HEALTHCARE
## Table of Content

- Executive Summary ........................................... 3
- Advantage India ................................................. 4
- Market Overview and Trends ................................. 6
- Porter’s Five Force Framework Analysis ................. 13
- Strategies Adopted ............................................. 15
- Growth Drivers .................................................. 17
- Opportunities .................................................... 30
- Case Studies ..................................................... 34
- Key Industry Organizations ................................. 37
- Useful information ............................................. 39
**EXECUTIVE SUMMARY**

| Fifth Largest Employer | • India is expected to rank amongst the top 3 healthcare markets in terms of incremental growth by 2020  
  • In 2015, Indian healthcare sector became the 5th largest employer, both in terms of direct as well as indirect employment, with total direct employment of 4,713,061 people.  
  • In May 2017, the Asian Research and Training Institute for Skill Transfer (ARTIST) announced plans to create around 1 million skilled healthcare providers by 2022. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impressive Growth Prospects</td>
<td>• Indian healthcare sector, one of the fastest growing industries, is expected to advance at a CAGR of 22.87 per cent during 2015–20 to reach US$ 280 billion by 2020. There is immense scope for enhancing healthcare services penetration in India, thus presenting ample opportunity for development of the healthcare industry</td>
</tr>
</tbody>
</table>
| Strong Fundamentals and Cost Advantage | • Rising income levels, ageing population, growing health awareness and changing attitude towards preventive healthcare is expected to boost healthcare services demand in future  
  • The low cost of medical services has resulted in a rise in the country’s medical tourism, attracting patients from across the world. Moreover, India has emerged as a hub for RandD activities for international players due to its relatively low cost of clinical research |
| Favourable Investment Environment | • Conducive policies for encouraging FDI, tax benefits, favourable government policies coupled with promising growth prospects have helped the industry attract private equity, venture capitals and foreign players  
  • The sector registered 88 funding deals amounting to US$ 397.41 million as of September 2016 |

*Source: Business Standard, Ministry of External Affairs, Ministry of External Affairs (Investment and Technology Promotion Division)*
Healthcare revenue in India is set to reach US$ 280 billion by 2020; expenditure is likely to expand at a CAGR of 17 per cent over 2011–20.

Rising incomes, greater health awareness, lifestyle diseases and increasing access to insurance will contribute to growth.

Investment in healthcare infrastructure is set to rise, benefiting both ‘hard’ (hospitals) and ‘soft’ (RandD, education) infrastructure.

India is the largest exporter of formulations with 14 per cent market share and ranks 12th in the world in terms of export value. Double-digit growth is expected over the next 5 years.

Availability of a large pool of well-trained medical professionals in the country.

India has an advantage over its peers in the West and Asia in terms of cost of high-quality medical services offered.

The government aims to develop India as a global healthcare hub.

Policy support in the form of reduced excise and customs duty and exemption in service tax.

Creation of new drug testing laboratories and further strengthening of the 31 existing state laboratories.


MARKET OVERVIEW AND TRENDS
THE HEALTHCARE MARKET FUNCTIONS THROUGH FIVE SEGMENTS

Healthcare

- **Hospitals**
  - Government hospitals – It includes healthcare centres, district hospitals and general hospitals
  - Private hospitals – It includes nursing homes and mid-tier and top-tier private hospitals

- **Pharmaceutical**
  - It includes manufacturing, extraction, processing, purification and packaging of chemical materials for use as medications for humans or animals

- **Diagnostics**
  - It comprises businesses and laboratories that offer analytical or diagnostic services, including body fluid analysis

- **Medical Equipment and Supplies**
  - It includes establishments primarily manufacturing medical equipment and supplies, e.g. surgical, dental, orthopaedic, ophthalmologic, laboratory instruments, etc

- **Medical Insurance**
  - It includes health insurance and medical reimbursement facility, covering an individual's hospitalisation expenses incurred due to sickness

- **Telemedicine**
  - Telemedicine has enormous potential in meeting the challenges of healthcare delivery to rural and remote areas besides several other applications in education, training and management in health sector

Source: Hospital Market – India by Research on India, Aranca Research
STRONG GROWTH IN HEALTHCARE EXPENDITURE OVER THE YEARS

- Healthcare has become one of India’s largest sectors both in terms of revenue and employment. The industry is growing at a tremendous pace owing to its strengthening coverage, services and increasing expenditure by public as well private players.

- During 2008-20, the market is expected to record a CAGR of 16.5 per cent.

- The total industry size is expected to touch US$ 160 billion by 2017 and US$ 280 billion by 2020.

- The Ministry of Health is focusing on development of technologies for the treatment of diseases like Cancer and TB.

