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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\(^1\), 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.

Impressive growth prospects

- Indian healthcare sector, one of the fastest growing industries, is expected to advance at a CAGR of 26.31 per cent during 2016–20 to reach USD280 billion by 2020. There is immense scope for enhancing healthcare services penetration in India, thus presenting ample opportunity for development of the healthcare industry

Strong fundamentals

- Rising income levels, ageing population, growing health awareness & changing attitude towards preventive healthcare is expected to boost healthcare services demand in future

Cost advantage

- 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 R&D 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 USD397.41 million as of September 2016

Note: 1 Data as of 2015;
Source: Deloitte, TechSci Research
EXECUTIVE SUMMARY

The doctor-to-patient ratio for India, as per the Medical Council of India, stands at 1:1,674.

Healthcare Market Size

2016 USD110 Billion

Hospitals Bed for every 1050 patients in 2015

3601 AYUSH Hospitals

196312 – Number of Hospitals in India

156926 – Number of Sub-centers

2760 Blood Bank till February, 2015

515 organizations registered for Eye Banks till 2015

189 Government medical colleges till 2015

404 Medical Colleges for MBBS till 2015

215 Private medical colleges till 2015

25346 Postgraduate students per year till 2015

Source: WHO, IMH, Deloitte, EBAI, TechSci Research
The WHO’s recommended doctor-to-patient ratio: 1:1,000

For updated information, please visit www.ibef.org
HEALTHCARE

ADVANTAGE INDIA
HEALTHCARE


Notes: R&D – Research and Development, CAGR - Compound Annual Growth Rate, USD – US Dollar, F – Forecast, E - Estimate

Growing demand

For updated information, please visit www.ibef.org

Advantage India

2016

Market value: USD110 billion

Strong demand

- Healthcare revenue in India is set to reach USD280 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

2020F

Market value: USD280 billion

Attractive opportunities

- Investment in healthcare infrastructure is set to rise, benefiting both ‘hard’ (hospitals) & ‘soft’ (R&D, education) infrastructure
- India is the largest exporter of formulations with 14 per cent market share & ranks 12th in the world in terms of export value. Double-digit growth is expected over the next 5 years

Quality and affordability

- Availability of a large pool of well-trained medical professionals in the country
- India has an advantage over its peers in the West & Asia in terms of cost of high-quality medical services offered

Policy support

- The government aims to develop India as a global healthcare hub
- Policy support in the form of reduced excise & customs duty & exemption in service tax
- Creation of new drug testing laboratories & further strengthening of the 31 existing state laboratories
- National Health Insurance Mission to provide health benefits to people
HEALTHCARE

MARKET OVERVIEW AND TRENDS
THE HEALTHCARE MARKET FUNCTIONS THROUGH FIVE SEGMENTS

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

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

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

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

- **Medical insurance**
  - It includes health insurance & 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 & remote areas besides several other applications in education, training & management in health sector

**Source:** Hospital Market – India by Research on India, TechSci Research
Healthcare has become one of India's largest sectors both in terms of revenue & 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 USD160 billion by 2017 & USD280 billion by 2020.

As per the Ministry of Health, the government is working on the development of 50 technologies for treatment of diseases such as cancer & TB.

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

Indian companies are entering into merger & acquisitions with domestic & foreign companies to drive growth & gain new markets.
PRIVATE SECTOR HAS A STRONG PRESENCE IN INDIA’S HEALTHCARE SECTOR

The private sector has emerged as a vibrant force in India’s healthcare industry, lending it both national & 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 presence of a well-educated, English-speaking medical staff in state-of-the-art private hospitals and diagnostic facilities.

