quality delivery services	• Need for a clear policy on integration of IT with healthcare • Need for framework stimulating collection of data around delivery and disease burden • Need for clear policies to usage of ICT tools ensuring both confidentiality and portability
Quality	• Lack of proper implementation of quality standards • No incentives to maintain quality in both public or private setups	• Steps in quality improvements are identified and accreditations from NABH/NABL becomes imperative • Incentives to team to deliver primary care in a comprehensive manner • Proposed more quality audits of government healthcare centres	• Plans and procedures to maintain quality in healthcare facilities need to be revealed in a detailed manner
Human Resource	• Insufficient staffing especially at primary level	• Empowerment of nurses and paramedical staff to deliver necessary care in PHC • ASHA to bridge gap between community and first level health facilities • Strengthen public hospitals with human resource and supplies	• Empowerment of nurses and paramedical staff is a short term plan and India needs a long term plan to solve the human resource gap • Concrete steps need to be identified for improvement in availability of doctors/nurses/para-medics at PHC
Allied Medicine	• Lack of awareness and availability of allied medicine	• AYUSH elements to be included to strengthen primary healthcare and increase in sensitisation towards these medical verticals among allopathic doctors	• Adequate steps taken to determine allied medicines get due recognition

01 – National Health Policy 2015 draft

Source: KPMG in India analysis

National Health Policy 2015: Healthcare funding

	Key gaps identified in Indian healthcare	Key action points suggested in NHP 2015 draft	Areas where further strengthening required
Healthcare spending	• The GDP share of healthcare expenditure is low, public health expenditure of GDP is lowest among BRICS nations[2]	• The public health expenditure of the GDP will increase to 2.5 per cent from the current share[3]	• Need to ensure effective utilisation of existing budgets • It is imperative to achieve adequate distribution of the increased budget in areas of high priorities both strategically and geographically
Public insurance	• Absence of national health insurance policy for all to attempt decreasing OPP expenditure • Government policies announced so far have not reached full potential due to poor implementation	• The policy recognises the problem of increasing OOP expenditure • Advocates establishment of National Health Account system for normative resource allocation and payment mechanism • The policy suggests the reduction in healthcare cost borne by the poor in the private sector by using public insurance schemes	• Need for discussions around universal health insurance for the masses • Restructuring of government insurance scheme to ensure smooth implementation and implementation of transparent payment process is required
Private insurance	• Private insurance is expensive and out of reach of masses	• Steps to make private insurance more affordable are not been discussed	• Need for incentives to increase participation of private insurance sector • Need to provide tax incentives to private insurance players

Source: KPMG in India analysis, 2015

02 – "World Data Bank – World Development Indicators – 2005-2013", The World Bank website, accessed on 3rd February 2015, KPMG in India Analysis;
03 – National Health Policy 2015 draft;

National Health Policy 2015: Drugs

	Key gaps identified in Indian healthcare	Key action points suggested in NHP 2015 draft	Areas where further strengthening required
Pricing	• High prices of medicines is a major concern area	• Pricing of drugs continue to be controlled by National Pharmaceutical Pricing Authority	• Need for clarity of Jan Aushadhi program and its implementation • Strengthening of supply chain is required
Availability	• Availability of essential drugs in public healthcare facilities remains a challenge	• Plans to establish a central procurement agency for procurement and distribution of vaccines and a number of key drugs • Recognises importance of providing free drug and diagnostic services in public hospitals	• Steps required to supply free drugs and diagnostics need to be substantiated from a procurement perspective • Drug delivery model of Tamil Nadu and Rajasthan needs to be replicated in other states
Quality	• Quality control needs to be strengthened to counter spurious drugs	• Strengthening regulatory regime to ensure safety, efficacy and quality of drugs • Strengthening post surveillance program for drugs	• Measures seems adequate. However plans and procedures to determine quality of drugs need to be revealed in a detailed manner • Use of technology needs to be strengthened
Regulatory	• Regulatory hurdles is hindering innovation	• No steps proposed to decrease complexity of regulatory approvals • Recognised the importance of innovations targeting local diseases	• Steps to strengthen regulatory regime is required • Steps to decrease complexity in taking drug approvals need to be worked on

