

# Healthcare: The neglected GDP driver

Need for a paradigm shift

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## Foreword

The United Nations has projected that India's population will reach 1.45 billion by 2028, making it the world's most populous nation surpassing China. Further, India will also be faced with the challenge of 168 million people in the geriatric age group by 2026. If India were to leverage its demographic dividend, then it is imperative that it nurtures a healthier population.

Although, India has made significant progress in the last six decades on various health parameters, the focus of our healthcare system has been mainly on curative care. However, with rising disposable incomes, changes in lifestyle and increasing population, we are witnessing a significant change in the disease pattern in the country. While we are still struggling with the communicable diseases, the disease burden of non-communicable diseases has increased to 60 per cent. India is estimated to lose USD4.8 trillion between 2012 and 2030 due to non-communicable disorders. It is therefore critical for India to transform its healthcare sector.

Healthcare is traditionally seen as a social sector in India, with less government focus and low budget allocation. India currently spends cumulatively 4.2 per cent of its GDP on healthcare, with just 1 per cent being contributed by the public sector, amongst the lowest globally.

It is high time that we realise the significance of healthcare as an economic development opportunity for national as well as state level. The Indian

healthcare market is growing at a CAGR of ~16 per cent and is expected to reach USD 280 Bn by 2020. A paradigm shift in terms of our healthcare policy as well as our approach towards the sector is needed for India's economic growth.

Federation of Indian Chambers of Commerce and Industry (FICCI) as a change agent has been working diligently with the government to bring about requisite policy changes that can provide impetus to the growth of health services sector in reaching out to the masses. This joint study by FICCI and KPMG evaluates the progress of health sector in India in recent years and assesses the scope of the sector in terms of human productivity enhancer, foreign exchange generator, booster for innovation and entrepreneurship as well as employment opportunities, and hence an important driver of GDP for India.

We are grateful to Ministry of Health and Family Welfare, Government of India for supporting FICCI HEAL 2015 on the theme "India's Healthcare: Time for Paradigm Shift" on 31 August & 1 September 2015 at FICCI, New Delhi.

We are sure that the deliberations in the conference will help us in coming up with concrete recommendations that will be submitted to the Government at the highest level for consideration.

We would like to take this opportunity to thank the leaders from the industry who provided their valuable inputs and contributed to this report.



**Nilaya Varma**

## Foreword

The last few decades have seen notable gains in the health of citizens in India. The country has added 11 years to the average life expectancy at birth in three decades; raising it from only 55 years in 1980 to 66 years by 2013.<sup>1</sup> Many factors, such as improved nutrition, robust investment by private players in building the healthcare infrastructure, the swelling middle class segment and innovations in medical technologies, have contributed to this improvement.

From centuries, it has been indicated and well-established that economic development has played a crucial role in improving the health indicators of a nation, as growth in economy provides opportunities for better nutrition, and greater capability to invest in healthcare infrastructure. However, there are apparent reasons to believe that improvements in the health of citizens contribute positively to the economic prosperity of a nation. Today, healthcare stands as one of the largest employers in the country.<sup>2</sup> The sector has successfully attracted influx of billions of dollars from private ventures, foreign investments and an inflow of equity capital through numerous deals in the last year alone. Additionally, medical tourism as a segment has seen strong emergence, owing to India's growing strength in healthcare delivery.

Recognising the eminence of this fact, this report, by KPMG in India and FICCI, aims to amend the way stakeholders view healthcare funding – from mere expenditure that eats into the gross domestic production (GDP) pie to a beneficial form of investment that propels economic growth of a nation.

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1. Life expectancy at birth, total (years), The World Bank website, <http://data.worldbank.org/indicator/SP.DYN.LE00.IN>, accessed July 2015  
2. Human Resource and Skill Requirements in the Healthcare Sector report, KPMG in India and NSDC report, April 2015



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**A robust healthcare system drives GDP growth in the presence of adequate investments and a conducive environment by not only acting as a productivity and employment generator, but also as a magnet to attract foreign exchange earnings and provide opportunities for innovation and entrepreneurship.**





# Setting the context



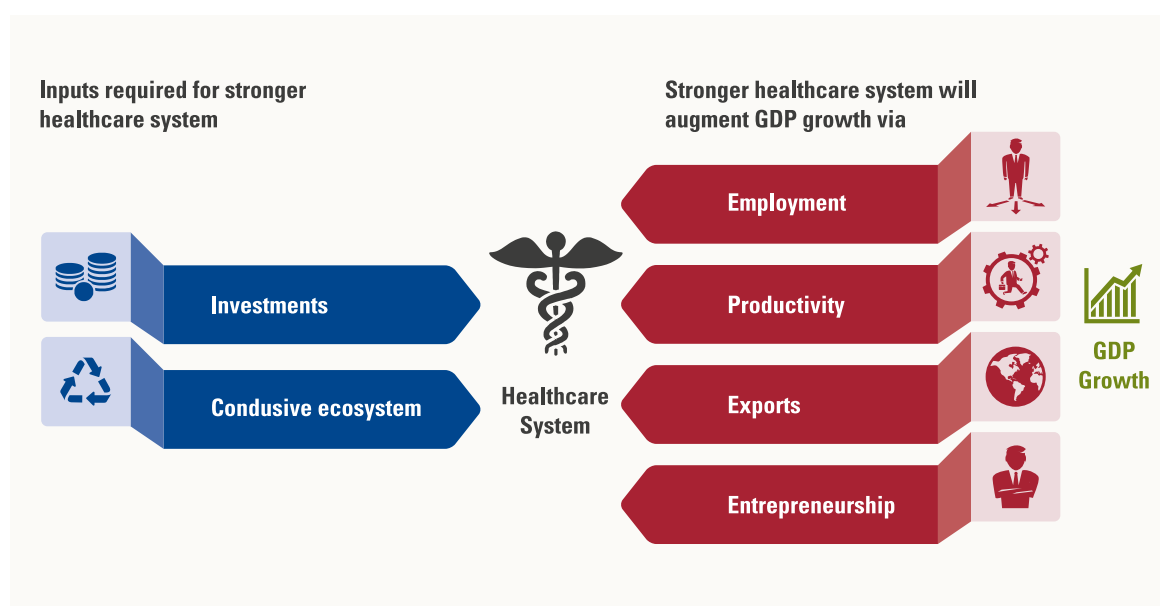
India has come a long way in the last six decades since independence, especially in terms of improving the health of its citizens. The life expectancy at birth has risen to 66 years over the past 29 years, which is more than a twofold increase since the late 1940s.<sup>3</sup>

While the government has taken significant measures to improve access to quality care, this sector has also seen emergence of private players due to the growing healthcare needs of the population, with an inflow of both domestic and foreign investments. Recently, the private sector has seen emergence of innovative delivery models, helping improve access to healthcare not only in metros, but also in smaller towns in the country.

However, the public sector's lackadaisical performance, due to limited investments and sub-optimal utilisation of available resources, has hampered its growth in India, which could be attributed to the prevailing perception of healthcare as more of a social expenditure rather than a growth enabler. This mindset needs to be changed, so that we can accelerate growth and strengthen our healthcare facilities.

The healthcare sector is currently multi-layered and complex, which makes it difficult to unlock its true potential and provide quality services. The onus of bringing the sector into the limelight as a Gross Domestic Product (GDP) driver now lies with the policy makers. This shall further garner the interest of private players, thereby attracting more investments and creating a conducive environment for the sector to grow.

### Healthcare drives the GDP growth



Source: KPMG in India analysis, 2015

3. Life expectancy at birth, total (years), The World Bank website, <http://data.worldbank.org/indicator/SP.DYN.LE00.IN>, accessed July 2015



Healthier citizens build a healthier nation. Though improving the state of healthcare in India still lags behind its international counterparts. If given due focus, the sector has the ability to propel GDP growth via multiple spokes, directly and indirectly.



### Healthcare as an employment generator<sup>4</sup>

With a rise in ageing population and growing disease burden, the demand for healthcare services is expected to increase manifold. In order to meet this demand, the sector calls for a greater number of healthcare practitioners and skilled labour, thereby creating more direct and indirect job opportunities in the coming years.



### Healthcare as a productivity enhancer<sup>4</sup>

Health is an important constituent of human capital. Investing in healthcare can have a positive impact across various spectrums of the economy. It can not only enhance labour productivity by increasing their physical capacities, such as endurance and strength, but also augment mental capacities, such as reasoning ability and cognitive functioning. Thus, health is expected to have far-reaching effects on productivity of both unskilled and skilled manpower.



### Healthcare as a forex generator<sup>4</sup>

India is fast emerging as one of the leading destinations for international patients, owing to technological advancement, improvements in quality of care imparted, international accreditation programmes run by medical institutes, enhanced skill sets of medical staff, and its cost arbitrage. This has consequently encouraged the inflow of foreign exchange, helping strengthen our position in the international market. Health experts have indicated that India can grab this opportunity and target GDP share of around two per cent in 10 years from now, through medical tourism.<sup>5</sup>



### Healthcare as a driver for innovation and entrepreneurship<sup>4</sup>

Innovation and entrepreneurship can be instrumental in driving the economy's growth. With the advent of alternate and innovative healthcare models, such as wellness centres, diabetes clinic, day care centres, diagnostic chains, among others, the entrepreneurial spirit in the sector has heightened. This in turn is expected to create employment opportunities, enhance productivity and increase export potential of healthcare services.

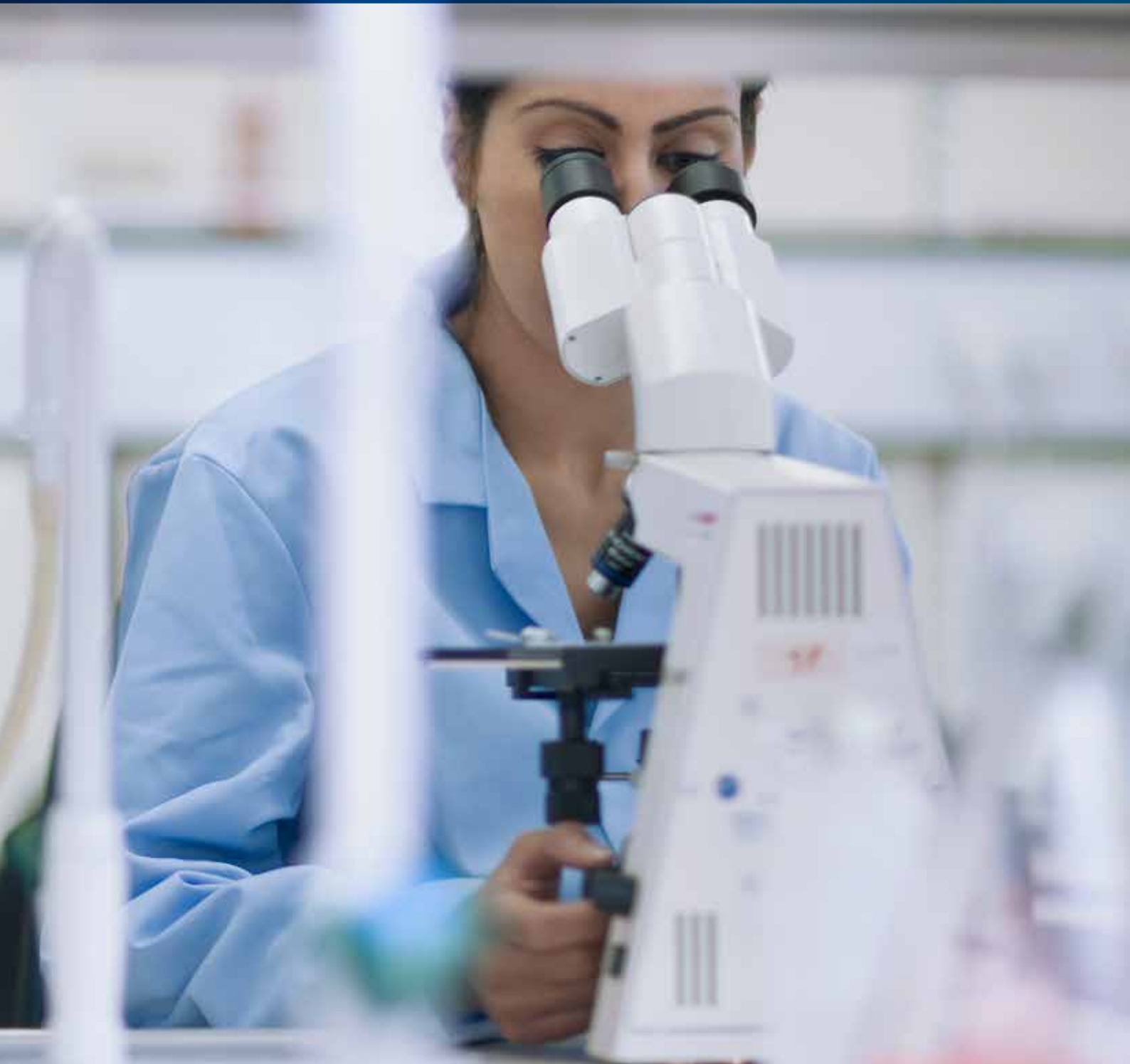
**This paper aims to provide a view to help envision investment into the health of citizens, as an investment to improve economic growth of the nation, and not as a social expenditure.**

4. KPMG in India analysis, 2015

5. Gulf region account for 30% of Apollo patients from abroad, EconomicTimes, 8 July 2015



# Role of healthcare







## Healthcare as an employment generator

### India's booming medical industry boasts of having one of the highest direct employment rates in the country

Today, the Indian healthcare sector has become one of the largest sectors, not only in terms of revenue, but also in terms of employment. It is the fifth largest employer among all sectors, both in terms of direct and indirect employment.<sup>6</sup>

The sector offers direct employment to nearly five million citizens<sup>7</sup> in India. Strengthened coverage, and increased investments by both public and private players, have empowered the Indian healthcare sector, which is expected to generate close to 7.5 million direct<sup>8</sup> opportunities by 2022.