- Government is emphasising on the eHealth initiatives such as Mother and Child Tracking System (MCTS) and Facilitation Centre (MCTFC).

- Indian companies are entering into merger and acquisitions with domestic and foreign companies to drive growth and gain new markets.

**Healthcare Sector Growth Trend (US$ Billion)**

Note: F - Forecast

Source: Frost and Sullivan, LSI Financial Services, Deloitte, Aranca Research
The private sector has emerged as a vibrant force in India’s healthcare industry, lending it both national and international repute.

Large investments by private sector players are likely to contribute significantly to the development of India’s hospital industry, which comprises around 80 per cent of the total market.

In India, private healthcare accounts for almost 74 per cent of the country’s total healthcare expenditure.

Private sector’s share in hospitals and hospital beds is estimated at 74 per cent and 40 per cent, respectively.

The main factor contributing to rising medical tourism in India is the presence of a well-educated, English-speaking medical staff in state-of-the-art private hospitals and diagnostic facilities.
PER CAPITA HEALTHCARE EXPENDITURE HAS RISEN AT A FAST PACE

- Per capita healthcare expenditure is estimated at a CAGR of 5 per cent during 2008–15 to US$ 68.6 by 2015.
- This is due to rising incomes, easier access to high-quality healthcare facilities and greater awareness of personal health and hygiene.
- Greater penetration of health insurance aided the rise in healthcare spending, a trend likely to intensify in the coming decade.
- Economic prosperity is driving the improvement in affordability for generic drugs in the market.

Source: World Bank, BMI Report
## NOTABLE TRENDS IN THE INDIAN HEALTHCARE SECTOR … (1/2)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Shift from communicable to lifestyle diseases** | - With increasing urbanisation and problems related to modern-day living in urban settings, currently, about 50 per cent of spending on in-patient beds is for lifestyle diseases; this has increased the demand for specialised care. In India, lifestyle diseases have replaced traditional health problems.  
- Most lifestyle diseases are caused by high cholesterol, high blood pressure, obesity, poor diet and alcohol |
| **Expansion to tier-II and tier-III cities** | - Vaatsalya Healthcare is one of the first hospital chains to start focus on Tier 2 and Tier 3 for expansion  
- To encourage the private sector to establish hospitals in these cities, the government has relaxed the taxes on these hospitals for the first five years |
| **Management contracts** | - Many healthcare players such as Fortis and Manipal Group are entering management contracts to provide an additional revenue stream to hospitals |
| **Emergence of telemedicine** | - Telemedicine is a fast-emerging sector in India; major hospitals (Apollo, AIIMS, Narayana Hrudayalaya) have adopted telemedicine services and entered into a number of PPPs  
- As of FY16, telemedicine market in India was valued at US$ 15 million and is expected to rise at a CAGR of 20 per cent during FY16-20, reaching to US$ 32 million by 2020  
- Telemedicine can bridge the rural-urban divide in terms of medical facilities, extending low-cost consultation and diagnosis facilities to the remotest of areas via high-speed internet and telecommunication. |

**Note:** PPP is Public – Private Partnerships, Management contracts - An arrangement under which operational control of an enterprise is given to a separate entity for a fee  
**Source:** IRDA, CII, Grant Thornton, Gartner, Technopak, Aranca Research
**NOTABLE TRENDS IN THE INDIAN HEALTHCARE SECTOR … (2/2)**

| Increasing penetration of health insurance | In FY16 (till November 2015), gross direct premium income from health insurance stood at 25.4 per cent of overall gross direct premium income for non life insurance segment
| **Healthcare** | Health insurance is gaining momentum in India; witnessing growth at a CAGR of 15.36 per cent, during FY08-16, gross healthcare insurance premium in 2016 stood at US$ 2.8 billion |
| **Mobile-based health delivery** | Strong mobile technology infrastructure and launch of 4G is expected to drive mobile health initiatives in the country
| | Cycle tel Humsafar is a SMS based mobile service designed for women, it enables women to plan their family in a better way
| | Mobile health industry in India is expected to reach US$ 0.6 billion by 2017 |
| **Technological initiatives** | Digital Health Knowledge Resources, Electronic Medical Record, Mobile Healthcare, Electronic Health Record, Hospital Information System, PRACTO, Technology-enabled care, telemedicine and Hospital Management Information Systems are some of the technologies gaining wide acceptance in the sector
| | AIIMS to convert all its payment transaction cashless, for which it has associated with mobile wallet company, MobiKwik, in January 2017. |
| **Luxury offering** | A new trend is emerging as luxury offerings in healthcare sector. More than essential requirements, healthcare providers are making offerings of luxurious services. For example: pick and drop services for patient by private helicopters and luxurious arrangements for visitors to patient in hospital |

*Source: Business Standard, Ministry of External Affairs, Ministry of External Affairs (Investment and Technology Promotion Division)*
PORTERS FIVE FORCES ANALYSIS
**Porter’s Five Force Framework Analysis**

### Bargaining Power of Suppliers
- Bargaining power of suppliers in this industry is high because quality of products and timely delivery matter and there are less number of quality suppliers.