Source: KPMG in India analysis, 2015

National Health Policy 2015: Medical education

	Key gaps identified in Indian healthcare	Key action points suggested in NHP 2015 draft	Areas where further strengthening required
Infrastructure	• Need for more number of medical colleges and medical seats to provide adequate human resource • Geographically skewed distribution of healthcare education facilities	• Policy framework encourages growth of professional and technical institutes • Expansion plans in states with larger human resource deficit	• Adequate steps in increasing the number of medical institutes to match the demand are required • Clear policy required to opening of medical and nursing institutes • Private sector needs incentives to partner with government to establish medical education centres at district levels or below
Human resource	• Availability of competent staff is getting acute across public and private setups	• Recognises the problem of staff shortage in education institutes • Strengthen nursing, para-medic, ASHA and development of B.Sc. in community health to provide comprehensive care	• Steps to improve the staffing deficiency need to be taken on priority • Steps to increase nursing and paramedical seats and strengthen the existing infrastructure are yet to be elaborated
Quality	• Growing concern over medical education quality • Nursing and para-medical education is lagging behind both in number and quality	• Strengthening National Board of Examination to innovate new education and training models • Steps to ensure quality by periodic review of private setups	• Plans and procedures to determine quality of education need to be revealed in a detailed manner
Academic fee	• High fee structure makes accessibility a challenge in private sector	• Steps to make private medical education more affordable by mean of standardisation of fee structure	• Need for a more clear policy on fee structure and admission process in private sector • Need for transparency in admission process of medical education

Source: KPMG in India analysis, 2015

Way forward

Healthcare delivery needs stimulus around infrastructure, technology, quality and staffing to promote access to quality affordable care

Healthcare delivery

Infrastructure:

Stakeholders need to collaborate to add more infrastructure such as healthcare set-ups at each delivery level to meet demand of growing population. Moreover, prioritise infrastructure development according to geographical needs

- **Primary level**
  a) Strengthen primary healthcare setup to increase accessibility
  b) Incentivise private sector to establish healthcare facilities at primary level
  c) Government need to explore additional models such as PPP to increase access to quality healthcare at base level. Further it needs to formulate a policy around PPP models in healthcare. Partnership with private sector can improve operational efficiencies and infrastructure. As one of the PPP funding options, the government can provide complete converge of CAPEX including land and private sector can bear the operating expenses.
  d) Establish referral system in public health to avoid over crowding at secondary and tertiary level
- **Secondary level**
  a) Fiscal and tax incentives to private sector for increasing the scale of operation in order to improve accessibility and affordability
  b) Expand services in certain specialised field such as ophthalmology, etc.
  c) Strengthen the existing CHCs in terms infrastructure and staffing
  d) Expand the number of CHCs using various models such as PPP model
- **Tertiary Level**
  a) Need to establish more centres of excellence such as AIIMS and PGI
  b) Provide low interest loans and tax subsidies to private players to establish more affordable tertiary care facilities

Quality:

- **Public**
  a) Need to strengthen the implementation of current quality auditing system
  b) Link the public healthcare facility financing model with quality outcomes
- **Private**
  a) Need to reform Clinical Establishment Act, 2010 to increase the acceptability among private players
  b) Promote adoption of quality accreditations such as NABH/NABL or other similar certifications, linking empanelment with insurance bodies with these quality certificates

Human Resources:

1. Staffing of AYUSH doctors at primary and secondary level can strengthen healthcare delivery
2. Incentivise healthcare workforce in financial and non-monetary ways to work in rural areas

Technology:

1. Government need to formulate a policy to encourage the adoption of ICT tools such EMR, Tele-medicine, Mobile health etc. for improving accessibility and acceptability of healthcare services
2. **Need for data collection in all spheres of healthcare delivery and diseases burden.** This can help in establishing clinical protocols suitable to Indian population. Also, special emphasis should be on maintaining confidentiality and portability.