Shares in healthcare spending in India, 2005

- Government hospital: 34%
- Top tier: 26%
- Mid tier: 14%
- Nursing home: 26%

Shares in healthcare spending in India, 2015

- Government hospital: 40%
- Top tier: 30%
- Mid tier: 19%
- Nursing home: 11%

Source: A report on ‘Indian Hospital Services Market Outlook’ by consultancy RNCOS, Grant Thornton, LSI Financial Services, OECD, TechSci research.
Per capita healthcare expenditure is estimated at a CAGR of 5 per cent during 2008–15 to USD68.6 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.

### Key Players in the Market

<table>
<thead>
<tr>
<th>Company</th>
<th>No of beds (1)</th>
<th>Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apollo Hospitals Enterprise Ltd</td>
<td>9,500</td>
<td>Chennai, Madurai, Hyderabad, Karur, Karim Nagar, Mysore, Visakhapatnam, Bilaspur, Aragonda, Kakinada, Bengaluru, Delhi, Noida, Kolkata, Ahmedabad, Mauritius, Pune, Raichur, Ranipet, Ranchi, Ludhiana, Indore, Bhubaneswar, Dhaka, Bacheli, Bellary, Goa, Lavasa, Nashik, Nellore, Trivunnamalai, Trichi</td>
</tr>
<tr>
<td>Aravind Eye Hospitals</td>
<td>4,000</td>
<td>Theni, Tirunelveli, Coimbatore, Puducherry, Madurai, Amethi, Kolkata, Dindigul, Tirupur, Salem, Tuticorin, Udumalpet</td>
</tr>
<tr>
<td>CARE Hospitals</td>
<td>2,400</td>
<td>Hyderabad, Vijayawada, Nagpur, Raipur, Bhubaneswar, Surat, Pune, Visakhapatnam, Jabalpur, Raigarh</td>
</tr>
<tr>
<td>Fortis Healthcare Ltd</td>
<td>10,000</td>
<td>Mumbai, Bengaluru, Kolkata, Mohali, Noida, Delhi, Amritsar, Raipur, Jaipur, Chennai, Kota, Faridabad, also the company present in Singapore, Dubai, Mauritius and Sri Lanka</td>
</tr>
<tr>
<td>Max Hospitals</td>
<td>2,500</td>
<td>Delhi, NCR, Punjab, Uttarakhand</td>
</tr>
<tr>
<td>Manipal Group of Hospitals</td>
<td>7,000</td>
<td>Udupi, Bengaluru, Manipal, Attavar, Mangalore, Goa, Tumkur, Vijaywada, Kasaragod, Visakhapatnam</td>
</tr>
<tr>
<td>Narayana Health</td>
<td>5,600</td>
<td>Ahmedabad, Bengaluru, Berhampore, Davangere, Dharwad, Durgapur, Guwahati, Hyderabad, Jaipur, Jamshedpur, Kolar, Kolkata, Kuppam, Mahuva, Mysore, Raipur, Shimoga, Bellary, Palanpur</td>
</tr>
</tbody>
</table>

**Source:** Company websites, Fortis Red Herring Prospectus, TechSci Research

**Note:** (1) No of beds include owned subsidiaries, Joint Ventures and affiliations. Data mentioned is as per latest data available i.e May 2017

For updated information, please visit [www.ibef.org](http://www.ibef.org)
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
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</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 1st hospital chains to start focus on Tier 2 & 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 5 years |
| Management contracts            | • Many healthcare players such as Fortis & 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 & entered into a number of PPPs  
• As of FY16, telemedicine market in India was valued at USD15 million & is expected to rise at a CAGR of 20 per cent during FY16-20, reaching to USD32 million by 2020  
• Telemedicine can bridge the rural-urban divide in terms of medical facilities, extending low-cost consultation & diagnosis facilities to the remotest of areas via high-speed internet & telecommunication. |
Increasing penetration of health insurance

- In FY16, gross direct premium income from health insurance stood at 28.49 per cent of overall gross direct premium income for non-life insurance segment.
- 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 USD2.8 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 USD0.6 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 & 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 & drop services for patient by private helicopters & luxurious arrangements for visitors to patient in hospital.

