HEALTHCARE

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**EXECUTIVE SUMMARY**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sixth largest in the world</td>
<td>• India is expected to rank amongst the top three healthcare markets in terms of incremental growth by 2020</td>
</tr>
<tr>
<td></td>
<td>• India was the sixth largest market globally in terms of size in 2014</td>
</tr>
<tr>
<td>Impressive growth prospects</td>
<td>• Indian healthcare sector, one of the fastest growing industry, is expected to advance at a CAGR of 22.87 per cent during 2015–20 to reach USD280 billion. There is immense scope for enhancing healthcare services penetration in India, this presents ample opportunity for development of the healthcare industry</td>
</tr>
<tr>
<td>Strong fundamentals</td>
<td>• Rising income levels, ageing population, growing health awareness and changing attitude towards preventive healthcare is expected to boost healthcare services demand in future</td>
</tr>
<tr>
<td>Cost advantage</td>
<td>• 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&amp;D activities for international players due to its relatively low cost of clinical research</td>
</tr>
<tr>
<td>Favourable investment environment</td>
<td>• Conducive policies for encouraging FDI, tax benefits, favorable government policies coupled with promising growth prospects have helped the industry attract private equity, venture capitals and foreign players</td>
</tr>
</tbody>
</table>

*Source: Deloitte, TechSci Research*
HEALTHCARE

EXECUTIVE SUMMARY

The doctor-to-patient ratio for rural India, as per the Health Ministry statistics, stands at 1:30,000, well below the WHO's recommended 1:1,000.

- **Healthcare Market Size**: USD100 Billion
- **Hospitals Bed Per Thousand Population till 2014**: 0.9
- **Physicians Per Thousand Population till 2014**: 0.7
- **Number of Hospitals in India**: 3601
- **Number of Sub-centers**: 152326
- **Number of AYUSH Hospitals**: 3601
- **Number of Sub-centers**: 184488
- **Number of Medical Colleges for MBBS till 2015**: 404
- **Number of Private medical colleges till 2015**: 215
- **Number of Postgraduate students per year till 2015**: 25346
- **Number of Eye Banks till 2013**: 249
- **Number of Blood Bank till February, 2015**: 2760
- **Number of Eye Banks till 2015**: 54348

Source: WHO, IMH, Deloitte, TechSci Research

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Growing demand

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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

Attractive opportunities

- Investment in healthcare infrastructure is set to rise, benefiting both ‘hard’ (hospitals) and ‘soft’ (R&D, 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 five 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 and 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 and customs duty, and exemption in service tax
- Creation of new drug testing laboratories and further strengthening of the 31 existing state laboratories
- A group has been formed for constituting the “Mental Health Policy”


Notes: R&D – Research and Development, CAGR - Compound Annual Growth Rate, USD – US Dollar, F – Forecast, E - Estimate
# The Healthcare Market Functions Through Five Segments

<table>
<thead>
<tr>
<th>Segment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>Government hospitals – It includes healthcare centres, district hospitals and general hospitals</td>
</tr>
<tr>
<td></td>
<td>Private hospitals – It includes nursing homes, and mid-tier and top-tier private hospitals</td>
</tr>
<tr>
<td>Pharmaceutical</td>
<td>It includes manufacturing, extraction, processing, purification and packaging of chemical materials for use as medications for humans or animals</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>It comprises businesses and laboratories that offer analytical or diagnostic services, including body fluid analysis</td>
</tr>
<tr>
<td>Medical equipment and supplies</td>
<td>It includes establishments primarily manufacturing medical equipment and supplies, e.g. surgical, dental, orthopaedic, ophthalmologic, laboratory instruments, etc</td>
</tr>
<tr>
<td>Medical insurance</td>
<td>It includes health insurance and medical reimbursement facility, covering an individual’s hospitalisation expenses incurred due to sickness</td>
</tr>
<tr>
<td>Telemedicine</td>
<td>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</td>
</tr>
</tbody>
</table>

*Source: Hospital Market – India by Research on India, TechSci Research*
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 17 per cent.

The total industry size is expected to touch USD160 billion by 2017 and USD280 billion by 2020.

As per the Ministry of Health, development of 50 technologies has been targeted in the FY16, for the treatment of disease like Cancer and TB.

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

Source: Frost & Sullivan, LSI Financial Services, Deloitte, TechSci Research
Notes: E - Estimate, F - Forecast
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 presence of a well-educated, English-speaking medical staff in state-of-the-art private hospitals and diagnostic facilities.

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 11.3 per cent during 2008–15E to USD91 Billion 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.