India can learn from the success of primary care model adopted by Brazil

Learnings from Brazil: Programa Saúde da Família

Background

- Prior to Sistema Único de Saúde, Brazil had private hospital centred healthcare delivery system supported by large corporates
- These hospital were urban area centred
- This system of healthcare delivery neglected economically weaker section of society and rural population

Actions

- Government launched' the Programa Saúde da Família' (PSF) model under national health system Sistema Único de Saúde - with an aim to increase access of primary healthcare through the health centres.
- The centre is staffed by a doctor, a nurse and a community health workers, providing basic primary care for around 800 to 1000 families[1]

Outcomes

- PSF now caters to 70 per cent of the Brazilian population[2]
- IMR decreased from 41 to 12 per 1000 live births during 1995-2013[3]
- MMR decreased from 98 to 69 per 100,000 live births during 1995-20133

Learnings for India

- Develop an effective and affordable primary healthcare system, with aim of access to all vision, that works efficiently well in delivering basic wide ranging healthcare services in areas where healthcare access remains distant
- It needs to be backed by public funding

01 – "Brazil: Incentive Program for Family Health Performance Improvement (PIMESF) Implemented in Piripiri Municipality", RBF Health, accessed February 2015;
02 – "Flawed but fair: Brazil's health system reaches out to the poor", WHO , accessed February 2015;
03 – World Development Indicators, The World Bank, accessed February 2015.

To decrease burden of OOP on the poor section of society all stakeholders need to work cohesively towards the aim of providing affordable and acceptable care

Healthcare funding

India needs to increase percentage GDP share on healthcare expenditure to meet the problems of availability, accessibility, affordability and acceptability

- **Public**
  a) Government needs to implement a robust plan for effective utilisation of budgets and implement proper plans so that public expenditure is fully utilised
  b) Restructure the existing insurance policies to holistically cover both in-patient and out-patient procedures for poor patients. The schemes also need to logically fix the rates of procedures and ensure transparent and timely payment to providers
  c) Reimbursement under CGHS and alike schemes needs to accessed on quality parameters additionally. Also, time bound payment policy needs to be adopted to keep these insurance schemes attractive to private sector
  d) Need to take steps on providing Insurance cover for all citizens
- **Private**
  a) Need to incentivise private insurance sector to increase its participation in providing affordable healthcare for masses

India need to take cues from Singapore to implement a social security plan that is not only affordable but also determines quality

Learnings from Singapore: Healthcare system financed by both public and private expenditure

Background

- Singapore experienced rapid healthcare cost inflation in the 1970s and government was pressed to address the financing issue[4]
- In 1980s the country planned to adopt a policy of co-payment to encourage its citizens to assume personal responsibility[4]
- The government provides subsidy with an aim of universal coverage along with individual responsibility[4]

Actions

- First level protection- The government provides heavy subsidies of up to 80 per cent of the total bill in public hospitals[4]
- Second level protection- The government introduced a medical saving component in central provident fund- Medisave, a compulsory saving account[4]
- Third level protection- It is provided by a low cost medical insurance scheme – MediShield
- The government also has a medical endowment fund for ultimate safety of patients

Outcomes

- As people share in the expense of their care, along with government subsidies and constructive policies, the Singapore's healthcare system is able to achieve sixth rank in WHO country healthcare rankings
- The national healthcare expenditure is around 4 per cent of GDP and still providing high quality healthcare as compared to developed nations with high healthcare expenditure

Learnings for India

- Universal healthcare coverage can be provided for basic healthcare services along with assigning individuals a – responsibility, may be in the form of co-payment
- Adopting fundamental components from Singapore's healthcare system such as co-payment, transparency, mandatory savings can help India in making a balanced approach towards public and private expenditure for delivering health for all

04 – "Affordable Excellence -- The Singapore Healthcare Story", William A. Haseltine, Ridge Books and Brookings Institution Press, 2013; "Medical Savings Accounts: Lessons From Singapore", Harvard education website, accessed February 2015

Need to strengthen supply chain for uninterrupted availability of affordable drugs along with promoting innovation targeting local diseases, can help in achieving drug security

Drug accessibility

Accessibility:

a) Strengthen the supply chain further over as suggested in NHP 2015 to determine uninterrupted availability in public healthcare setups
b) Ensure proper implementation of Jan Aushadhi program

Quality

a) Need to strengthen the regulatory and legal framework to control spurious drugs by periodic quality audits at retail and manufacturing levels along with stringent penalties