Source: IRDA, CII, Grant Thornton, Gartner, Technopak, PwC, TechSci Research

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PORTERS FIVE FORCES ANALYSIS
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 New Entrants

- Big threat of new entrants in the industry
- Number of players has increased considerably in recent times

Substitute Products

- Customers may go for public hospitals which are inexpensive
- Customers might go for E-Health

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

Bargaining Power of Customers

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

Source: TechSci Research
HEALTHCARE

STRATEGIES ADOPTED

Cost leadership

• Private players in the industry are making their supply chain efficient & 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 & staff productivity
  • Good human capital management (i.e. training)

Differentiation

• 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

Focus

• Certain players in industry focus only on providing one kind of healthcare service to customers. Many examples can be quoted for hospitals focusing on treatment of cancer & providing leading cancer & eye related treatments in India.

Diversified business approach

• Offering a range of healthcare & wellness services under a single brand has become a trend. Patients & healthcare services seekers find it convenient. Demand of such arrangements boosts the healthcare sector.

Merger & 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 USD 193.37 million.
• Serum Institute of India, the world’s largest vaccine manufacturer, purchased a defunct unit of Nanotherapeutics Inc., a Czech Republic-based injectable polio doses maker, for USD 78.49 million. The acquisition will help Serum Institute of India to become the largest manufacturer of injectable polio vaccine in the world.

Source: TechSci Research

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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 USD10 billion for healthcare facilities
- National Health Insurance Mission to cover entire population

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

**Increasing investments**
- Rising FDI and private sector investments
- Lucrative M&A opportunities
- Foreign players setting R&D centres and hospitals

**Source:** Health Ministry, TechSci Research

Notes: FDI – Foreign Direct Investment, M&A - Mergers & Acquisitions
NRHM - National Rural Health Mission

For updated information, please visit [www.ibef.org](http://www.ibef.org)
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 USD68.6
- 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

Trends in per capita income in India (USD)

Note: E - Estimated F – Forecasts
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 & 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

Number of hospitalised cases (million)

Source: Apollo Investor Presentation March 2016, TechSci Research
Note: F - Forecast
MEDICAL TOURISM: A NEW GROWTH FACTOR FOR INDIA’S HEALTHCARE SECTOR

- Presence of world-class hospitals & 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 USD3.9 billion and is expected to reach USD8 billion by 2020. During 2013-16, the country’s medical tourism market witnessed growth at a CAGR of 27 per cent

- Inflow of medical tourists is expected to cross 3.2 million by 2015 compared to 0.85 million in 2012

- Yoga, meditation, ayurveda, allopathy & 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, TechSci Research
# Healthcare

## Re-emergence of Traditional Medical Care

### Market size
- The traditional (ayurvedic) medical care market in India was valued at about USD2.7 billion in 2014, and grew at a CAGR of 20 per cent during 2011–15. In 2015, Government of India approved a 200 bedded All India Institute of Ayurveda in New Delhi.

### Services offered
- The sector has broadened its offerings & now includes services on diet & nutrition, yoga, herbal medicine, humour therapy & spa

### Leading brands and players
- Many big players such as Apollo, VLCC & 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 & 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.
- In April 2014, country has developed vast AYUSH infrastructure comprising over 8 lacs registered practitioners, 25492 dispensaries and 3601 hospitals
- In Union Budget 2017-18, the plan outlay for AYUSH is estimated at USD212.5 million

Source: Ministry of Health, Make in India, RNCOS, KPMG, TechSci Research; Notes: AYUSH - Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homoeopathy
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 USD100 billion by 2015 and further to USD280 billion by 2020.

The private hospital market in India is estimated at USD81.0 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.