While the public healthcare network is widespread, majority of the service share lies with the private sector, which today caters to 70 per cent of out-patient and 60 per cent of in-patient services.<sup>9</sup> The sector is projected to continue on its growth path, with an estimated market size of USD280 billion<sup>10</sup> by 2020. The private sector is likely to contribute in a major way to this growth. With a shift in focus towards quality of service, particularly with the rising demand for tertiary and quaternary care, the industry requires specialised and highly skilled resources. As a result, a large increase in demand, for nurses in particular, is anticipated.

#### Present status of India's human resources in the healthcare sector

Directly employed professionals	Numbers employed
Doctors	918,303
Dental surgeons	120,897
Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH)	686,319
Auxiliary nurse midwives	726,557
Registered nurses	1,562,186
Lady health visitors	55,498
Pharmacists	643,301
<b>Total direct employment</b>	<b>4,713,061</b>

**Source:** Human resources in health sector, National Health Profile (NHP) of India - 2013, <http://cbhidghs.nic.in/index2.asp?slid=1284&sublinkid=1166>, accessed July 2015

6. Source: 1- Medical Value Travel, KPMG in India, September 2014;

7. Human resources in health sector, National Health Profile (NHP) of India - 2013 website, <http://cbhidghs.nic.in/index2.asp?slid=1284&sublinkid=1166>, accessed July 2015;

8. Human resource and skill requirements in the Healthcare sector (2013-2017, 2017-22), National Skill Development Corporation, 2015;

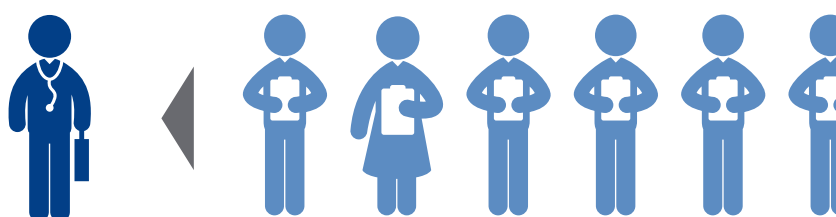
9. KPMG in India analysis and Primary research interviews;

10. For numbers till 2014: Industry Forecast - Healthcare - India - Q3 2015, BMI Research, June 2015, for numbers beyond 2014: KPMG in India analysis, 2015

## Owing to the diverse range of medical services, the sector also provides indirect employment to healthcare professionals in categories such as medical assistance, nursing associates, etc.

Healthcare industry is not just about the physicians, surgeons or the nurses, it engulfs the entire world of public and private hospitals, physicians' offices, nursing and residential healthcare facilities, dentists, and other healthcare practitioners, outpatient care centres, home healthcare services and other ambulatory healthcare services, as well as diagnostic laboratories.

### Additional FullTime Equivalent (FTE) employed per doctor



**One physician, on an average, requires support from 5.6 full-time employees to deliver quality healthcare service in different settings.**

**Source:** KPMG IN India analysis; How Many Staff Members Do You Need?, American Academy of Family Physicians website, accessed July 2015

### FTE's required per physician

Role	FTE required
General administrative	0.24
Business office	0.80
Managed care administrative	0.16
Housekeeping and security	0.14
Medical receptionists	1.0
Medical secretaries, transcribers	0.34
Medical records	0.43
Other administrative support	0.13
Registered nurses	0.44
Licensed practical nurses	0.40
Medical assistants, nurse aides	0.76
Clinical laboratory	0.34
Radiology and imaging	0.21
Contracted support staff	0.23

**Source:** How Many Staff Members Do You Need?, American Academy of Family Physicians website, accessed July 2015

The healthcare system generates more employment per unit established as compared to other sectors that are given priority and supported by the government.

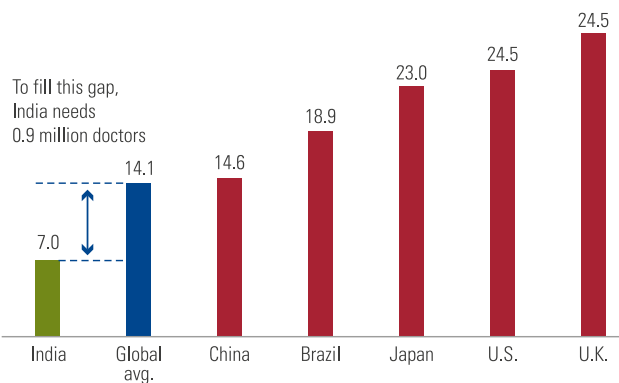
- Dr. Narottam Puri

## However, the demand for healthcare manpower has outpaced its supply, creating a huge gap in quality healthcare services that needs to be filled

In comparison to World Health Organisation's (WHO) stipulated minimum doctor to patient ratio of 1:1,000, India has only 0.7 doctors per 1,000 patients.<sup>11</sup>

- Currently, 0.9 million more doctors<sup>12</sup> are required to meet the global average of 14.1 doctor per 10,000 people.
- Moreover, in comparison to WHO's stipulated minimum ratio of 2.5:1000, India has only 1.7 nurses per 1,000 patients.<sup>11</sup> An additional 2.4 million nurses<sup>12</sup> are required to meet the growing demand

### Physicians (per 10,000 population) 2014



**Source:** World Health Statistics 2014, WHO, accessed July 2015; Excellence Comes in Many Dimensions 18th Annual Report 2013-14 Fortis Healthcare, p88, accessed July, 2015

In order to fill the current healthcare workforce gap, India needs to focus not only on increasing the educational institutes, but also the quality of education.

- Dr. Nandakumar Jairam

11. World Health Statistics 2014, WHO, accessed July 2015;

12. KPMG in India analysis, 2015;



## Human resource challenge for Indian healthcare



Around 50,000 medical<sup>13</sup> students graduate every year, whereas the number of PG seats are only approximate 15,000 in MD, MS courses.<sup>14</sup> Scarcity of PG seats leads to migration of students opting for higher education, fellowship programmes and job opportunities abroad. Approximately 1,330 doctors moved abroad in 2012.<sup>15</sup>

Major factors contributing to the lesser density of healthcare workers in rural sector are poor infrastructure, non-availability of the basic healthcare requirements, medicines and equipment. According to the Health and Family Welfare Department, there are more than 20 per cent untouched vacancies untouched for specialists and assistant surgeons<sup>16</sup> in Primary Healthcare Centres (PHCs) and Community Healthcare Centres (CHCs).



India's system healthcare is mostly driven by contract based or Allied Health Professionals (AHP), i.e. 56 per cent<sup>17</sup> with respect to the permanent employees particularly constituting the record keepers, duty assistants and diagnostics assistants. And there also exists a scarcity of 1.88 lakh<sup>18</sup> AHPs only in public health organisations.

13. Medical capitation fee zooms as seats go under knife, Business Standard, 28 June 2014;

14. Primary research interviews and KPMG in India analysis, 2015;

15. Human Resource and Skill Requirements in the Healthcare Sector (2013-17, 2017-22) NSDC Report, 2015, P28;

16. India has just one doctor for every 1,700 people, The Indian Express, 22 September 2013;

17. Human Resource and Skill Requirements in the Healthcare Sector, National Skill Development Corporation, p25, accessed July 2015;

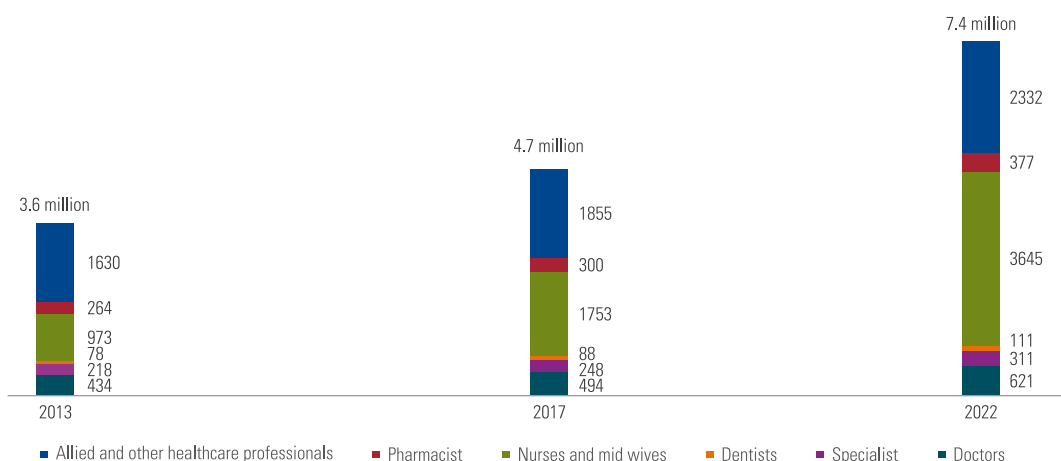
18. Human Resource and Skill Requirements in the Healthcare Sector, National Skill Development Corporation, p26, accessed July 2015



## Changing trends in the healthcare industry are likely to increase the demand for healthcare workforce in the coming years, signalling a prospective boom in the GDP

Workforce requirements for the healthcare sector is expected to grow from 35.9 lakh in 2013 to 74 lakh in 2022, which is more than double<sup>19</sup> of its existing workforce to meet the market demand.

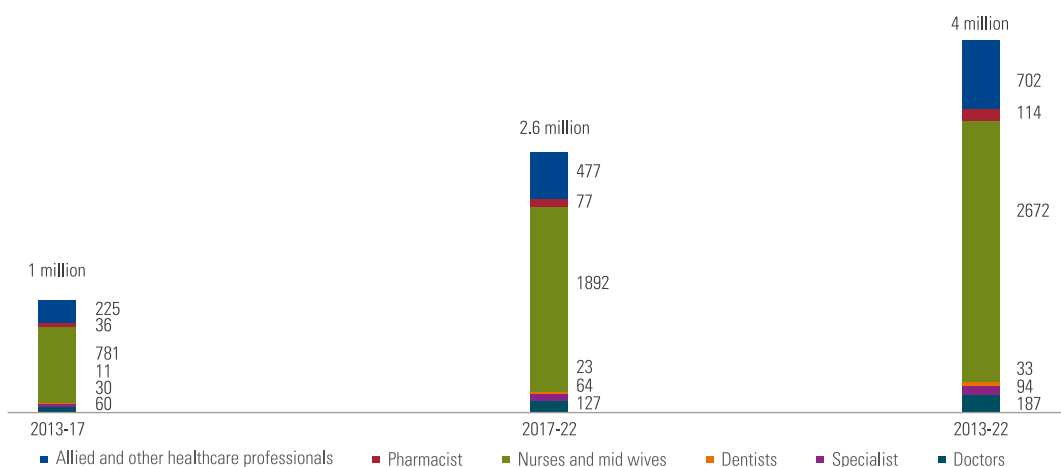
### Workforce demand projections across various roles in healthcare



Source: Human Resource and Skill Requirements in the Healthcare Sector report, KPMG in India and NSDC report, April 2015

One of the key initiatives taken by the Indian government to help increase the workforce availability is the approval to create around 10,000 Bachelor of Medicine and Bachelor of Surgery (MBBS) seats.<sup>19</sup> In another positive development, the Medical Council of India (MCI) has approved the establishment of 16 medical colleges.<sup>19</sup>

### Incremental demand for workforce in healthcare



Source: Human Resource and Skill Requirements in the Healthcare Sector report, KPMG in India and NSDC report, April 2015

19. Human Resource and Skill Requirements in the Healthcare Sector report, KPMG in India and NSDC report, April 2015

The Indian healthcare industry, though confronted with many challenges, offers a chance to create millions of job opportunities that can not only support the Indian GDP growth, but also support other sectors of the economy by improving both demand and supply of a productive healthy workforce.