Research and development

a) Incentivise R&D in drug development especially targeting indigenous diseases
b) Regulatory process needs to be transparent and less complex
c) Need to strengthen IPR regime in India to promote innovation

Learnings from China: National Essential Medicine System – 2009

Background

- Due to inefficiencies with drug distribution and dispensing, patients bore high drug expenditure
- To curb these rising expenditures Chinese government issued policies for National Essential Medicine system

Actions

- By the end of 2010, bidding platforms were established in all regions, with the majority of counties implementing online purchasing.[5]
- Essential medicine under this system initially included 307 drugs, which is now expanded to 600 and also to private set-ups[6]

Outcomes

- Prices of essential medicines dropped on average by 17 per cent by 2011[6]
- National Essential Medicine system has been adopted by close to 40 per cent of public primary health facilities[7]

Learnings for India

- Establishing a model like National Essential Medicine system, that not only provides access to affordable medicine but also increases availability but also monitors quality

05 – The reform of the essential medicines system in China: a comprehensive approach to universal coverage', Journal of Global Health, accessed February 2015;
06 – 'National Essential Medicines List and policy practice: A case study of China's health care reform',; Springer Link, accessed February 2015;
07 – "Health insurance systems in China: A briefing note", World Health report, accessed February 2015.

To match the increasing demand of healthcare resources, India needs to invest into strengthening both the infrastructure and quality of medical education nationwide

Medical Education

Policy

Need for a policy around opening of new medical and nursing colleges. This will help the stakeholders in allocation of resources in the right direction with increased transparency.

Infrastructure

- **Public**
  a) Increase the number of undergraduate and post graduate seats in existing medical colleges
  b) Setup medical education institutes to educate and train doctors, nurses and other para medical staff in geographies with high unmet healthcare needs
- **Private**
  a) Incentivise private sector to establish institutes in rural areas to increase access to quality healthcare in rural areas
  b) Establish PPP models to increase the participation of private sector in improving the healthcare human resource deficiency. Models such as establishing a 50 seat medical college attached to 200 bed district hospital

Quality:

a) Reform and implement the National Council for Human Resources in Health (NCHRH) bill to ensure standardisation of medical education
b) Invest into continuous education and training of healthcare workforce at all levels to improve quality of delivery
c) Revamp education curriculum at all levels to enable them to take higher responsibilities

Research

a) Promote research in medical institutes to analyse local demographic data on health conditions prevalent domestically

Human Resource

a) Steps are required to attract the talent pool to peruse teaching career and fill the current void
b) Incentivise the doctors from private sector to actively participate in providing medical education

Liberia's story of rebirth of healthcare work force can be used as an example for India while taking actions to increase the healthcare human resource

Learnings from Liberia: Rebuilding Human Resource for health

Background

- Liberia's civil war (1989-2003) destroyed its health system, leading to shortage of healthcare workforce[8]
- In 2006, the Ministry of Health and Social Welfare focused on rebuilding its human resource for health[8]
- Due to high maternal and neonatal mortality rates, the government focused on strengthening its nurses cadre

Actions

- In 2006, Government re-opened rural training institutions and reinstituted free health education to increase enrolment[8]
- The government developed regional incentive package to top up government pay packages for persons working in hard-to-reach areas[8]
- Steps such as standardisation of the salaries for nurses and stipend for students with a bond helped in hiring for government sector

Outcomes

- The country has increased its clinical health workers to 4653 in 2010 from 1396 in 1998[8]
- Number of nurses had more than doubled between 2006 to 2010[8]
- Certified nurses and midwives aides also increased by 31 per cent and 28 per cent respectively[8]
- The percentage of nurses in clinical aides increased by 73 per cent in 2010[8]

Learnings for India

- Incentivise postings in rural areas in order to attract and retain healthcare professionals
- Government can launch programs that can provide stipends to healthcare students to serve the government in a hard to reach area for a limited period of time[9]

08 – "Rebuilding human resources for health: a case study from Liberia", Human Resource for health website, accessed February 2015;
09 – 'KPMG in India analysis',2015;

Long way to go…

With growing population and healthcare cost, India is facing a challenge of affordability and accessibility to provide quality healthcare services for masses. Allocating higher budget to national healthcare expenditure can help in solving many issues related to infrastructure building and strengthening the existing ones. To match the healthcare spending of other BRICS nation, India needs to develop a long term vision for healthcare sector and NHP 2015 is a right step in that direction.