Market size of private hospitals (USD billion)

Source: WHO Statistical Information System, Indian Chamber of Commerce, Yes Bank, TechSci Research
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 USD 697.21 million in 29,115 health facilities of India

Over 2012-22, diagnostic market is expected to grow at a CAGR of 20.4 per cent to USD32 billion from USD5 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

Notes: E - Estimates, F – Forecast, IVD - In Vitro Diagnostic
HEALTHCARE IS A KEY FOCUS AREA UNDER THE 12TH FIVE-YEAR PLAN (2012–17)

- The NITI Aayog has allocated USD55 billion under the 12th Five-Year Plan to the Ministry of Health and Family Welfare, which is about three times the actual expenditure under the 11th Five-Year Plan.
- The share of healthcare in total plan allocation is set to rise to 2.5 per cent of GDP in the 12th Plan from 0.9 per cent in the 11th Plan.
- The 12th plan focusses on providing universal healthcare, strengthening healthcare infrastructure, promoting R&D and enacting strong regulations for the healthcare sector.
- Establishing a system of Universal Health Coverage (UHC) in the country that means each individual would have assured access to a defined essential range of medicines and treatment at an affordable price, which should be entirely free for a large percentage of the population.

Proposed budget allocation for Departments of Ministry of Health and Family Welfare under 12th Plan (USD billion)

<table>
<thead>
<tr>
<th>Department of Health and Family Welfare</th>
<th>AYUSH</th>
<th>Department of Health Research</th>
<th>AIDS Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>1.8</td>
<td>1.8</td>
<td>0.3</td>
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</table>

Budget allocation for Departments of Ministry of Health and Family Welfare under 11th Plan (USD billion)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>18.4</td>
<td>0.7</td>
<td>0.4</td>
<td>0.3</td>
</tr>
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</table>

Source: Ministry of Health & Family Welfare, TechSci Research
Notes: AYUSH - Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
For updated information, please visit www.ibef.org
STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR … (1/3)

<table>
<thead>
<tr>
<th>Encouraging the private sector</th>
</tr>
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<tbody>
<tr>
<td>• 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</td>
</tr>
<tr>
<td>• Government is encouraging the PPP model to improve availability of healthcare services and provide healthcare financing.</td>
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<tr>
<td>• 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.</td>
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<thead>
<tr>
<th>Encouraging investments in rural areas</th>
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<tbody>
<tr>
<td>• 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</td>
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<table>
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<tr>
<th>Tax incentives</th>
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<tbody>
<tr>
<td>• All healthcare education and training services are exempted from service tax</td>
</tr>
<tr>
<td>• Increase in tax holiday under section 80- IB for private healthcare providers in non metros for minimum of 50 bedded hospitals</td>
</tr>
<tr>
<td>• 250 per cent deduction for approved expenditure incurred on operating technology enables healthcare services such as tele medicine, remote radiology</td>
</tr>
<tr>
<td>• 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</td>
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<thead>
<tr>
<th>Biomedical Equipment Management and Maintenance Program (BMMP)</th>
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<tbody>
<tr>
<td>• 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.</td>
</tr>
</tbody>
</table>

Source: Union Budget FY16, Health Ministry, TechSci Research
STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR … (2/3)

**National Health Policy 2015 Draft**

- The primary aim is to inform, clarify, strengthen & prioritise government’s role in shaping the health systems
- An initiative taken by the Government to leverage economic growth so as to achieve better health outcomes which would contribute to improved productivity as well as equity
- The policy framework ensures health assurance & universal access to affordable healthcare services in an assured mode

**Incentives in the medical travel industry**

- 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 USD491 towards medical expenditure if they are not covered under health insurance

**Fund allocation by government**

- Additional amount of USD458.3 would be provided to senior citizens, as per 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 ~USD1470 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
STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR … (3/3)

Medical institutions and Laboratories

- Allocation of USD82.6 million being a part of Union Budget, 2016-17, to set up 4 more institutions of the stature of AIIMS in Andhra Pradesh, West Bengal, Maharashtra and Uttar Pradesh
- In 2017, the government announced setting up of 2 new AIIMS in Jharkhand & Gujarat.
- Creation of new drug testing laboratories and further strengthening of the 31 existing state laboratories