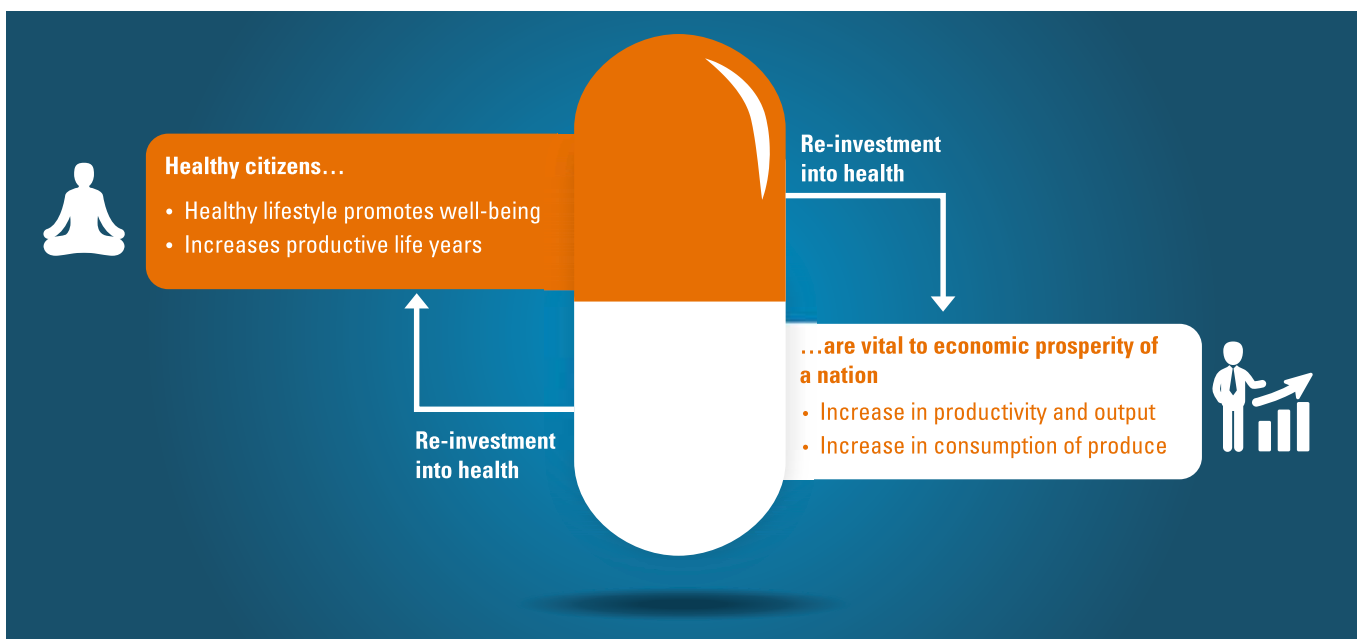
## Healthcare as a productivity enhancer

**As India aspires to become a world economic power, the health of the nation becomes an even more vital component to help achieve this vision.**

A healthy workforce is more productive as it can work for a longer duration. When a worker is unable to work due to serious health problems, such as disability, then he/she is also unable to help the nation in raising the standard of living. Although it may be difficult to define the exact impact of productivity loss, a rough indicator of economic loss due to illness would not be pleasant for India. This is due to an individual's inability to generate economic output or incapability of paying taxes on earnings. Thus, a healthy workforce is an important economic asset to a nation.

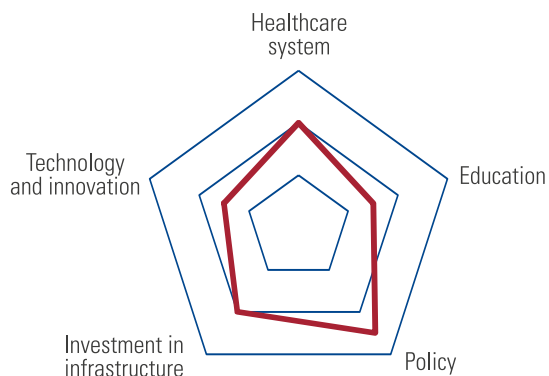
As the disease burden grows in developing countries, adequate measures are required to exercise control. Untimely death and the growing non-communicable diseases (NCD) burden affect a large portion of population in the developing economies, including India. An affordable healthcare policy intervention in developing countries has the potential to significantly improve the status of healthcare in those countries. These measures to improve health are expected to have significant impact on their economic growth.

### Health drives wealth of a nation



Source: KPMG in India analysis, 2015

## Drivers of GDP

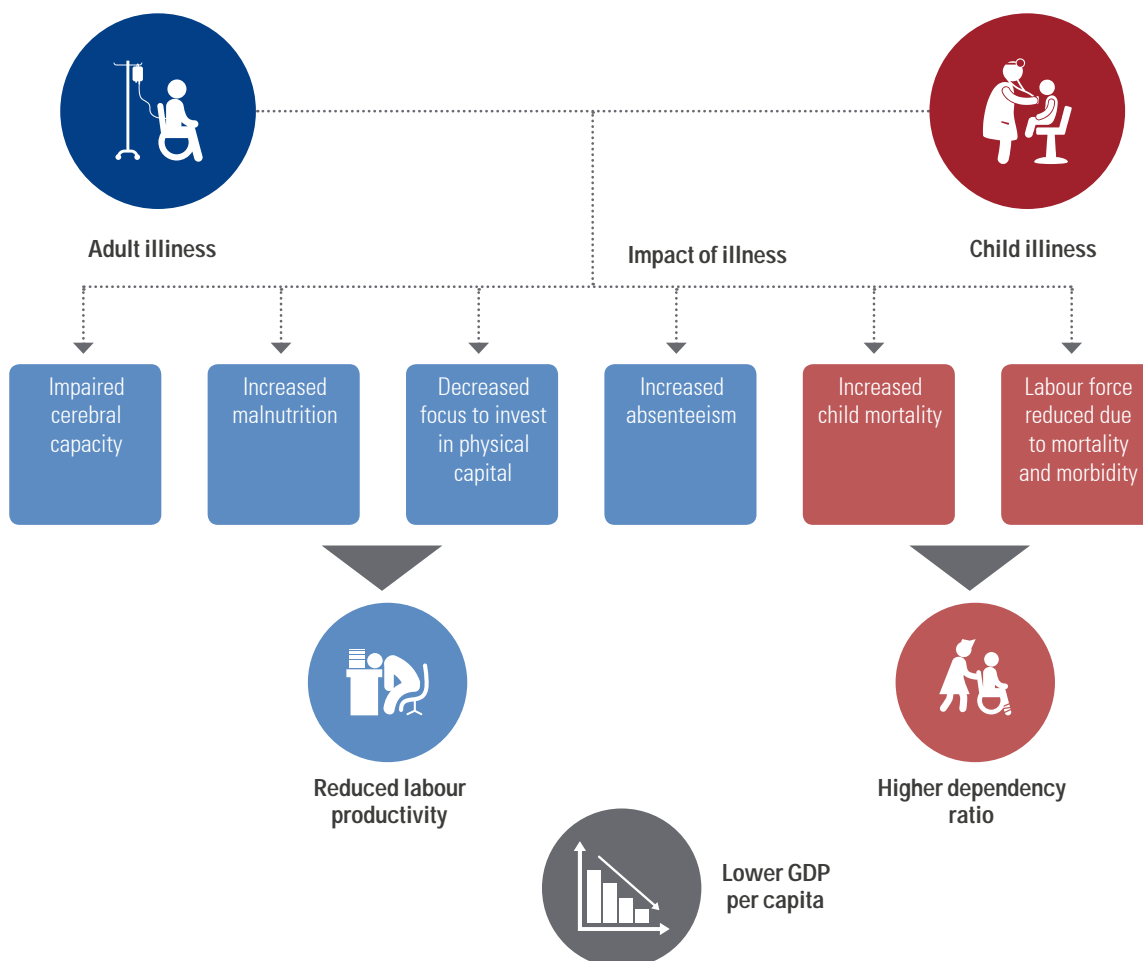


Source: Primary research interviews, KPMG in India analysis, 2015

The results from KPMG in India's analysis and the existing literature on economic growth, clearly demonstrates the role of health as a positive driver for economic growth, at least at the micro level. The research suggests that, healthier workers are likely to be productive and are able to work longer than their relatively less healthier counterparts. They are therefore, able to secure higher earnings than the disease-burdened workers. It has been observed, that illness and diseases also shorten the working life span of an individual, thereby impacting their lifetime earnings.

**However, poor health of the workforce could impact GDP per capita negatively by reducing both labour productivity and the relative size of the labour force.**

## Unhealthy individuals lead to GDP loss

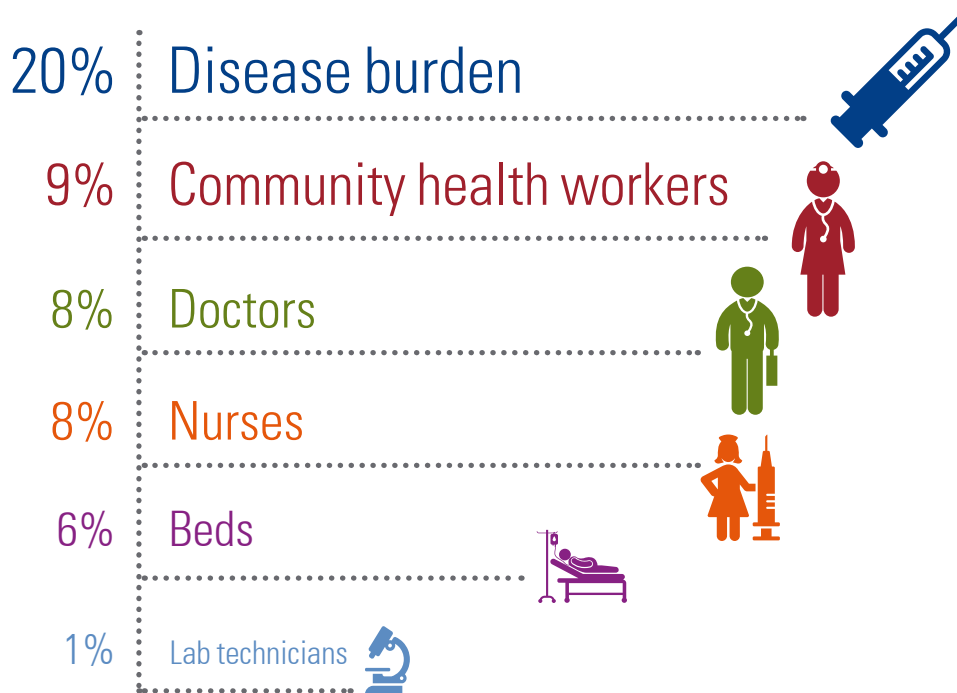


Source: KPMG in India analysis, 2015

**Despite accounting for 20 per cent of the global disease burden, the existing Indian healthcare infrastructure is far from being sufficient to address the prevailing healthcare needs. In addition, an increasing NCD burden, is abating the economic growth of India resulting in huge fiscal encumbrance.**

In comparison to global facilities in with respect to healthcare infrastructure, the share of disease burden is much high for India<sup>20</sup> and the disease burden on India is further growing with the rising elderly population, which is expected to further grow to 11.8 per cent of the total population<sup>21</sup> by 2025. Lack of skilled service providers is one of the biggest constraints in the country. The healthcare sector in India is expected to need a 7.4 million strong workforce<sup>22</sup> in 2022 compared to 3.5 million in 2013. Additionally, there is also a requirement of 550 new medical colleges<sup>22</sup> to meet the global average of doctors in 2030.