### Competitive Rivalry
- Increase in number of private players in the market has led to increased competition.
- However number of hospitals is still low compared to the requirement so there is not much competition in the market.

### Threat of Substitutes
- Customers may go for public hospitals which are inexpensive.
- Customers might go for E-Health.

### Threat of New Entrants
- Big threat of new entrants in the industry.
- Number of players has increased considerably in recent times.

### Bargaining Power of Buyers
- Bargaining power of customers is low because of trust and loyalty however increase in number of options has given customers some bargaining power.

---

**Source:** Aranca Research
STRATEGIES ADOPTED
### STRATEGIES ADOPTED

| Cost leadership | • Private players in the industry are making their supply chains efficient and leveraging economies of scope to reduce cost. One such example is Narayan Hrudayalaya (NH) where health care is provided at affordable cost. NH reduces cost by:  
  • High procurement of medical supplies  
  • High-volume by high capacity utilisation and staff productivity  
  • Good human capital management (i.e. training) |
| Differentiation and diversified business approach | • Players in the industry are trying to differentiate themselves by providing multiple health care services under one roof. In 2015, Many hospitals have collaborated with government to provide healthcare facilities in rural areas  
  • Offering a range of healthcare and wellness services under a single brand has become a trend. Patients and healthcare services seekers find it convenient. Demand of such arrangements boosts the healthcare sector. |
| Focus | • Certain players in industry focus only on providing one kind of health care service to its customers. This also helps them to be the leader in that service. Many examples can be quoted for hospitals focusing on treatment of cancer and providing leading cancer treatment and eye related problems and treatments in India. |
| Merger and Acquisitions | • In April 2017, IFFCO has invested 26 per cent stake in a start-up firm Gramin Health Care (GHC), a affordable and easily accessible service for farmers to educate them about basic health.  
  • In April 2017, Religare sold its 80 per cent stake in Religare Health Insurance Co. Ltd. to a group of investors led by True North for US$ 193.37 million.  
  • Serum Institute of India, the world's largest vaccine manufacturer, buys a defunct unit of Nanotherapeutics Inc., Czech Republic-based injectable polio doses maker, for US$ 78.49 million. The acquisition will help the Serum Institute of India to become the largest manufacturer of injectable polio vaccine in the world by increasing production capacity four-fold to more than 200 million doses by 2019.  
  • General Atlantic Partners and TPG voiced intentions to bid jointly for acquiring the healthcare assets of Fortis for US$ 1.80 billion. |

*Source: Aranca Research*
GROWTH DRIVERS
# Indian Healthcare Sector Is Poised to Grow

**Growing Demand**
- Rising incomes and affordability
- Growing elderly population, changing disease patterns
- Rise in medical tourism
- Better awareness of wellness, preventive care and diagnosis

**Policy Support**
- Encouraging policies for FDI and the private sector
- Reduction in customs duty and other taxes on life-saving equipment
- NRHM allocated US$ 10 billion for healthcare facilities
- National Health Insurance Mission to cover entire population

**Focus**
- Expanding research and development and distribution facilities in India
- Use of modern technology
- Providing support to global projects from India

**Merger and Acquisitions**
- Rising FDI and private sector investments
- Lucrative M&As opportunities
- Foreign players setting R&D centres and hospitals

*Note: FDI – Foreign Direct Investment, M&As - Mergers and Acquisitions NRHM - National Rural Health Mission  
Source: Health Ministry, Aranca Research*
RISING INCOME, AGEING POPULATION TO BE KEY HEALTHCARE DEMAND DRIVER

- Rising incomes mean a steady growth in the ability to access healthcare and related services.
- During 2015-19, per capita income is expected to increase at a CAGR of 8.09 per cent.
- Per capita expenditure on healthcare in India was US$ 68.6.
- Moreover, changing demographics will also contribute to greater healthcare spending; this is likely to continue with the size of the elderly population set to rise from the current 98.9 million to about 168 million by 2026.
LIFESTYLE DISEASES AND GROWING AWARENESS TO INCREASE HOSPITALISATION