Determining access to affordable basic health care is a major concern and needs to be addressed urgently in order to provide financial security to the low-income section of the society. Since majority of the population lives in rural areas[10], strengthening primary healthcare centres with quality infrastructure, qualified medical functionaries and access to drugs can improve the healthcare outcomes. Integrating the primary care with higher levels of care would not only reduce the burden at secondary and tertiary level but can also help increase the quality of care. India can learn from developing countries such as Thailand, Mexico and Brazil where primary care forms the anchor of health care delivery along with high level of integration between various levels of care. This system provides a strong gate keeping and also serves the patient management function at primary healthcare level. India can take inspiration from this approach to provide a system of holistic care for all citizens.

The country also needs to strengthen its low cost drug delivery program and in this respect, launch of Jan Aushadhi program is a step in the right direction. There needs to be a focus on regular supply of drugs at public healthcare facilities so as to improve access of low cost drugs to masses. Quality is another area of concern and some time-bound steps are required from all stakeholders to curb spurious drugs manufacturing and sales.

Human resource development is also an important area since there is a severe gap in supply and demand. Establishing and upgrading the existing healthcare education institutes along with the launch of community healthcare programs can fill the existing gap and drive the healthcare sector to a brighter future.

Establishing a robust healthcare funding program can provide social security to almost all the citizens. Moreover, technology can play a key role in improving the health outcomes of the country. The government needs to develop an appropriate vision to mobilise and use ICT tools in order to create outcomes. Technology can also improve transparency in the costs along with co-ordination and management of private sector to improve the access to quality and affordable healthcare.

Social security, drug security, transparency and good governance are key areas that can transform the Indian healthcare system. With right government policies and active participation from the private sector, India can achieve its dream of healthcare for all.

10 – "Rural population (% of total population)", The World Bank, accessed February 2015

Annexure

Abbreviations

AHPI	Association of Healthcare Providers
AIDS	Acquired Immune Deficiency Syndrome
AIIMS	All India Institute Of Medical Science
ANM	Auxiliary Nurse and Midwives
ASHA	Accredited Social Health Activists
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
B.Sc.	Bachelor in Science
BRICS	Brazil, Russia, India, China and South Africa
CAPEX	Capital Expenditures
CDSCO	Central Drugs Standard Control Organization
CGHS	Central Government Health Scheme
CHC	Community Health Centers
COPD	Chronic obstructive pulmonary disease
CVD	Cardiovascular Disease
DBT	Department of Biotechnology
DCGI	Drug Controller General of India
DoP	Department of Pharmaceuticals
DPCO	Drug Price Control Order
ECHS	Ex-Servicemen Contributory Health Scheme
EHR'	Electronic Health Records
EMR	Electronic Medical Records
ESI	Employee's State Insurance
FSS	Food Safety and Standards
GDMO	General Duty Medical Officer
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
IMR	Infant Mortality Rate
IP	Intellectual Property
IPHS	Indian Public Health Standards
IPR	Intellectual Property Rights
IT	Information Technology
JCI	Joint Commission International
MDG	Millennium Development Goals
MGNERGA	Mahatma Gandhi National Rural Employment Gurantee Act
MMR	Maternal Mortality Rate
NABH	National Accreditation Board for Hospitals
NABL	National Accreditation Board for Testing and Calibration Laboratories
NCD	Non-Communicable Diseases
NCHRH	The National Council for Human Resources in Health
NCU	National Currency Unit
NGO	Non-Government Organizations
NHP	National Health Policy
NPCDCS	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke
NPHCE	National Program for Health Care of the Elderly
NPP	National Population Policy
NRHM	National Rural Health Mission
OOP	Out of Pocket
PGI	Post Graduate Institute of Medical Education and Research
PHC	Public Healthcare Centre
PMS	Practice Management Software
PPP	Public Private Partnership
PSF	Programa Saúde da Família'
PSU	Public Sector Unit
R&D	Research and Development
RSBY	Rashtriya Swasthya Bima Yojna
SOP	Standard Operating Procedure
USA	Unites States of America
WHO	World Health Organization

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