#### India's share in global disease burden vs share of global healthcare infrastructure



Source: Indian Healthcare Services, Asia Pacific Equity Research, J.P. Morgan, via Thomson research database, accessed July 2015

#### Growing burden of NCDs

India is going through a paradigm shift in healthcare due to the epidemiological transition from communicable diseases to NCDs and multiple health transitions pertaining to demographics (ageing population) and nutrition (high caloric consumption and low physical activity levels) transitions. According to WHO, premature deaths caused by NCDs, majorly cardiovascular diseases (CVDs), cancers and diabetes have risen. NCDs are the leading cause of death, accounting for 60 per cent of all deaths in India<sup>21</sup>, which is more than those due to injuries, maternal, prenatal, communicable and nutritional conditions. Additionally, NCDs account for around 40 per cent of hospital stays and nearly 35 per cent of all recorded Out-Patient Department (OPD) visits.<sup>23</sup>

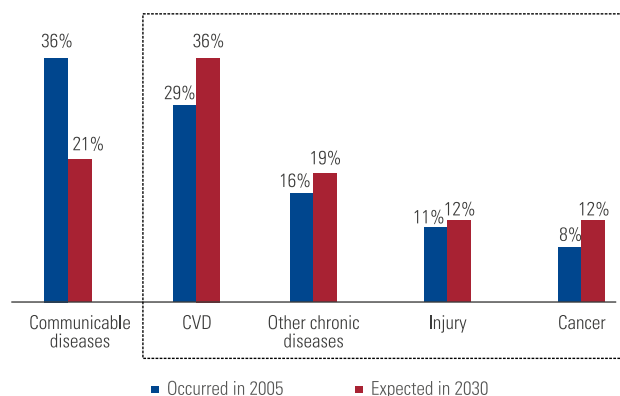
20. Indian Healthcare Services, Asia Pacific Equity Research, J.P. Morgan, via Thomson research database, accessed July 2015

21. Report of the National Commission on Macroeconomics and health, WHO, August 2005

22. Human Resource and Skill Requirements in Healthcare Sector (2013-17, 2017-22), NSDC and KPMG India report, April 2015

23. Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p5.

### Mortality causes in India: By 2030, NCDs are expected to be the major cause of mortality; more than communicable diseases



Source: Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p5, p13

### Economic burden

Poor health hampers the productivity of individuals, which further impacts economic growth of the country, on a large scale. According to WHO, the probability of dying due to four above mentioned major NCDs, is 26 per cent among the most productive years of the 30-70 age group.<sup>24</sup> Under the current scenario, the ageing population of India is likely to levy additional stress on the economic growth of the country.

NCDs were responsible for more disability-adjusted life years (DALYs) in 2010 (~235 million) than communicable diseases (~222 million) in India.<sup>25</sup> Diabetes is one of the major concerns in India, as number of DALYs due to the disease nearly doubled from approximately 4.1 to 8 million<sup>25</sup> between 1990 to 2010. However, the same is lower than CVD as death for patients living with diabetes is eventually due to the latter.

### XXXXXX

NCD	DALYs	% of total DALYs
CVD	48,793,600	9.4
Chronic respiratory diseases	35,880,300	7.0
Cancer	19,094,000	3.7
Diabetes	7,968,930	1.5

Source: Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p13

Burden of lifestyle diseases such as CVDs and diabetes are swelling on a daily basis, but our healthcare sector is not able to cater to them.

- Dr. Narottam Puri

24. Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p5

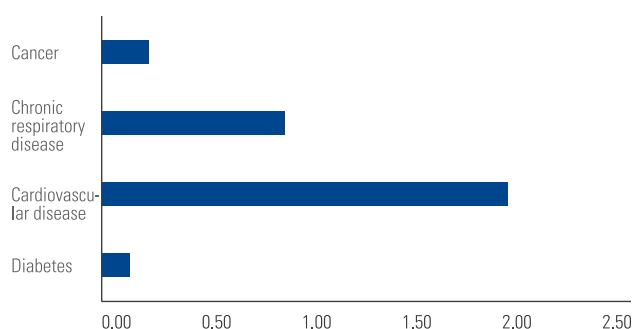
25. Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p13.



## It is estimated that this increasing NCD burden will cost India close to USD5 trillion due to loss of productivity.

The erosion-productivity impact calculator (EPIC) model, used by the World Economic Forum and the Harvard School of Public Health, predicts that NCDs are expected to lead to as much as USD4.58 trillion<sup>26</sup> (based on 2010 dollars) loss of output between 2012-30. CVDs are major contributors to the economic burden in NCDs.<sup>26</sup>

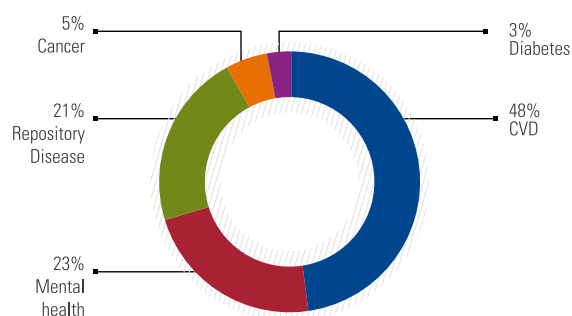
**Economic burden due to NCDs in India, 2012-30 (in trillion of 2010 USD)**



**Note:** The estimates are based on EPIC model

**Source:** Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p22

**Contribution (%) of each disease to lost economic output for India, 2012-30**



**Source:** Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p22

As per the World Bank study, there has been an enormous projected loss to national income for 2006-15 on account of mortality due to NCDs. This means that there could be substantial economic burden in the range of 7-8 per cent only through NCDs. If these are correct figures, it is a big concern and worry.

- Dr. Girdhar J. Gyani



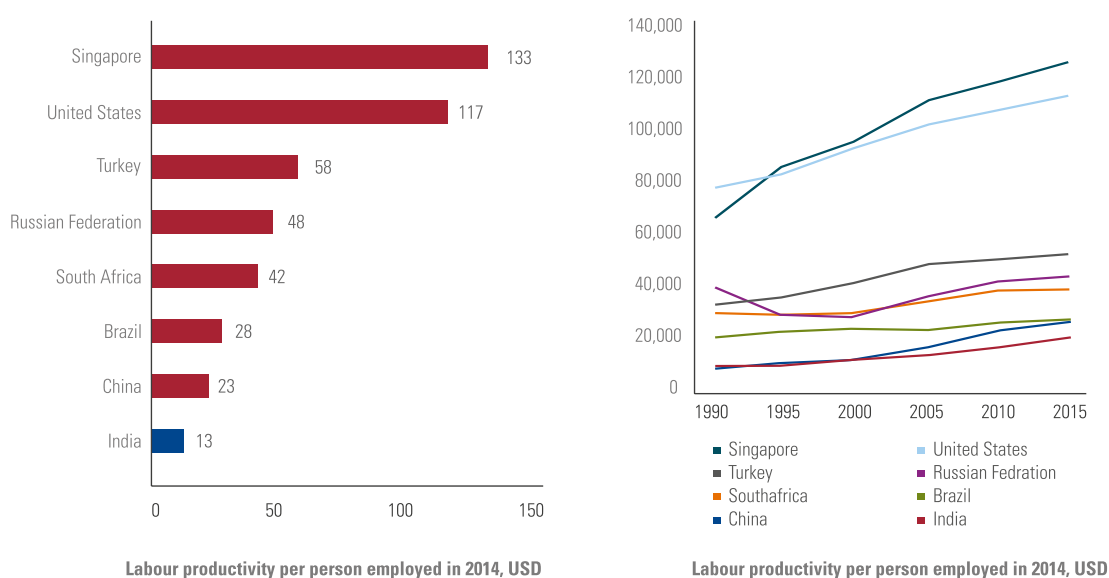
<sup>26</sup> Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p23

## The mounting disease burden, coupled with low government focus on healthcare, has acted as one of the prime factors accounting for low labour productivity in India.

Availability of abundant manpower and cost competitiveness has given India an edge over other countries. However, low labour productivity poses a challenge to India's potential of becoming a manufacturing hub. Among many other factors, health is likely to be a key factor leading to low labour productivity.

Health is an important parameter with reference to labour productivity. Increased workforce productivity can lead to better skills and improved working environment, making way for faster economic growth and higher investments.

### India's economy is beset by poor people productivity



**Source:** The Conference Board Total Economy Database, The Conference Board website, accessed July 2015

The government incurs less health related expenditure when its people are healthy. It can instead invest more in upgrading infrastructure which can enhance overall productivity of the economy.<sup>27</sup>

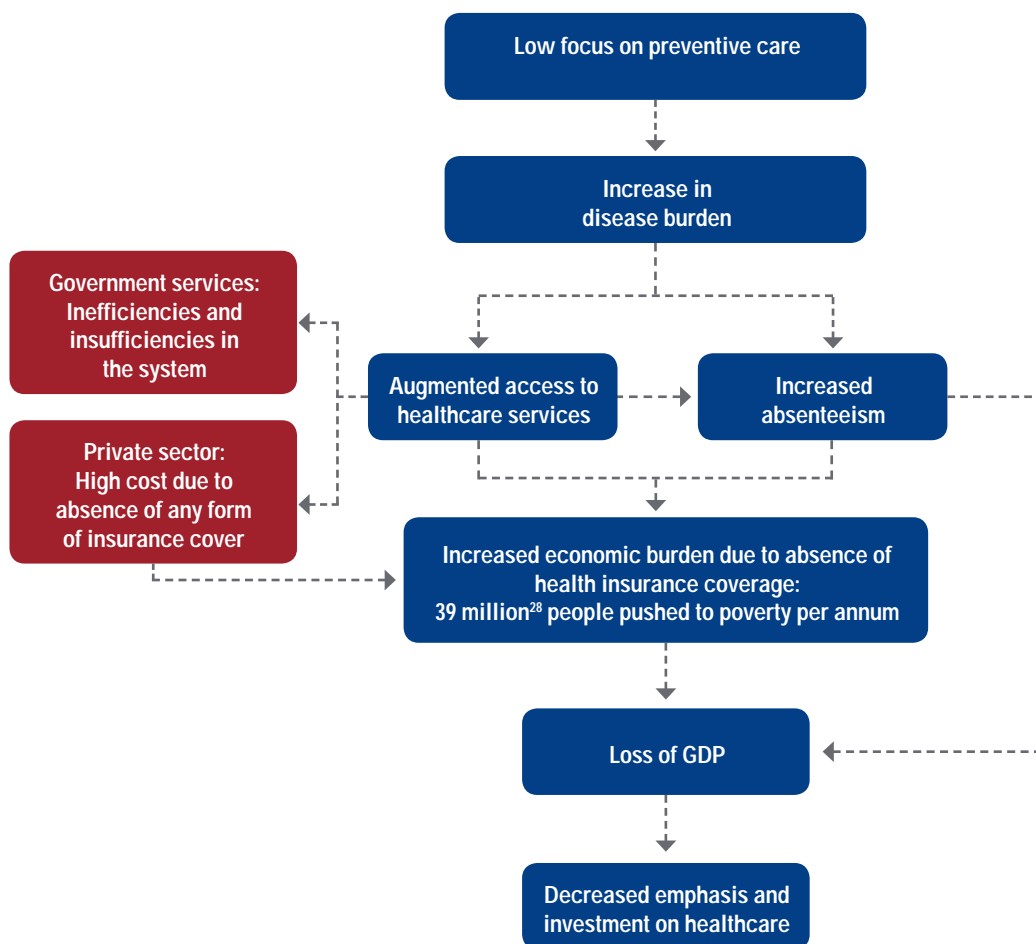
27. Impact of Health on Productivity Growth in India, International Journal of Economics, Finance and Management, July 2013

## In addition, the abysmally low focus on preventive care in India is expected to further GDP losses due to decreasing productivity.

The health benefits of prevention are instinctual; it is wiser to prevent a disease than to face its consequences at a more advanced stage. Apart from this, there is economic benefit of preventing a disease and costs associated with neglecting preventive care. Reduced life span, lower quality of life, less productivity, and economic losses are some of the negative effects of neglecting preventive care.

The Indian government's low focus on preventive care may lead to an increase in disease burden, and eventually, the nation has to spend more on tackling diseases, resulting in a loss of GDP.

### The vicious cycle of GDP loss and healthcare burden



Source: KPMG in India analysis, 2015

28. Healthcare in India: current state and key imperatives, KPMG India, February 2015

## In summation

In a nutshell, there seems to be a strong correlation between the state of health and productivity of a nation's workforce and its economic growth and development. A country can build a strong foundation for economic success and prosperity by investing in the health of its population. In other words, a healthy and productive workforce is a key ingredient to economic growth as adversities of diseases have the capability to snowball into fiscal drags on a country's economic output.