- The purported rise of lifestyle diseases in India is expected to boost industry sales figures.
- Increased incidences such as heart disease, obesity and diabetes have contributed to rising healthcare spending by individuals.
- Growing health awareness and precautionary treatments coupled with improved diagnostics are resulting in an increase in hospitalisation.
- Indian system of healthcare, Ayurveda has unique therapies which are beneficial for treatment of many chronic lifestyle disorders and thus attracting more number of patients to avail these services in India.
- CAGR of hospitalised cases from 2008 – 18:
  - Cardiac – 18 per cent
  - Oncology – 16 per cent
  - Diabetes – 19 per cent

Source: Apollo Investor Presentation March 2016
MEDICAL TOURISM: A NEW GROWTH FACTOR FOR INDIA’S HEALTHCARE SECTOR

- Presence of world-class hospitals and skilled medical professionals has strengthened India’s position as a preferred destination for medical tourism
- Superior quality healthcare, coupled with low treatment costs in comparison to other countries, is benefiting Indian medical tourism which has, in turn, enhanced the prospects of the Indian healthcare market
- Treatment for major surgeries in India costs approximately 20 per cent of that in developed countries
- India also attracts medical tourists from developing nations due to lack of advanced medical facilities in many of these countries
- As of 2016, medical tourism market in India is estimated to be around US$ 3.9 billion and is expected to reach US$ 8 billion by 2020. During 2013-16, the country’s medical tourism market witnessed growth at a CAGR of 27 per cent
- The number of foreign tourists coming to India for medical purposes rose by almost 50 per cent to 230,000 in 2016 from 130,000 in 2015.
- Yoga, meditation, ayurveda, allopathy and other traditional methods of treatment are major service offerings that attract medical tourists from European nations and the Middle East to India

Source: Ministry of Health, RNCOS, KPMG, Deloitte, Medical Tourism Association, LSI Financial Services, Apollo Investor Presentation, Aranca Research
## RE-EMERGENCE OF TRADITIONAL MEDICAL CARE

### Market size and Services Offered

- The traditional (ayurvedic) market in India is expected to rise at a CAGR of 16 per cent over 2016-2021. In 2015, Government of India has approved All India Institute of Ayurveda in New Delhi, it would be a 200 bedded hospital.
- Ayurvedic medicines offer traditional Indian health remedies based on natural and herbal ingredients.
- The sector has broadened its offerings and now includes services on diet and nutrition, yoga, herbal medicine, humour therapy and spa.

### Leading brands and players

- Many big players such as Apollo, VLCC and Manipal Group are also setting up wellness centres across India, with traditional healthcare remedies as the focus of their offerings.
- As of March 2017, Philips is shifting its focus towards adoption of new wave technologies for enhancing its hold in healthcare sector by leveraging its expertise in Deep Learning, Machine Learning and Artificial Intelligence.

### Notable trends

- The traditional medical sector is developing Traditional Knowledge Digital Library to prevent companies from claiming patents on such remedies.
- There is growing interest from numerous private equity firms in the traditional healthcare sector in India.
- 6,200 indigenous herbal plants

### Developing infrastructure

- In Union Budget 2017-18, the government has decided to setup 2 new AIIMS in Jharkhand and Gujarat.
- As of April 2015, country has developed vast AYUSH infrastructure comprising, 25,723 dispensaries and 3598 hospitals.
- In Union Budget 2017-18, the plan outlay for AYUSH is estimated at US$ 212.5 million.
- In 2015, number of hospitals increased to 196312 and number of sub centres reached to 156926.

**Source:** Ministry of Health, Make in India, RNCOS, KPMG, Aranca Research; Notes: AYUSH - Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homoeopathy.
PRIVATE PLAYERS ARE KEY CONTRIBUTORS TO GROWTH IN NUMBER OF HOSPITALS

- A major portion of secondary, tertiary and quaternary healthcare institutions comes from private sector with a concentration in metros, tier II and tier I cities.
- Large investments by private sector players are likely to contribute significantly to the development of India’s hospital industry and the sector is poised to grow to US$ 100 billion by 2015 and further to US$ 280 billion by 2020.
- The private hospital market in India is estimated at US$ 81.0 billion at the end-of 2015.
- During 2009–15, the market size of private hospitals is estimated to have a CAGR of 24.2 per cent.
- Increase in number of hospitals in Tier-II and Tier-III cities has fuelled the growth of private sector.