Union Budget 2017-18

- To set up a health infrastructure fund & make an access, a fund for health care has been allocated under the Union budget for infrastructure & innovation specially for the Tier 2, Tier 3 & rural areas
- To raise the tax exemption level on the preventive health check-up to USD 297.48 from current existing amount of USD 74.37, which will be exempted under the section 80D of the Income Tax Act, to achieve the universal healthcare coverage
- To increase the deduction towards medical insurance premium, the current deduction limit being USD 223.11 which is to be increased to USD 743.71 for self & for family. In the case of dependent parents the current limit of USD 297.48 needs to be increased to USD 743.71. The GST exemption should cover health insurance premium
- There is a provision for increasing the depreciation rate on the medical devices & equipment from 15 per cent to 30 per cent
- To get the tax benefit, on the limit of annual medical reimbursement is to be raised from USD 223.11 each to at least USD 1487.43 each per house
- 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
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 – December 2016, FDI inflows for drugs and pharmaceuticals sector stood at USD14,536.58 million
- Inflows into sectors such as hospitals & diagnostic centers and medical appliances stood at USD4.2 billion and USD1.47 billion, respectively, during the same period
- In February 2017, German healthcare firm Merck announced its plans to open their 4th bio production centre worldwide & their 1st in India. It will help the local companies to manufacture biosimilars & biotech drugs.
INDIA’S COMPETITIVE ADVANTAGE IN HEALTHCARE OVER PEERS DRIVING INVESTMENTS

* India’s primary comparative advantage lies in its—
  * Large pool of well-trained medical professionals in the country
  * Cost advantage compared to peers in Asia and Western countries
    * Cost of surgery in India is one-tenth of that in the US or Western Europe
  * Increased success rate of Indian companies in getting Abbreviated New Drug Application (ANDA) approvals
* The country offers vast opportunities in R&D as well as medical tourism.
* During 2016 (up to November), 82 health tech companies raised about USD 80 million.

<table>
<thead>
<tr>
<th>Opportunities for investments in healthcare</th>
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<tbody>
<tr>
<td>Diagnostic &amp; pathology services</td>
</tr>
<tr>
<td>Clinical trials</td>
</tr>
<tr>
<td>Health insurance</td>
</tr>
<tr>
<td>Telemedicine</td>
</tr>
<tr>
<td>Equipment</td>
</tr>
</tbody>
</table>
HEALTHCARE

SECTOR IS ATTRACTING LUCRATIVE M&A DEALS

<table>
<thead>
<tr>
<th>Indian partner</th>
<th>Foreign players</th>
<th>Type of business</th>
<th>Stake (%)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia Pacific</td>
<td>Serene Senior Care</td>
<td>Healthcare</td>
<td>100%</td>
<td>2017</td>
</tr>
<tr>
<td>Tech Mahindra</td>
<td>CJS Solutions</td>
<td>Healthcare</td>
<td>84.7%</td>
<td>2017</td>
</tr>
<tr>
<td>Continental Hospitals Limited</td>
<td>IHH Healthcare Berhad</td>
<td>Healthcare</td>
<td>51%</td>
<td>2016</td>
</tr>
<tr>
<td>Cipla</td>
<td>InvaGen Pharmaceuticals Inc. and Exelan Pharmaceuticals Inc.</td>
<td>Pharmaceuticals</td>
<td>100%</td>
<td>2016</td>
</tr>
<tr>
<td>Famy Care Ltd</td>
<td>Mylan Inc – Mylan Laboratories Limited</td>
<td>Pharma, healthcare &amp; biotech</td>
<td>100%</td>
<td>2015</td>
</tr>
<tr>
<td>Nitin Lifesciences</td>
<td>Recipharm</td>
<td>Pharmaceuticals</td>
<td>74%</td>
<td>2015</td>
</tr>
<tr>
<td>Lupin Pharmaceuticals Inc.</td>
<td>Temmler</td>
<td>Pharmaceuticals</td>
<td>100%</td>
<td>2015</td>
</tr>
<tr>
<td>Panacea Biotec Ltd</td>
<td>Apotex Inc</td>
<td>Pharmaceutical</td>
<td>-</td>
<td>2014</td>
</tr>
<tr>
<td>Lupin Pharmaceutical Inc</td>
<td>Grin</td>
<td>Pharma, healthcare and biotech</td>
<td>-</td>
<td>2014</td>
</tr>
<tr>
<td>Medreich Ltd.</td>
<td>Meiji Seika Pharma</td>
<td>Pharmaceutical</td>
<td>100%</td>
<td>2014</td>
</tr>
<tr>
<td>Wyeth Ltd</td>
<td>Pfizer Ltd</td>
<td>Pharma, healthcare and biotech</td>
<td>-</td>
<td>2013</td>
</tr>
<tr>
<td>Torrent Pharmaceuticals</td>
<td>Elder Pharmaceuticals</td>
<td>Pharma, healthcare &amp; biotech</td>
<td>100.0</td>
<td>2013</td>
</tr>
</tbody>
</table>