### Case in point : Investing in employees' health leads to increased productivity

#### Background

- According to the Journal of Occupational and Environmental Medicine U.S., 2013, health promotion programmes at a workplace to improve employee health can lead to increase in productivity and increased cost savings
- The study analysed the productivity effects of a wellness programme on employees. The programme included wellness coaches to provide telephonic support to employees to help address risks or health problems
- It also measured absenteeism (lost work time) as well as time spent at work with reduced productivity.

#### Outcome

- The wellness programme led to reduction in lost work time, which is equivalent to 10.3 hours per year in additional productive time
- Annual saving was USD350 per employee; this is a reflection of those who participated in the programme as compared to non-participant workers.

**Source:** Investing in Employees' Health Leads to Increased Productivity, American College of Occupational and Environmental Medicine website, accessed July 2015





## Healthcare as a forex generator

### India has been successful in leveraging its talent pool and cost effectiveness to emerge as a preferred medical value travel destination, globally.

India has been historically making its presence felt in the global market through the export of quality services. While Information Technology (IT) has been a forerunner in this, with time, the country has also been successful in becoming a formidable force in the trade of health services.

India has been exporting healthcare services in the form of providing medical treatment to overseas patients and physical movement of skilled professionals to other countries. However, with the advancement in technology, improved infrastructure, quality benchmarks, cost arbitrage and skilled labour, the country has established itself as an important and favourable medical travel destination, along with other services under the umbrella. Many of the Indian healthcare players have also been able to establish their niche globally with the setting up of super specialty hospitals and clinics, and diagnostic and treatment centres through a collaboration mode.

Medical tourism not only results in monetary gains, but also helps to strengthen our country's credibility, globally. It acts as a growth driver for numerous other sectors, such as tourism, hospitality, logistics and aviation, by means of contributing to their market size pie and generating employment.

Availability of highly talented human resource, coupled with technological advancement, enables India to provide cross border services, such as tele-medicine, tele-surgery and tele-diagnosis; along with process outsourcing services such as medical transcription, back office support, coding and billing, etc. Furthermore, India has developed a strong presence in providing advanced healthcare services, e.g. organ transplants and cardiovascular procedures, with a high success rate. Moreover, less/no waiting time in hospitals for admission and treatment makes the country an attractive destination for medical tourism.

Indian hospital chains have achieved quality standards and received accreditation from international bodies, such as Joint Commission International (JCI), indicating eminence of care that matches international standards. These certifications have helped these players position themselves among the foreign patients as one of the favoured destinations to get treatment from.

Due to the abovementioned positive factors, the medical value travel market is expected to grow by a CAGR of 30 per cent between<sup>29</sup> 2014 and 2019.

#### Medical value travel market in India (USD billion)



**Note:** 'e' denotes estimated years; Source: Global medical tourism market, Technovia Insights, accessed via ISI Emerging Markets Database, July 2015  
**Source:** KPMG in India analysis

29. Global medical tourism market, Technovia Insights, accessed via ISI Emerging Markets Database, July 2015

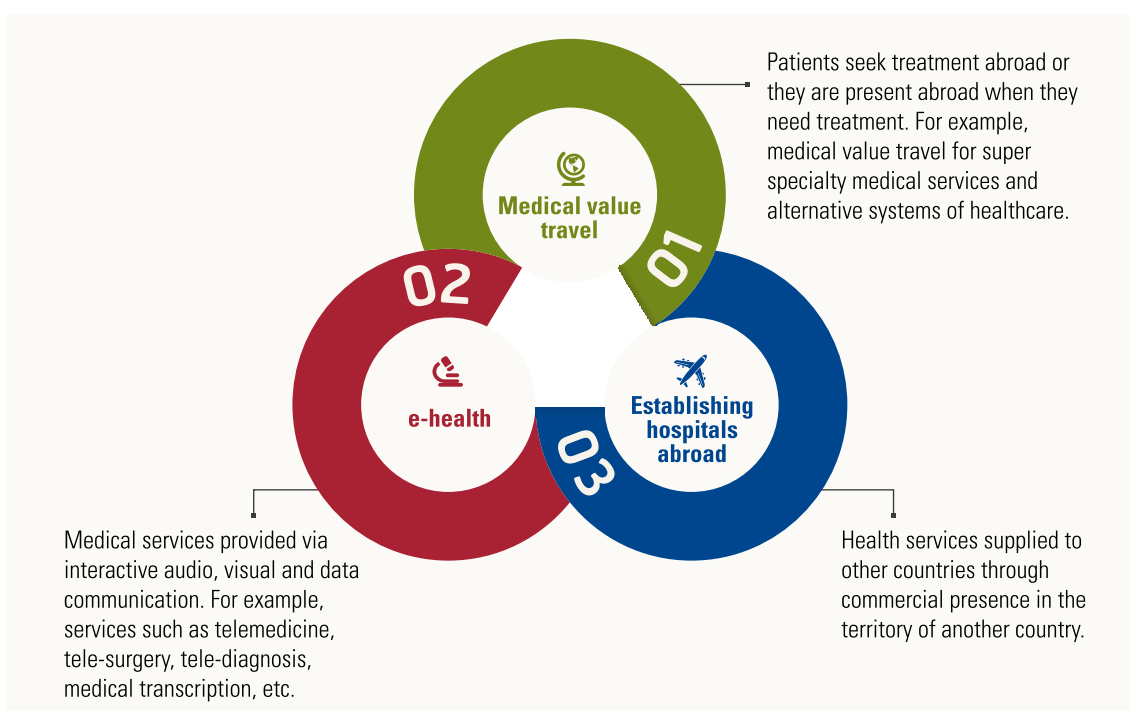


**Additionally, the sector is capable of exporting other healthcare services, such as e-health and inbound investments, to contribute positively to the growth of the economy.**

Healthcare is considered to be one of the major sectors that stimulates economic growth and contributes significantly to the country's employment. The Indian government's initiatives, such as like 'Make in India', 'Digital India' and the National Health Mission, are reflective of the steps to build our position globally. Hence, with its inherent strengths in mind, it may not be an overstatement to say that the healthcare sector in India could well be a core driver of economic growth in the coming decade.

In the recent past, healthcare services have seen rapid globalisation, as reflected in the growing number of patients travelling across international borders for their treatment, the physical movement of healthcare personnel, rapid growth in information technology platforms serving healthcare across the globe, and in the increasing number of joint venture engagements.

### Export of Indian healthcare services



Source: KPMG in India analysis, 2015

### FICCI's initiatives for medical value travel

FICCI believes that the medical value travel industry has the potential of becoming the next IT/ITeS industry in India. In this context, FICCI has constituted a 'working group' to bring together all stakeholders of the Indian medical value travel sector and consolidate their efforts to leverage this potential. The group has submitted a compendious policy paper to the Ministry of Commerce & Industry, GoI with specific recommendations outlining a road map that can position India as a preferred healthcare destination. The group is now working towards forming a council on medical value travel which will have representation from all the relevant ministries as well as the industry, to include hospitals, wellness centres, tourism and AYUSH companies.

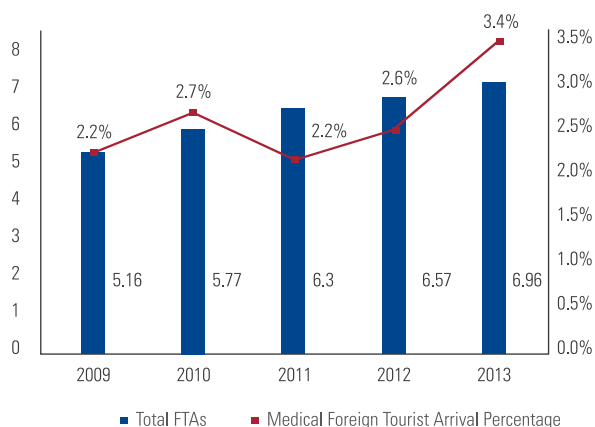
## Low treatment cost, internationally accredited healthcare facilities and delightful hospitality services continue to attract patients from across the globe, thereby encouraging the inflow of foreign exchange in the country.

### Medical value travel

Medical value travel, also popularly known as medical tourism, is being considered as India's next crown jewel. It is fast emerging as the country's distinct proposition that is adding considerable value to its economy. The country has been successfully attracting patients from across the globe and providing quality, low-cost treatment.

The medical value travel market in India is expected to grow at a CAGR of approximately 30 per cent from USD2.8 billion in 2014 to 10.6 billion in 2019.<sup>30</sup> People from different parts of the world are travelling to the country to capitalise on the comparative cost advantage and quality services offered by medical facilities here. Additionally, rising costs of healthcare in the developed world, along with rising disposable income and healthcare awareness among the global population, is forcing patients to explore cheaper options in other countries. India hosted nearly 230,000 patients from all over the world in 2013, with a majority coming from developing and under-developed economies.<sup>31</sup>

#### Indian medical value travel – number of medical Foreign Tourist Arrivals (FTAs)



Source: India Tourism Statistics (2013), Ministry of Tourism, 2014, p50, KPMG in India analysis 2015

India has a huge potential to be the country of choice to attract medical tourists from many countries, particularly SAARC nations wherein quality services and high-end tertiary and quaternary care is not available.

- Dr. Narottam Puri

Neighbouring countries, such as Afghanistan, Bangladesh, Nepal, etc., accounted for the highest number of medical tourist<sup>31</sup> inflow in 2013. This can be attributed to the lack of quality healthcare infrastructure and skilled manpower deficit in these countries. Additionally, physical proximity and similarity in culture, and food and language make India a convenient option. For similar reasons, SAARC countries have formed a dominant piece in the medical tourists' pie. Regional cooperation treaties between India and other countries to promote each other as preferred medical tourist destinations are also strengthening India's position as a sought after destination for medical value travel.

India's cost arbitrage gives it a definite edge over other countries, e.g. Singapore and Malaysia, when it comes to attracting medical tourists. Medical treatment offered to tourists enables them to save around 30 to 70 per cent of their costs in India.<sup>30</sup>

30. Global medical tourism market, Technovia Insights, accessed via ISI Emerging Markets Database, July 2015

31. India Tourism Statistics 2013, Ministry of Tourism, 2014, p50

**Moreover, Indian healthcare players are proving their mettle globally by establishing quality hospitals in different countries.**

#### **Geographical expansion**



- India can provide economical treatment for uninsured or underinsured patients from developed nations
- SAARC countries such as Bangladesh, Pakistan, Afghanistan, Bhutan, Nepal, Maldives and Sri Lanka are major sources of medical tourists in India, owing to the physical vicinity and political co-operation agreements.



#### **Expansion of service offerings**

- India's traditional strength in yoga and ayurveda adds a distinct angle to the country's medical value travel proposition
- Presence of healthcare facilities with international standards and highly skilled medical workforce has helped India in strengthening its spot in medical travel.

To emerge as a top medical value travel destination, India needs to focus on quality of services and increase transparency and accountability in every part of healthcare delivery. Moreover, government needs to increase efficiencies in terms of visa, airport documentation and co-ordination among various agencies to boost this sector.

**- Dr. Nandakumar Jairam**



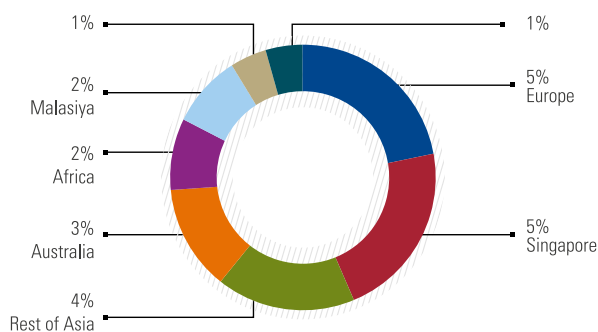
## Establishment of hospitals in foreign countries

Indian healthcare players have developed capabilities to establish and operate hospitals and clinics abroad. Establishment of satellite healthcare facilities by major hospital chains, especially in high potential medical value travel countries, are expected to help India gain a leading position in the sector. However, stakeholders need to work together to increase the presence of Indian hospitals abroad in order to facilitate export of services through this mode.

A few hospital chains are focussing on Africa and the Asia Pacific region, as the healthcare platform required in these countries resonates with India's healthcare requirements. The country should now focus on building hospitals in developing countries which have less legal constraints, as compared to others. Also, establishment of hospitals in Africa shall help India build a better relationship with African nations.

Since 2010, close to 20 outbound merger and acquisition (M&A) deals have been executed across the world by domestic players, reflecting the growing prowess of Indian healthcare players.