Source: WHO Statistical Information System, Indian Chamber of Commerce, Yes Bank, Aranca Research
GROWING IN-PATIENT / OUT-PATIENT AND DIAGNOSTIC MARKET

- Over 2015-20, the In-Patient market is expected to grow at a CAGR of 13 per cent
- Over 2015-20, the Out-Patient market is expected to grow at CAGR of 10 per cent
- As of 2016, the inventory of all bio-medical equipment stood around 7,56,750 worth US$ 697.21 million in 29,115 health facilities of India

Market Size of In-patient/Out-patient

<table>
<thead>
<tr>
<th>Year</th>
<th>In-Patient</th>
<th>Out-Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>2015</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>2020F</td>
<td>83%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Market Size of Diagnostic Market (US$ Billion)

- Over 2012-22, diagnostic market is expected to grow at a CAGR of 20.4 per cent to US$ 32 billion from US$ 5 billion in 2012
- Sub-sector of diagnostic, IVD Equipment market is expected to grow at a CAGR of around 15 per cent from 2012 to 2015
- Diagnostic market is split between imaging and pathology with 30 per cent and 70 per cent share respectively
### STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR … (1/3)

**Encouraging the private sector**
- The benefit of section 10 (23 G) of the IT Act has been extended to financial institutions that provide long-term capital to hospitals with 100 beds or more.
- Government is encouraging the PPP model to improve availability of healthcare services and provide healthcare financing.
- Till October 2015, 5 projects under PPP have been completed and has become operational.
- Many reforms were introduced in the 2017-18 Union Budget, wherein the government announced that Aadhar based smart-cards will be issued to senior citizens to monitor health. Moreover, the health sub centers, numbering to 1.5 lakh, will be transformed into health wellness centers.

**Encouraging investments in rural areas**
- The benefit of section 80-IB has been extended to new hospitals with 100 beds or more that are set up in rural areas; such hospitals are entitled to 100 per cent deduction on profits for 5 years.

**Tax incentives**
- All healthcare education and training services are exempted from service tax.
- Increase in tax holiday under section 80- IB for private healthcare providers in non metros for minimum of 50 bedded hospitals.
- 250 per cent deduction for approved expenditure incurred on operating technology enables healthcare services such as tele medicine , remote radiology.
- Excise duty on chassis for ambulance reduced from 24 per cent to 12.5 per cent.
- Artificial heart is exempted from basic custom duty of 5 per cent.
- Income tax exemption for 15 years for domestically manufactured medical technology products.

**Biomedical Equipment Management and Maintenance Program (BMMP)**
- In December 2016, Health Ministry undertook BMMP to avoid wastage of either unused medical equipment or used. The programme will ensure the proper maintenance of medical equipment that are used in hospitals.

*Source: Aranca Research*
The Union Cabinet, Government of India, has approved the National Health Policy 2017, which will provide the policy framework for achieving universal health coverage and delivering quality health care services to all at an affordable cost.

Creation of new drug testing laboratories and further strengthening of the 31 existing state laboratories

Incentives and tax holidays are being offered to hospitals and dispensaries providing health travel facilities. Senior citizens above 80 years of age will be allowed deduction of US$ 491 towards medical expenditure if they are not covered under health insurance.

In Union Budget, 2015-16, Government has allocated US$ 5.4 billion for healthcare sector development. Government has raised health insurance premium amount from US$ 245 to US$ 409 and for senior citizens amount has been increased from US$ 327 to US$ 491.

Additional amount of US$ 458.3 would be provided to the senior citizens as per the provisions made under Union Budget 2016-17.

As per Union Budget 2016-17, using funds through public-private partnership (PPP), National Dialysis Service Programme is announced to be launched at all district hospitals.

Under Budget 2016-17, the government announced its plans to launch a new health protection scheme, which would cover an amount of ~US$ 1470 per family.

3,000 medical stores are to be set up across the country with an aim to provide quality medicines at cost effective prices.

**Source:** Aranca Research
STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR … (3/3)

<table>
<thead>
<tr>
<th>Medical institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Allocation of US$ 82.6 million being a part of Union Budget, 2016-17, to set up four more institutions of the stature of AIIMS in Andhra Pradesh, West Bengal, Maharashtra and Uttar Pradesh</td>
</tr>
<tr>
<td>▪ As a part of increasing healthcare infrastructure in India, the government announced setting up of 2 new AIIMS in Jharkhand and Gujarat.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Union Budget 2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ To set up a health infrastructure fund and make an access, a fund for health care has been allocated under the Union budget for infrastructure and innovation specially for the Tier 2, Tier 3 and rural areas</td>
</tr>
<tr>
<td>▪ To raise the tax exemption level on the preventive health check-up to US$ 297.48 from current existing amount of US$ 74.37, which will be exempted under the section 80D of the Income Tax Act, to achieve the universal healthcare coverage</td>
</tr>
<tr>
<td>▪ To increase the deduction towards medical insurance premium, the current deduction limit being US$ 223.11 which is to be increased to US$ 743.71 for self and for family. In the case of dependent parents the current limit of US$ 297.48 needs to be increased to US$ 743.71. The GST exemption should cover health insurance premium</td>
</tr>
<tr>
<td>▪ Under the Union Budget 2017, there is a provision for increasing the depreciation rate on the medical devices and equipment from 15 per cent to 30 per cent</td>
</tr>
<tr>
<td>▪ To get the tax benefit, on the limit of annual medical reimbursement is to be raised from US$ 223.11 each to at least US$ 1487.43 each per house</td>
</tr>
<tr>
<td>▪ The import tariffs/duties which are levied on the health care (drugs, surgical equipment), the same is to be completely removed if its manufactured in India</td>
</tr>
</tbody>
</table>