Source: Grant Thornton Dealtracker, TechSci research; Note: M&A – Mergers and Acquisitions

For updated information, please visit www.ibef.org
<table>
<thead>
<tr>
<th>Investee</th>
<th>Investor</th>
<th>Type of business</th>
<th>Stake (%)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerala Institute of Medical Sciences</td>
<td>True North</td>
<td>Healthcare Services</td>
<td>40%</td>
<td>2017</td>
</tr>
<tr>
<td>Continental Hospitals Limited</td>
<td>IHH Healthcare Berhad</td>
<td>Pharmaceuticals</td>
<td>73.4%</td>
<td>2016</td>
</tr>
<tr>
<td>Cipla</td>
<td>InvaGen Pharmaceuticals Inc. and Exelan Pharmaceuticals Inc.</td>
<td>Pharmaceuticals</td>
<td>100%</td>
<td>2016</td>
</tr>
<tr>
<td>Famy Care Ltd</td>
<td>Mylan Inc – Mylan Laboratories Limited</td>
<td>Pharmaceuticals</td>
<td>100%</td>
<td>2015</td>
</tr>
<tr>
<td>Nitin Life Sciences</td>
<td>Recipharm</td>
<td>Pharmaceuticals</td>
<td>75%</td>
<td>2015</td>
</tr>
<tr>
<td>Temmler</td>
<td>Lupin</td>
<td>Pharmaceuticals</td>
<td>100%</td>
<td>2015</td>
</tr>
<tr>
<td>Chrys Capital</td>
<td>GVK Biosciences</td>
<td>Contract research</td>
<td>10%</td>
<td>2015</td>
</tr>
<tr>
<td>Gavis &amp; Novel laboratories</td>
<td>Lupin</td>
<td>Pharmaceuticals</td>
<td>100%</td>
<td>2015</td>
</tr>
<tr>
<td>Cadila Healthcare</td>
<td>Claris Lifesciences</td>
<td>Injectables</td>
<td>100%</td>
<td>2015</td>
</tr>
<tr>
<td>Nova Specialty Hospitals</td>
<td>Apollo Hospitals</td>
<td>Healthcare service</td>
<td>-</td>
<td>2015</td>
</tr>
<tr>
<td>Laurus Labs Pvt. Ltd.</td>
<td>Warburg Pincus</td>
<td>Pharma &amp; Healthcare</td>
<td>32%</td>
<td>2014</td>
</tr>
</tbody>
</table>

Source: Grant Thornton Dealtracker, TechSci Research; Note: PE – Private Equity
HEALTHCARE

OPPORTUNITIES
HEALTHCARE

OPPORTUNITIES IN HEALTHCARE

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 & 2.4 million nurses required to meet the growing demand for healthcare
- Over USD200 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 & 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 USD8 billion in 2015, up from USD3.8 billion in 2012. The market has more than 1000 players