### Outbound M&A deals by Indian firms – geographical split



Source: KPMG in India analysis, 2015; VCC Edge, accessed July 2015

#### Geographical expansion



- Many African countries are interested in partnering with both private and government healthcare organisations to build healthcare capacity in their own country
- South-east Asia can also be explored to establish healthcare facilities, especially in countries which allow a major foreign ownership stake in their healthcare sector
- Further expansion in SAARC region to strengthen healthcare delivery
- India can partner with CIS countries for establishing hospitals and clinics as many countries are prioritising modernisation and development of their healthcare infrastructure.



#### Expansion of service offerings

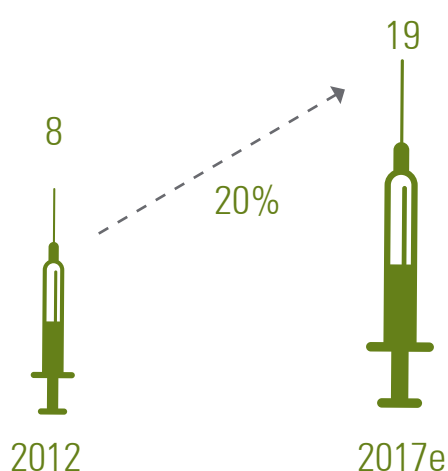
- India can also establish dialysis, radiology and pathology centres abroad
- The country can leverage its tele-medicine strength to provide services in the areas mentioned above.

## Tele-medicine services: A centre stage for convergence

The tele-medicine market in India has observed noteworthy growth in the recent past, owing to its potential to provide increased access, lower cost, better patient outcomes, greater patient engagement and improved safety. In the future, tele-medicine is expected to play a major role in the convergence story that is currently unfolding across the country.<sup>32</sup>

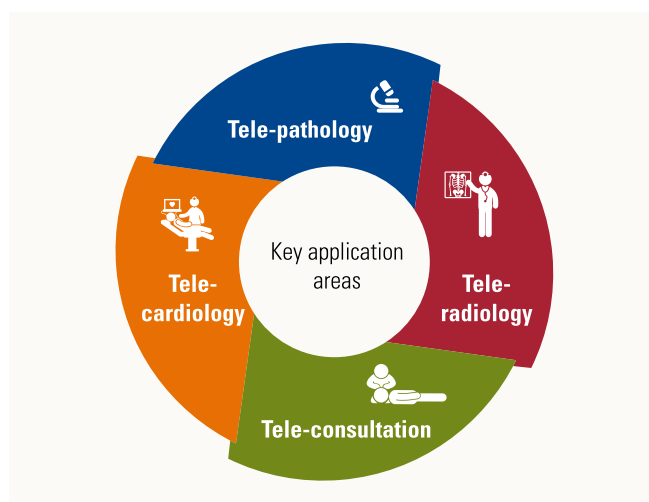
The global telemedicine industry is expected to grow at a CAGR of approximately 18 per cent, from USD10 billion in 2010 to nearly USD27 billion in 2016. Indian tele-medicine, though in its nascent stage, is showing robust growth at approximately 20 per cent and is projected to grow from USD8 million in 2012 to approximately USD19 million by 2017.<sup>33</sup>

### Indian telemedicine market (USD million)



**Source:** Analysing the Telemedicine Market in India, Smart Research Insights, accessed via ISI Emerging Markets Database, July 2015

### Key application areas



**Source:** KPMG in India analysis, 2015

32. Telemedicine services take centre stage for convergence, KPMG in India, 2014

33. Analysing the Telemedicine Market in India, Smart Research Insights, accessed via ISI Emerging Markets Database, July 2015





## A targeted approach to provide tele-medicine services to countries and regions having less developed infrastructure and low availability of medical workforce can provide ample opportunities for India.

Tele-medicine has a huge potential to improve healthcare across the four pillars, namely, accessibility, availability, affordability and acceptability.

- Improve accessibility and availability - improve access to healthcare for all by removing urban-rural healthcare disparity
- Increase affordability - reduce economic burden by reducing cost of care.
- Increase acceptability - improve quality of care by engaging the patient throughout the treatment cycle.

Further, tele-medicine technology is likely to also help in upgrading skills via tele-education, tele-training, tele-monitoring and tele-support.

### Geographical expansion



- Tele-medicine offers huge potential in supplying healthcare services and attracting medical tourists from African nations, SAARC and CIS countries, as well as regions which have less developed infrastructure and low availability of medical workforce
- Few initiatives, such as the SAARC tele-medicine network and pan-African e-network project, can push the demand of Indian services significantly
- Many developed countries, such as the U.S., are short of trained radiologists; this provides an opportunity for India to deliver low-cost tele-radiology services to these countries.

### Expansion of service offerings



- India has enormous future potential in remote healthcare models such as mobile-based personal emergency response system, m-health applications and self monitoring devices with applications for data transmission.
- There is e-diagnostic and e-radiology services could be expanded; with sample collection centres and radio-diagnostic centres abroad.

## In summation

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India's strength lies in its young populace; by 2020, it is expected to become the youngest country, with around 64 per cent of its population<sup>34</sup> in the working age group. With such a huge young talented pool, India is destined to be a source of human resources not only for most of the developed economies that are ageing in demographics, but also for less developed economies in the coming decades. The current conditions are apposite for India to reap the demographic dividend and become a key engine for global growth.

India's service sector has evolved over decades and offers huge potential for global and domestic economy with its low-cost and high value advantage. The service sector in India is driving the Indian growth story, and the healthcare sector can play a vital role in this by establishing itself as a global supplier for quality services.

The government's announcement of setting up a board to boost medical tourism<sup>35</sup> and immediate medical visa facility for patients from SAARC countries<sup>36</sup> are positive steps, as medical value travel is a growing source for earning foreign exchange and it symbolises prestige and goodwill outside India.<sup>36</sup> Moreover, health experts have indicated that India can grab this opportunity and can target a GDP share of around two per cent in 10 years from now from medical tourism.<sup>37</sup>



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34. India is set to become the youngest country by 2020, The Hindu, 17 April 2013

35. Govt sets up Board to boost medical tourism, EconomicTimes, 19 June 2015

36. Quick visa for SAARC patients to boost India's medical tourism, EconomicTimes, 28 November 2014

37. Gulf region account for 30% of Apollo patients from abroad, EconomicTimes, 8 July 2015



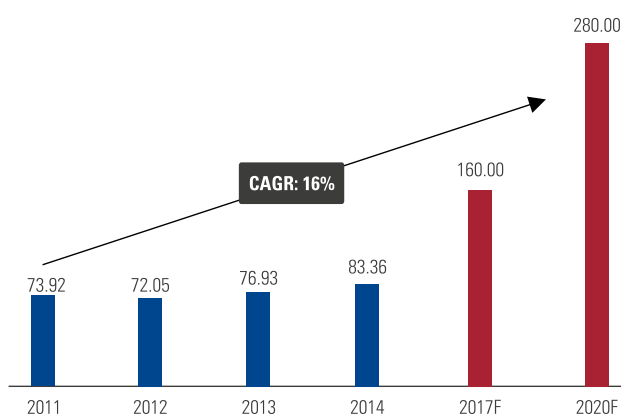
## Healthcare as a driver for innovation and entrepreneurship

**The growing healthcare market size, which currently contributes to four per cent of the Indian economy, has opened a plethora of opportunities for key stakeholders to expand and innovate, attracting investments from foreign players, who have more than doubled the influx of funds in the sector.**

The healthcare landscape in India is witnessing substantial transformation which is stemming from a radical shift in the disease patterns of its populace. The country today is faced with a dual burden of communicable and non-communicable diseases, giving rise to a new pool of patients who could demand varied and specialised types of medical services. The increasing and ageing population also needs to be taken care of. India crossed the 100 million mark of its geriatric population in 2014 and is expected to be the home for around 143 million elderly by 2020.<sup>38</sup> This can be attributed to an increase in the life expectancy of individuals. With the rise in awareness and growing urbanisation, demand for healthcare facilities is also increasing.

The Indian healthcare industry has been on a robust growth trajectory. The sector is expected to grow vigorously at a CAGR of approximately 16 per cent, from USD73.92 billion in 2011 to USD280 billion in 2020.<sup>39</sup> Factors, such as increasing and ageing Indian population, growing disease burden, increasing government focus, rising awareness and insurance penetration among the populace are expected to drive this growth further. Additionally, increasing investments, growing innovation and entrepreneurship are expected to increase the market size, thereby increasing the contribution of healthcare to the country's GDP.

### Expanding healthcare market size in India (USD billion)



Source: KPMG in India analysis, 2015, Industry Forecast - Healthcare - India - Q3 2015, BMI Research, June 2015

### FICCI's activities in innovations and entrepreneurship

FICCI has been active in promoting innovation across several sectors, including healthcare, and is a member of the Sectoral Innovation Council of Ministry of Health & Family Welfare, Government of India. To take this agenda forward, FICCI Task Force on Innovations in Healthcare has introduced a series of activities such as the Sandbox, Hackathon, Bootcamps and B2B interactions.

This forum brings together all stakeholders who are involved with healthcare innovation, provides a platform to showcase their products and concepts as well as facilitates a mentor-mentee relationship.

FICCI is also working towards fostering a start-up ecosystem to accelerate entrepreneurship in the healthcare space and facilitate engagements with policy makers.

The private sector forms the backbone of India's healthcare industry. The exponential growth in the penetration of private players in tier II and III cities as well as rural areas is laudable. Boasting of high quality facilities and services, private healthcare forms a significant portion (around 65 per cent) in the primary care pie of the country and accounts for more than 40 per cent of the total hospitals in the country.<sup>40</sup>

38. 20% of population to be elderly by 2050: HelpAge India report, Live Mint, 21 February 2015

39. KPMG in India analysis, 2015, Industry Forecast - Healthcare - India - Q3 2015, BMI Research, June 2015

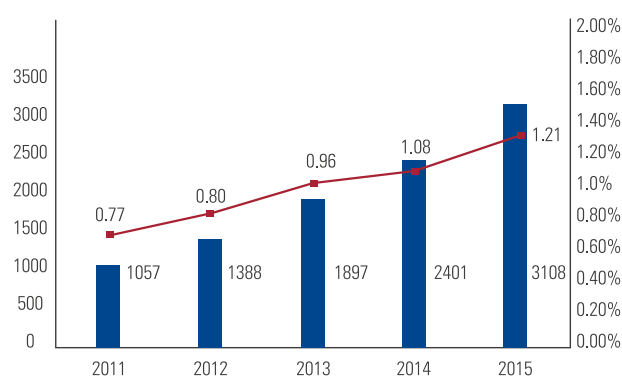
40. India Pharmaceuticals and Healthcare Report Q3 2014, Business Monitor International, May 2014

The private healthcare sector in India is witnessing a series of important developments that could lead to the rise of a new wave of innovation and entrepreneurship. Existing private players seem to have robust expansion plans that are expected to further increase healthcare access and propel growth. In addition, new entrants and small players are also capitalising on prevailing opportunities to establish their niche and satisfy patients' appetite for high quality and affordable healthcare.

The Indian healthcare sector is evolving as it widens the focus of services by the use of innovative technology, enhanced delivery models and new applications. Due to increasing inflow of foreign investments in both brownfield and greenfield projects, healthcare providers are expanding in India.

The country has received USD377,310 million aggregate Foreign Direct Investment (FDI)<sup>38</sup> from April 2000 to May 2015. Hospitals and diagnostic centres were recipients to an FDI of USD3,108 million for the same period, constituting 1.21 per cent of the total FDI into India.<sup>41</sup> The share of healthcare FDI has almost doubled since 2011, highlighting the growing interest of foreign players in the sector.

### FDI received by the healthcare sector (hospitals and diagnostic chains)



**Source:** KPMG in India analysis, 2015; Fact sheet on foreign direct investment (FDI), Department of Indian Policy & Promotion website, [http://dipp.nic.in/English/Publications/FDI\\_Statistics/2014/india\\_FDI\\_March2014.pdf](http://dipp.nic.in/English/Publications/FDI_Statistics/2014/india_FDI_March2014.pdf), accessed July 2015

With the epicentre of innovation shifting from developed to developing countries, India is in a good position to provide an effective ecosystem for frugal innovation in the healthcare sector, that can benefit its population. Taking leads from developed nations, it is axiomatic that innovation in the healthcare sector has a positive domino effect on the country's health and wealth.