*Source: Aranca Research*
### STRATEGIES ADOPTED

| Cost leadership                                                                 | Private players in the industry are making their supply chain efficient and leveraging economies of scope to reduce cost. One such example is Narayan Hrudayalaya (NH) where healthcare is provided at affordable cost. NH reduces cost by  
| High procurement of medical supplies                                           |  
| High-volume by high capacity utilisation and staff productivity               |  
| Good human capital management (i.e. training)                                 |  
| Differentiation and diversified business approach                             | Players in the industry are trying to differentiate themselves by providing multiple healthcare services under one roof. Many hospitals have collaborated with government to provide healthcare facilities in rural areas  
| Offering a range of healthcare and wellness services under a single brand has become a trend. Patients and healthcare services seekers find it convenient. Demand of such arrangements boosts the healthcare sector. |  
| Focus                                                                          | Certain players in industry focus only on providing one kind of health care service to its customers. This also helps them to be the leader in that service. Many examples can be quoted for hospitals focusing on treatment of cancer and providing leading cancer treatment and eye related problems and treatments in India.  
| Merger and Acquisitions                                                        | In April 2017, IFFCO has invested 26 per cent stake in a start-up firm Gramin Health Care (GHC), a affordable and easily accessible service for farmers to educate them about basic health.  
|                                                                                | In April 2017, Religare sold its 80 per cent stake in Religare Health Insurance Co. Ltd. to a group of investors led by True North for US$ 193.37 million.  
|                                                                                | Serum Institute of India, the world's largest vaccine manufacturer, buys a defunct unit of Nanotherapeutics Inc., Czech Republic-based injectable polio doses maker, for US$ 78.49 million. The acquisition will help the Serum Institute of India to become the largest manufacturer of injectable polio vaccine in the world by increasing production capacity four-fold to more than 200 million doses by 2019.  
|                                                                                | General Atlantic Partners and TPG voiced intentions to bid jointly for acquiring the healthcare assets of Fortis for US$ 1.80 billion. |

*Source: Aranca Research*
SUPPORTIVE POLICIES DRIVE FDI INFLOWS

- 100 per cent FDI is allowed under the automatic route for greenfield projects
- For brownfield project investments, up to 100 per cent FDI is permitted under the government route
- Demand growth, cost advantages and policy support have been instrumental in attracting FDI
- During April 2000 – March 2017, FDI inflows for drugs and pharmaceuticals sector stood at US$ 14.71 billion.
- Inflows into sectors such as hospitals and diagnostic centers and medical appliances stood at US$ 4.2 billion and US$ 1.47 billion, respectively, during the same period
- In February 2017, German healthcare firm Merck announced its plans to open their 4th bio production centre worldwide and their 1st in India. It will help the local companies to manufacture biosimilars and biotech drugs.

**Cumulative FDI inflows (From April 2000 Up to December 2016) into the healthcare sector (US$ million)**

**Note:** FDI – Foreign Direct Investment

**Source:** Department of Industrial Policy and Promotion, Aranca Research
OPPORTUNITIES
### Healthcare Infrastructure
- Additional 3 million beds needed for India to achieve the target of 3 beds per 1,000 people by 2025
- Additional 1.54 million doctors and 2.4 million nurses required to meet the growing demand for healthcare
- Over US$ 200 billion is expected to be spent on medical infrastructure by 2024
- Over the years, India has made strategic interventions in National Health Mission and the national disease control programmes to ensure quality and affordable healthcare for all.