Medical tourism

- The Indian medical tourism industry is expected to reach USD8 billion by 2020 from USD3.9 billion in 2016, growing at a CAGR of 27 per cent over 2013-16
- In 2015, India is likely to see 3.2 million medical tourists annually
- 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

Notes: Deloitte, Apollo Investor Presentation, RNCOS, Industry estimates
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HEALTHCARE

SCOPE 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 & 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>10.6%</td>
<td>4.2%</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

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Health insurance premium collection (USD billion)

CAGR: 21.73%

<table>
<thead>
<tr>
<th>Year</th>
<th>Premium Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-09</td>
<td>1.03</td>
</tr>
<tr>
<td>2009-10</td>
<td>1.3</td>
</tr>
<tr>
<td>2010-11</td>
<td>2.42</td>
</tr>
<tr>
<td>2011-12</td>
<td>2.79</td>
</tr>
<tr>
<td>2012-13</td>
<td>2.85</td>
</tr>
<tr>
<td>2013-14</td>
<td>2.9</td>
</tr>
<tr>
<td>2014-15</td>
<td>3.6</td>
</tr>
<tr>
<td>2015-16</td>
<td>4.08</td>
</tr>
</tbody>
</table>

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 USD4.08 billion

Health insurance premiums are expected to increase at a CAGR of 21.73 per cent during 2008–16

Source: IRDA, Hospital Market India – By Research on India, LSI Financial Services, World Bank, TechSci Research

Note: IRDA – Insurance Regulatory and Development Authority
HEALTHCARE

SUCCESS STORIES
MAX HEALTHCARE: WELL POISED TO TAP GROWTH OPPORTUNITIES

**2000** Established 1st hospital Max Medcenter

**2002**

**2004**

**2006**

**2008**

**2010**

**2011**

**2012**

**2013**

**2014**

**2015**

**2016**

**FY16 USD2.17 billion revenue**

Organic growth through expansion of hospital network

Network of highly qualified doctors, nurses & medical personnel

Further expansion in North India

JV with Life Healthcare, South Africa, extending global reach

Plans to invest USD 47.79 million to build a cancer hospital in Delhi

Over 9 million customers, 22,500 employees; 58,000 agents & 240 offices

Q32013 Registered patient base touched 2.4 million

2013 Over 2,000 beds & team of 2,040 doctors; 2,800 nurses & 2,700 other trained personnel

2012 Opened its 1st Super Speciality hospital in Uttarakhand

2012 Strengthened capabilities to provide primary, secondary & tertiary/quaternary care

Award for ‘Excellence in Healthcare delivery’

Received DL Shah National Award on ‘Economics of Quality’

NABH certified

NABL accredited


Source: Company website, Company reports, TechSci Research


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GLOBAL HOSPITALS: SET TO GROW WITH HOSPITAL NETWORK EXPANSION

1998
First hospital opened in Hyderabad

1999
First hospital to carry out intravascular surgery

2000
Operational excellence, inclusion of more service offerings aided growth

2002
Revision of hospital network in Bengaluru and Chennai

2007
Acquisition of Tamilnad Hospital in 2007 for transforming it to Global Health City

2010
Global Health City received NABH accreditation

2011
Commission of Global Hospitals, Mumbai with 450 – bed multi – super speciality and multi – organ transplant facility

2012
Proposed IFC investment to enhance bed capacity to 1,800 by FY16

2015
Current capacity of about 2,000 beds

2015
3,00,000 In Patients and 50,000 Out Patients annually

Source: Company website, Company reports, TechSci Research

Note: IFC - International Finance Corporation, NABH - National Accreditation Board for Hospitals & Healthcare, R&D - Research & Development