- Mr. Nilaya Varma,  
Partner,  
KPMG

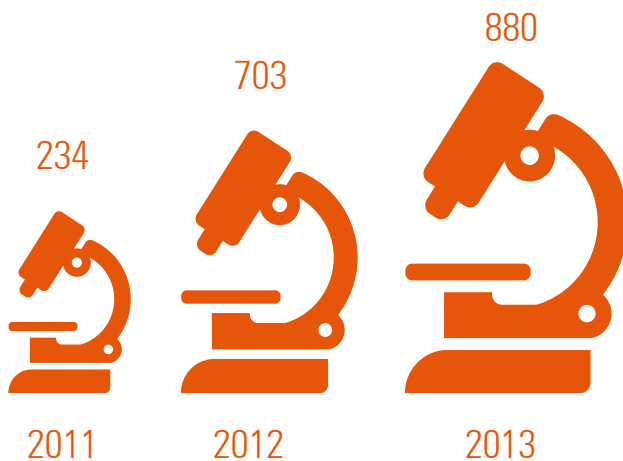
41. Fact sheet on foreign direct investment (fdi), DIPP, accessed July 2015

## Moreover, the advent of private equity players in the sector has propelled the scope of innovation by opening an array of opportunities.

Investment opportunities in the Indian healthcare sector have significantly increased. The sector is expected to be one of the most attractive investment targets for Private Equity (PE) and Venture Capital (VC) firms.

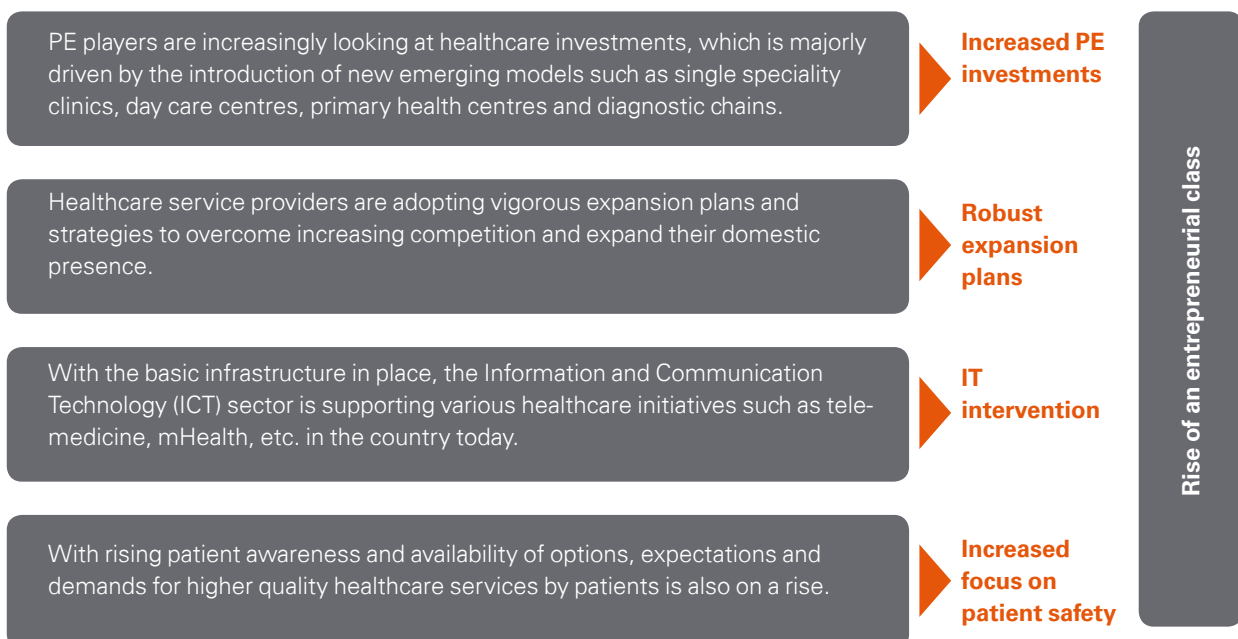
There has been an increase in the PE and VC activity in the recent past. The sector has attracted close to USD1 billion into hospital assets<sup>42</sup> from both domestic and foreign financing companies. The PE investments have nearly quadrupled from 2011 to 2013<sup>42</sup> for investments into hospitals and diagnostic chains. Further, the sector has seen close to 100 domestic and inbound M&A deals, with an average deal size of USD30 million, totalling to USD3 billion since 2010.<sup>42</sup>

### Private equity investments in hospital and diagnostics sector in India (USD million)



Source: KPMG in India analysis, 2015; VCC Edge, accessed July 2015

### Rise in entrepreneurship in Indian healthcare



Source: KPMG in India analysis, 2015

42. KPMG in India analysis, 2015; VCC Edge, accessed July 2015



The increasing interest of foreign players, and new financial provisions, have not only benefitted existing players that have entered into an expansion mode, but also given birth to a new generation of entrepreneurship that is changing the face of Indian healthcare. New innovations centred around patients have started to rise on the healthcare horizon.

## **These investments have given birth to innovative healthcare opportunities that not only improve the health of people, but also provide ample employment prospects.**

There is an increasing gap between the expectations of patients and the offerings of traditional models of healthcare delivery. This in turn is encumbering the traditional healthcare system and making it inefficient, adding to the woes of inaccessibility and unaffordability of healthcare services for a majority of the population. In the wake of these growing concerns and the urgent need to accommodate mounting healthcare requirements and expectations of the nation, an establishment of emerging, healthcare innovations has been enunciated.

### **Innovative healthcare approaches that could be explored by budding entrepreneurs in the healthcare space**

#### **New healthcare delivery models or financial innovation**

- Light asset ventures with high replicability and high scalability
- Increased focus on accessibility and affordability
- High returns on capital employed and low exit period.
- Promote cost containment

#### **New products**

- Improve the level of care provided to patients
- Stimulate patient awareness and galvanise people about wellness
- Streamline the dissemination and access to information
- Helps capture an array of biometric data that goes beyond fitness statistics

**Source:** KPMG in India Analysis, 2015

### **Case in point I: Healthcare financing - Yashaswini Micro Health Insurance scheme– an innovative form of insurance**

#### **Background**

- Launched in 2003, the Yashaswini Health Insurance Scheme, a community scheme, was designed for the farmers of Karnataka
- Under this scheme, the beneficiaries are allowed to undergo hospitalisation when needed, at a medical centre of their choice
- Surgeries are also covered under the ambit of this scheme wherein the beneficiaries are eligible to avail around 805 surgical procedures identified in 13 specialities in medicine apart from emergency treatment.<sup>43</sup>

#### **Outcome**

- Over a period of around a decade since its inception, more than 450,000 patients have been able to avail its benefits and undergo varied types of operations, including major heart operations, at a mere charge of an initial premium of only INR5 per month.<sup>44</sup>

43. All-new Yeshaswini health scheme from July 15,"The Hindu, 20 June 2013;

44. "Within a Decade, All Indians will Have Access to High-tech Healthcare: Dr. Devi Shetty", CIO.IN, 2 February 2013

## Case in point II: Frugal innovation – new focus on health product innovators

### Background

- In order to reach the 70 per cent rural population of India with a device capable of cardiac and glucose monitoring, Intel India's bio-signaling lab created a palm-sized home-wellness monitoring device<sup>45</sup>
- The aim was to contain the rising costs associated with these treatments for the poor
- The home-wellness monitoring device has been manufactured by a leading medical device company in India. It comes with a smartphone application that records the patient's data assimilated using the device.<sup>46</sup>

### Outcome

- Using the device, patients in far-flung areas are not only able to track their blood-glucose levels and undergo electrocardiography testing (ECG), but also obtain a specialist's advice without traveling anywhere
- The device is also capable of keeping track of daily activities of a person such as number of steps walked, calories burnt, changes in heart rate, etc.
- Patient data can be accessed by both patient and doctor via the secured web application in which it is stored.

## Case in point III: Kerala's dedicated efforts towards reducing MMR, IMR through technology

### Background

- The Kerala government, among other states, launched the Name Based Information Tracking System of Pregnant Mother and Child Immunisation (NBITS) project as per the directions from the Ministry of Health and Family Welfare (MOHFW), Government of India
- This is aimed at monitoring antenatal care check ups of pregnant women, institutionalising deliveries and postnatal care for reducing maternal mortality and tracking of children for regular immunisation and preventing drop out cases, thereby ensuring 100 per cent immunisation<sup>47</sup>
- As a part of the Hospital Kiosk programme of Kerala, parents of newborns in the state are expected to receive SMS reminders on their registered mobile phones regarding information about mandatory vaccinations for their infant, including the exact date and period of vaccinations, its significance, etc.<sup>48</sup>

### Outcome

- The decline in Kerala's Maternal Mortality Ratio (MMR) as per the Sample Registration System (SRS) between 2007-09 (MMR 81 per 100,000 live births) and 2010-12 (MMR 66 per 100,000 live births) is at an impressive 19 per cent approximately<sup>49</sup>
- This reduction in MMR can be partially attributed to the effective and timely implementation of this scheme.
- Kerala is one of the best performing states in the country, with an IMR of 12 per 1,000 live births.<sup>49</sup> However, the state has a long way to go in improving its neo-natal mortality rate as 75 per cent of infant deaths reportedly occur while in this phase.<sup>50</sup>

45. Intel researchers bring frugal innovation to Indian healthcare, Tech Spirit, 11 March 2015

46. Say YES to living healthy with BPL LifePhone Plus, Express Healthcare, 8 August 2014

47. MCTS- Mother and Child Tracking System, Arogya Keralam government website, accessed June 2015

48. Kerala to launch SMS alerts for vaccinations of infants, Deccan Herald, 23 February 2011

49. Decline in Rates of Maternal and Infant Mortality, Press Information Bureau Government of India, Ministry of Health and Family Welfare, 11 February 2014

50. State to pilot norms to reduce IMR, The Hindu, 28 December 2013

## Healthcare has also attracted entrepreneurs to innovate new business models, which in turn are expected to help bridge the gaps in the current healthcare delivery system and generate employment opportunities.

With an evolving business environment, India is emerging as a hot bed for innovation through entrepreneurship. Entrepreneurs and start-ups not only help generate employment, but also help eliminate some of the exiting issues in the current system.

Healthcare is not far behind and has attracted attention from funding agencies, including PEs and VCs. Be it increasing access to healthcare or bridging the gap between doctors and patients, or making it easier for patients to find the right healthcare provider-entrepreneurs have done it all. Thanks to the innovation in healthcare, entrepreneurs have shown the way to launch new delivery models in the country and help overcome current challenges in the sector.

Each of these entrepreneurs, not only help patients get better treatment, but also create jobs, thus servicing a dual purpose. Practo alone plans to hire nearly 1,000 people<sup>51</sup> in 2015; Portea, started in 2013, already employs over 1,700 employees.<sup>52</sup> With a conducive ecosystem for entrepreneurs in India, it is a no-brainer that entrepreneurs have the potential to generate employment for thousands of people, and help solve key issues in healthcare delivery today.