### Research
- Contract research is a fast growing segment in the Indian healthcare industry
- Cost of developing new drugs is as low as 60 per cent of the testing cost in the US
- About 60 per cent of global clinical trials is outsourced to developing countries
- The Contract Research and Manufacturing Services industry (CRAMS) is estimated at US$ 8 billion in 2015, up from US$ 3.8 billion in 2012. The market has more than 1000 players

### Medical Tourism
- The Indian medical tourism industry is expected to reach US$ 8 billion by 2020 from US$ 3.9 billion in 2016, growing at a CAGR of 27 per cent over 2013-16
- The number of foreign tourists coming to India for medical purposes rose by almost 50 per cent to 200,000 in 2016 from 130,000 in 2015.
- Cost of surgery in India is nearly one-tenth of the cost in developed countries
- There are 21 Joint Commission International (JCI) - accredited hospitals in India and growing

*Source: Aranca Research*
SCAPE FOR GROWTH, AS HEALTHCARE SERVICES REMAIN UNDER-REPRESENTED

- Huge scope for enhancing healthcare services considering that healthcare spending as a percentage of GDP
- Rural India, which accounts for over 70 per cent of population and is set to emerge as a potential demand source
- Only 3 per cent of specialist physicians cater to rural demand
- Vast opportunities for investment in healthcare infrastructure in both urban and rural India
- About 1.8 million beds required by the end of 2025

### Healthcare Spending as a Percentage of GDP (2015)

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.20%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Health Infrastructure per 1000 Individual (2013-2015)

<table>
<thead>
<tr>
<th></th>
<th>Physicians</th>
<th>Nurses and midwifery personnel</th>
<th>Hospital beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>0.7</td>
<td>1.5</td>
<td>1(^{(1)})</td>
</tr>
<tr>
<td>World median</td>
<td>2.5</td>
<td>2.5</td>
<td>2.9</td>
</tr>
</tbody>
</table>

\(^{(1)}\): 1 bed for every 1050 patients

OPPORTUNITIES IN HEALTH INSURANCE

- As of 2016, less than 15 per cent of the Indian population is covered through health insurance
- Increasing healthcare cost and burden of new diseases along with low government funding is raising demand for health insurance coverage
- Many companies offer health insurance coverage to employees, driving market penetration of insurance players
- By 2015, spending through health insurance will reach 8.4 per cent of total health spending, up from 6.4 per cent in 2009–10
- The share of population having medical insurance is likely to rise to 20 per cent by 2015

- With increasing demand for affordable and quality healthcare, penetration of health insurance is poised to grow exponentially in the coming years
- As on 2015-2016, the overall health insurance premium collected in India was recorded at US$ 4.08 billion
- Health insurance premiums are expected to increase at a CAGR of 21.73 per cent during 2008–16
CASE STUDIES
MAX HEALTHCARE: WELL POISED TO TAP GROWTH OPPORTUNITIES

- Max Medcentre, Panchsheel Park – First Medcenter with OP facilities and day care surgeries
- Max Hospital, Pitampura – First hospital to be ISO certified and first high end secondary care centre in North Delhi.
- Max Heart and Vascular Institute, Saket - First Super Tertiary Care Facility with Advanced Cardiac Life Support Ambulances and Air Evacuation Service.
- Max Super Speciality Hospital, Bathinda - Max Healthcare extended its footprint in North India
- Max Super Speciality Hospital, Dehradun, Max Healthcare opened its first Super Speciality hospital in Uttarakhand
- Max Multi Speciality Hospital, Greater Noida -

1985

- The company was founded and listed in the NSE and BSE with 37,000 shareholders.

2000-05

- Max Super Speciality Hospital, Saket - First Multi, Super Speciality Tertiary Care Location
- Max Hospital, Gurgaon - High End Secondary Care Centre in Gurgaon
- Max Healthcare received NABH and NABL certification for its laboratories.
- Max Healthcare receives NABH Accreditation for Blood bank

2006-10

2011-14

- Pushpanjali Crosslay Hospital officially becomes Max Super Speciality Hospital
- Saket City Hospital officially becomes Max Smart Super Speciality Hospital
- Max Super Speciality Hospital, Saket is accredited by the Joint Commission International

2015 onwards

Source: Aranca Research, Company Website

For updated information, please visit www.ibef.org
GLOBAL HOSPITALS: SET TO GROW WITH HOSPITAL NETWORK EXPANSION

Third Hospital to attract huge funds

Completed highest radial Procedures in India

Leading multi-organ transplant centre

First hospital to be recognised for R&D by Govt. of India

First hospital to perform radial procedures

First hospital to carry out intravascular surgery

- Global Health City received NABH accreditation
- 3,00,000 In Patients and 50,000 Out Patients annually
- Current capacity of about 2,000 beds

1998
- First hospital opened in Hyderabad

2010

2012
- Commission of Global Hospitals, Mumbai with 450 – bed multi – super speciality and multi – organ transplant facility