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**HEALTHCARE**

**FORTIS: LEADING THE WAY THROUGH DIVERSIFICATION**

- **Hospital expansion**
- **Diversification**
- **Acquisitions**
- **Higher profitability**
- **Current network**

**FY16**(1) USD653.19 million year ended revenue

*Completed acquisition of ~75% stake in SRL*

*Completed acquisition of Wockhardt Hospitals Ltd, adding 10 more hospitals*

*Started Fortis International Institute of Medical Sciences, a major educational institution with international standards*

*Network of 29 hospitals, including 12 satellite with capacity of 3,280 beds*

*Plans to add 400 new beds every year*

*Fortis Healthcare acquires 51 per cent stake in Fortis Hospotel Ltd.*

*Fortis is coming up with two multi-speciality hospitals and a medical college for 500 students*

*Completed acquisition of Wockhardt Hospitals Ltd, adding 10 more hospitals*

*Awarded with “Hospital of the Year in India” at the 2016 APAC Healthcare and Medical Tourism Awards*

**Source:** Research on India, TechSci Research

Note: (1) Fortis Financial result Year Ended March 31, 2016

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HEALTHCARE

APOLLO HOSPITALS: LEADER IN SUPER-SPECIALITY HEALTHCARE

1983
150 beds


Apollo plans to start a new Stemcyte and Cord blood Collection Centre through a JV with Cadilla Pharmaceutical, Stemcyte India Therapeutics Ltd and Stemcyte USA

Apollo plans to invest ~USD400 million to add another 2,685 beds by 2015

Apollo partnered with government to provide tele medicine facilities in rural India

Added robotic surgery capabilities in 4Q FY13

APHEL is starting a 290-bed super-speciality hospital in Bhubaneswar

Started its first children's hospital in Chennai with 80 bed capacity

Launched Oman’s first private telemedicine centre at its Muscat Hospital in 2007

Apollo Hospitals, Bhubaneswar launched GPS enabled ambulance services in 2016

Apollo plans to invest ~USD400 million to add another 2,685 beds by 2015

Enhanced investment

Joint Venture

Hospital expansion

Expansion into child care

First telemedicine centre

Source: Research on India, TechSci Research;
Note: JV – Joint Venture

JUNE 2017

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HEALTHCARE

INDUSTRY ASSOCIATIONS

Indian Medical Association
I.M.A. House
Indraprastha Marg,
New Delhi – 110 002, India
Telephone: 91 11 2337 0009, 2337 8819
Fax: 91 11 2337 9470, 2337 9178
Website: www.ima-india.org
E-mail: inmedici@vsnl.com

The Federation of Obstetric and Gynaecological Societies of India
Model Residency, 605,
Bapurao Jagtap Marg,
Jacob Circle, Mahalaxmi East,
Mumbai – 400 011, India
Fax: 23021383
Website: www.fogsi.org
E-mail: inmedici@vsnl.com

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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&A: Mergers and Acquisitions

NHRM: National Rural Health Mission

PPP: Public Private Partnerships
GLOSSARY … (2/2)

* **R&D**: Research and Development
* **USD**: 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 USD</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>2016-2017E</td>
<td>66.95</td>
</tr>
</tbody>
</table>

Source: Reserve bank of India, Average for the year

### Exchange rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one USD</th>
</tr>
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<tbody>
<tr>
<td>2005</td>
<td>43.98</td>
</tr>
<tr>
<td>2006</td>
<td>45.18</td>
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<td>2007</td>
<td>41.34</td>
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<td>2008</td>
<td>43.62</td>
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<td>2009</td>
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<td>2010</td>
<td>45.72</td>
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<td>2012</td>
<td>53.46</td>
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<tr>
<td>2013</td>
<td>58.44</td>
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<tr>
<td>2014</td>
<td>61.03</td>
</tr>
<tr>
<td>2015</td>
<td>64.15</td>
</tr>
<tr>
<td>2016 (Expected)</td>
<td>67.22</td>
</tr>
</tbody>
</table>

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