### Functional areas of healthcare start-ups that cover a wide spectrum of services



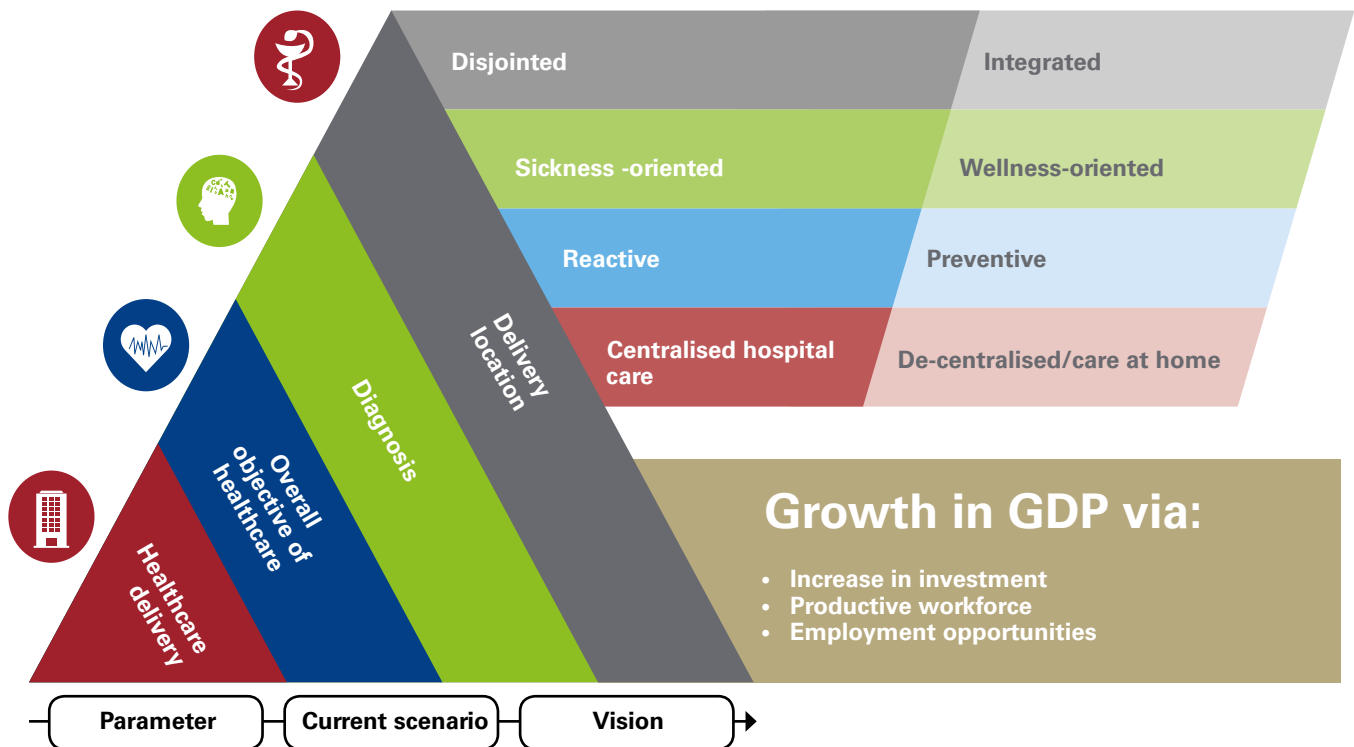
	<b>E-commerce</b> Online platforms for health devices and other healthcare products	
	<b>Connecting patients with service providers</b> Helps users find a doctor and book an appointment Helps users get a diagnosis and treatment for minor health problems	
	<b>Tele-medicine</b> Provides quick and easy access to doctors and hospital facilities via telephone services	
	<b>Managing chronic care conditions</b> Helps manage conditions such as asthma and COPD Includes applications which help a user manage skin related problems	
	<b>Treatment focussed solutions</b> Includes social media-based applications that connect blood donors and recipients of the same blood type	
	<b>Home healthcare services</b> Provides home based healthcare services	
	<b>Healthcare delivery</b> Provides primary healthcare services in lower town classes via mobile clinics and tele-health	
	<b>Enabling better medical research</b> Connects patients with serious medical conditions with the world's leading researchers to conduct personalised medical research	
	<b>Self-care services</b> Helps people track their nutrition, fitness and weight; provides insights about their lifestyle and suggestions to improve it	
	<b>Diagnostic services</b> Includes testing urine to diagnose a range of conditions	

Source: KPMG in India analysis, 2015

51. Practo is hungry to hire, plans to on-board 1000 employees in 2015, Your Story website, <http://yourstory.com/2015/05/practo-hiring/>, accessed July 2015

52. Management Team, Portea website, <http://www.portea.com/management-team>, accessed July 2015

## Innovation-based healthcare landscape



Source: KPMG in India analysis, 2015

Despite the aforementioned advantages and in the wake of universal healthcare ambitions of the government, India, until now has neither realised the need to innovative nor has it developed alternative formats that can bring a paradigm shift in the way healthcare is treated in the country. It is in times like these that the necessity of developing a culture of innovation among key stakeholders is even more pronounced.

Nurturing all components of innovation and creating an ecosystem encouraging inventiveness and creativity is bound to help the country garner that extra edge in its path to economic success, helping reap significant benefits in the future.







# Conclusion



A strong healthcare system is an important landmark in a country's growth journey—from a developing to a developed nation. India has come a long way from where it was two decades ago, but many challenges remain. With the increasing disease burden, the healthcare sector in the country is in dire need to get the right policy framework and infrastructure impetus. Granting infrastructure status may not only help the sector receive investments, but also bring down the cost of healthcare delivery.

Investments from private players have helped enhance healthcare delivery and are also expected to increase bed capacity in the near future. It is, therefore, highly important for the government and private players to join hands to ink the future of India's healthcare sector. The country is in a desperate need of appropriate financial models so as to prevent thousands of people who fall below poverty line from not receiving healthcare services due to expenses.

The country still faces a shortage of hospitals, doctors, specialists and paramedical staff. The education sector has not kept pace with rapid technological developments in the medical field and quality issues exist in both public as well as private sector. It should be noted that the healthcare sector impacts the country's GDP through various routes. It is also one of the largest sectors in India

in terms of employment generation. If appropriate investments are made in areas, such as healthcare delivery and education, they are expected to further increase the employment rate and positively impact the country's GDP.

India has already been developing a strong base in the domestic as well as the global market by providing specialised healthcare facilities. Availability of a large pool of skilled healthcare professionals and comparatively low cost of care has helped India garner the interest of developed nations. The country is gradually establishing its footprints on the platform of medical tourism, thereby contributing to the economy by increasing inflow of foreign currency.

With the emergence of new healthcare delivery models, the sector has lately been providing numerous opportunities to various entrepreneurs across the country. Start-ups have the potential to positively impact the GDP as well as redefine the way in which healthcare is delivered.

India needs to start looking at healthcare investments as a boost to the health of the country, which in turn can lead to better productivity, provide employment to millions, generate forex for the country and offer entrepreneurship opportunities to the nation's youth. All in all, investment and focus on healthcare is expected to be the harbinger for a healthy India.



## About FICCI (Federation of Indian Chambers of Commerce and Industry)

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialisation, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.

### FICCI Health Services Team

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## About KPMG

KPMG in India, a professional services firm, is the Indian member firm of KPMG International and was established in September 1993. Our professionals leverage the global network of firms, providing detailed knowledge of local laws, regulations, markets and competition. KPMG in India provides services to over 4,500 international and national clients in the country. It has offices across India in Delhi, Chandigarh, Ahmedabad, Mumbai, Pune, Chennai, Bangalore, Kochi, Hyderabad and Kolkata. The Indian firm has access to more than 8,000 Indian and expatriate professionals, many of whom are internationally trained. We strive to provide rapid, performance-based, industry-focussed and technology-enabled services, which reflect a shared knowledge of global and local industries and our experience of the Indian business environment.

### KPMG International

KPMG is a global network of professional firms which provides Audit, Tax and Advisory services. We operate in 155 countries and have more than 162,000 people working in member firms around the world.

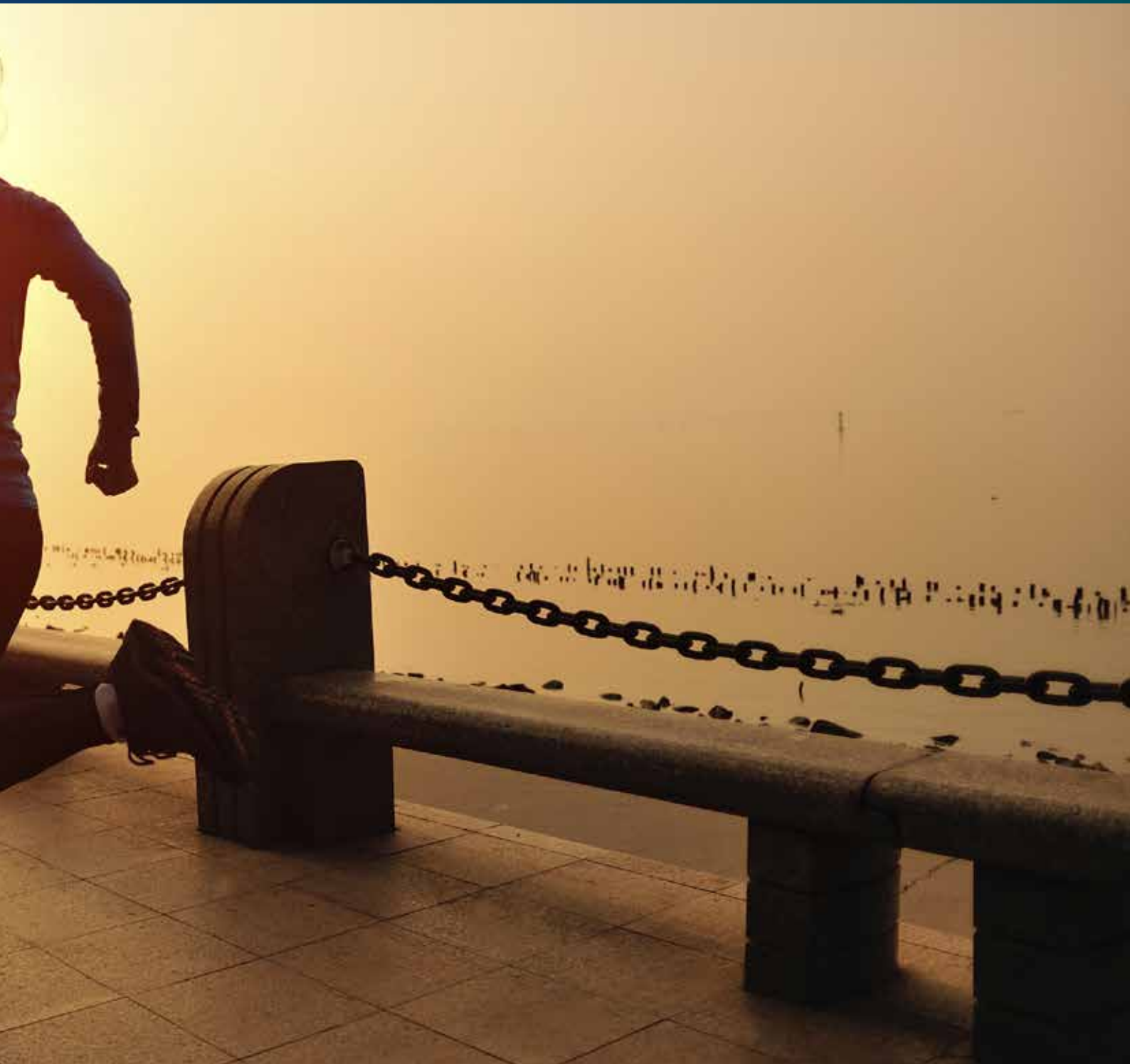
The KPMG Audit practice endeavours to provide robust and risk based audit services that address member firms' clients' strategic priorities and business processes.

KPMG's Tax services are designed to reflect the unique needs and objectives of each client, whether firms are dealing with the tax aspects of a cross-border acquisition or developing and helping to implement a global transfer pricing strategy. In practical terms that means, KPMG firms work with their clients to assist them in achieving effective tax compliance and managing tax risks, while helping to control costs.

KPMG Advisory professionals provide advice and assistance to help enable companies, intermediaries and public sector bodies to mitigate risk, improve performance, and create value. KPMG firms provide a wide range of Risk Consulting, Management Consulting, and Transactions and Restructuring services that can help their clients respond to immediate needs as well as put in place the strategies for the longer term.



# Abbreviations and acknowledgement





## Abbreviations

<b>AHP</b>	Allied Health Professionals
<b>AYUSH</b>	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
<b>BRICS</b>	Brazil Russia India China South Africa
<b>CAGR</b>	Compounded Annual Growth Rate
<b>CHC</b>	Community Health Centre
<b>CIS</b>	Commonwealth of Independent States
<b>CVD</b>	Cardiovascular Diseases
<b>DALYs</b>	Disability-adjusted life years
<b>ECG</b>	Electro-cardiography testing
<b>EPIC</b>	Erosion-Productivity Impact Calculator
<b>FDI</b>	Foreign Direct Investment
<b>Forex</b>	Foreign Exchange
<b>FTAs</b>	Foreign Tourist Arrivals
<b>FTE</b>	Full Time Equivalent
<b>GDP</b>	Gross Domestic Product
<b>ICT</b>	Information and Communication Technology
<b>IMR</b>	Infant Mortality Rate
<b>IT</b>	Information Technology
<b>JCI</b>	Joint Commission International
<b>M&amp;A</b>	Merger and Acquisition
<b>MBBS</b>	Bachelor of Medicine Bachelor of Surgery
<b>MCI</b>	Medical Council of India
<b>MMR</b>	Maternal Mortality Ratio
<b>MOHFW</b>	Ministry of Health and Family Welfare
<b>NCDs</b>	Non Communicable Diseases
<b>OPD</b>	Out Patient Department
<b>PE</b>	Private Equity
<b>PHC</b>	Primary Health Centre
<b>SAARC</b>	South Asian Association for Regional Cooperation
<b>SRS</b>	Sample Registration System
<b>U.S.</b>	United States
<b>VC</b>	Venture Capital
<b>WHO</b>	World Health Organisation

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