2015

Source: Aranca Research, Annual Report
KEY INDUSTRY ORGANISATIONS
<table>
<thead>
<tr>
<th>Indian Medical Association</th>
<th>The Federation of Obstetric and Gynaecological Societies of India</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.M.A. House</td>
<td>Model Residency, 605,</td>
</tr>
<tr>
<td>Indraprastha Marg,</td>
<td>Bapurao Jagtap Marg,</td>
</tr>
<tr>
<td>New Delhi – 110 002, India</td>
<td>Jacob Circle, Mahalaxmi East,</td>
</tr>
<tr>
<td>Telephone: 91 11 2337 0009, 2337 8819</td>
<td>Mumbai – 400 011, India</td>
</tr>
<tr>
<td>Fax: 91 11 2337 9470, 2337 9178</td>
<td>Fax: 23021383</td>
</tr>
<tr>
<td>Website: <a href="http://www.ima-india.org">www.ima-india.org</a></td>
<td>Website: <a href="http://www.fogsi.org">www.fogsi.org</a></td>
</tr>
<tr>
<td>E-mail: <a href="mailto:inmedici@vsnl.com">inmedici@vsnl.com</a></td>
<td>E-mail: <a href="mailto:inmedici@vsnl.com">inmedici@vsnl.com</a></td>
</tr>
</tbody>
</table>
USEFUL INFORMATION
GLOSSARY

- CAGR: Compound Annual Growth Rate
- EPA: Externally Aided Projects
- FDI: Foreign Direct Investment
- FY: Indian Financial Year (April to March)
- So FY10 implies April 2009 to March 2010
- GOI: Government of India
- ICT: Information and Communications Technology
- IMF: International Monetary Fund
- INR: Indian Rupee
- M&As: Mergers and Acquisitions
- NHRM: National Rural Health Mission
- PPP: Public Private Partnerships
- RandD: Research and Development
- US$: US dollar
- WHO: World Health Statistics
- Where applicable, numbers have been rounded off to the nearest whole number
## EXCHANGE RATES

### Exchange Rates (Fiscal Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004–05</td>
<td>44.81</td>
</tr>
<tr>
<td>2005–06</td>
<td>44.14</td>
</tr>
<tr>
<td>2006–07</td>
<td>45.14</td>
</tr>
<tr>
<td>2007–08</td>
<td>40.27</td>
</tr>
<tr>
<td>2008–09</td>
<td>46.14</td>
</tr>
<tr>
<td>2009–10</td>
<td>47.42</td>
</tr>
<tr>
<td>2010–11</td>
<td>45.62</td>
</tr>
<tr>
<td>2011–12</td>
<td>46.88</td>
</tr>
<tr>
<td>2012–13</td>
<td>54.31</td>
</tr>
<tr>
<td>2013–14</td>
<td>60.28</td>
</tr>
<tr>
<td>2014–15</td>
<td>61.06</td>
</tr>
<tr>
<td>2015–16</td>
<td>65.46</td>
</tr>
<tr>
<td>2016–17</td>
<td>67.09</td>
</tr>
</tbody>
</table>

### Exchange Rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>43.98</td>
</tr>
<tr>
<td>2006</td>
<td>45.18</td>
</tr>
<tr>
<td>2007</td>
<td>41.34</td>
</tr>
<tr>
<td>2008</td>
<td>43.62</td>
</tr>
<tr>
<td>2009</td>
<td>48.42</td>
</tr>
<tr>
<td>2010</td>
<td>45.72</td>
</tr>
<tr>
<td>2011</td>
<td>46.85</td>
</tr>
<tr>
<td>2012</td>
<td>53.46</td>
</tr>
<tr>
<td>2013</td>
<td>58.44</td>
</tr>
<tr>
<td>2014</td>
<td>61.03</td>
</tr>
<tr>
<td>2015</td>
<td>64.15</td>
</tr>
<tr>
<td>2016</td>
<td>67.21</td>
</tr>
</tbody>
</table>
India Brand Equity Foundation (IBEF) engaged Aranca to prepare this presentation and the same has been prepared by Aranca in consultation with IBEF.

All rights reserved. All copyright in this presentation and related works is solely and exclusively owned by IBEF. The same may not be reproduced, wholly or in part in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this presentation), modified or in any manner communicated to any third party except with the written approval of IBEF.

This presentation is for information purposes only. While due care has been taken during the compilation of this presentation to ensure that the information is accurate to the best of Aranca and IBEF’s knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Aranca and IBEF neither recommend nor endorse any specific products or services that may have been mentioned in this presentation and nor do they assume any liability or responsibility for the outcome of decisions taken as a result of any reliance placed on this presentation.

Neither Aranca nor IBEF shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this presentation.