Notes: E - Estimates; 2015E - Estimates for 2015 (by BMI)
## KEY PLAYERS IN THE MARKET

<table>
<thead>
<tr>
<th>Company</th>
<th>No of beds*</th>
<th>Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apollo Hospitals Enterprise Ltd</td>
<td>9,215</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, Trivuannamalai, Trichi</td>
</tr>
<tr>
<td>Aravind Eye Hospitals</td>
<td>3,649</td>
<td>Theni, Tirunelveli, Coimbatore, Puducherry, Madurai, Amethi, Kolkata, Dindigul, Tirupur, Salem, Tuticorin, Udumalpet</td>
</tr>
<tr>
<td>CARE Hospitals</td>
<td>2,100</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>1,973</td>
<td>Delhi, NCR, Punjab, Uttarakhand</td>
</tr>
<tr>
<td>Manipal Group of Hospitals</td>
<td>4,900</td>
<td>Udupi, Bengaluru, Manipal, Attavar, Mangalore, Goa, Tumkur, Vijayawada, Kasaragod, Visakhapatnam</td>
</tr>
<tr>
<td>Narayana Health</td>
<td>6,498</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>

*No of beds include owned subsidiaries, Joint Ventures and affiliations.

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

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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

Expansion to tier-II and tier-III cities

- There is substantial demand for high-quality and specialist healthcare services in tier-II and tier-III cities
- 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; many major hospitals (Apollo, AIIMS, Narayana Hrudayalaya) have adopted telemedicine services and entered into a number of PPPs
- As per the latest data available, the telemedicine market in India was valued at USD7.5 million, and is expected to rise at a CAGR of 20 per cent, to USD18.7 million by 2017
- 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

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

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
Increasing penetration of health insurance

- Health insurance is gaining momentum in India; gross healthcare insurance premium was USD2.9 billion in 2013 expanding at a CAGR of 26 per cent over FY08-13
- This trend is likely to continue, benefitting the country’s healthcare industry

Mobile-based health delivery

- Strong mobile technology infrastructure and launch of 4G is expected to drive mobile health initiatives in the country
- Currently, there are over 20 mhealth initiatives in the country for spreading awareness about family planning and other ailments
- Mobile health industry in India is expected to reach USD0.6 billion by 2017

Technological initiatives

- To standardise the quality of service delivery, control cost and enhance patient engagement, healthcare providers are focusing on the technological aspect of healthcare delivery
- Digital Health Knowledge Resources, Electronic Medical Record, Mobile Healthcare, Electronic Health Record, Hospital Information System and PRACTO are some of the technologies gaining wide acceptance in the sector
- Healthcare sector’s spending on IT products and services is expected to have risen to USD1.2 billion in 2014 from USD1.1 billion in 2013, which is expected to grow by 4 per cent over 2013

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: IRDA, CII, Grant Thornton, Gartner, Technopak, PwC, TechSci Research
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PORTER’S 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

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STRATEGIES ADOPTED

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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 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)
- Leveraging the benefit of Information Technology to reduce cost and improve healthcare delivery

Differentiation

- Players in the industry are trying to differentiate themselves by providing multiple health care services under one roof
- Players are also trying to provide better services to differentiate themselves

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. One such example is Tata Memorial Hospital which is focused on treatment of cancer and provides leading cancer treatment in India

Diversified business approach

- 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

Source: TechSci Research
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

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

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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
  - Per capita income is expected to increase at a CAGR of 7.33 per cent over 2014–18
  - Per capita expenditure on healthcare in India was estimated by 2015 was USD88.7
- 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: 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 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 August 2013, TechSci Research
Note: F - Forecast
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.
- Medical tourism market is expected to expand at a CAGR of 16.42 per cent to reach USD 1.79 billion in 2015 from USD 980 million in 2011.
- Inflow of medical tourists is expected to cross 3.2 million by 2015 compared to 0.85 million in 2012.
- 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.

Cost of surgeries in different countries (USD), 2014

Source: Ministry of Health, RNCOS, KPMG, Deloitte, Medical Tourism Association, LSI Financial Services, Apollo Investor Presentation, August 2013, TechSci Research
The traditional (ayurvedic) medical care market in India was valued at about USD2.7 billion in 2014, and this is expected to rise at a CAGR of 20 per cent over 2011–15.

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.

Vicks VapoRub, Amrutanjan Balm, Zandu Balm, Moov pain cream and Halls Lozenges are among the leading ayurvedic brands in India. 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.

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.

In 2014, the country has developed vast AYUSH infrastructure comprising of 686,319 registered practitioners, 26,107 dispensaries and 3,167 hospitals in public sector, 652 colleges/ institutes for undergraduate/post graduate education and 7,000 licensed drug manufacturing units.

Source: Ministry of Health, Make In India, RNCOS, KPMG, TechSci 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 USD100 billion by 2015 and further to USD280 billion by 2020.

- The private hospital market in India is estimated at USD54.0 billion at end-of 2014.

- Over 2009–14, the market size of private hospitals is estimated to have CAGR of 19.7 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)

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Size (USD Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>22.0</td>
</tr>
<tr>
<td>2010</td>
<td>29.9</td>
</tr>
<tr>
<td>2011</td>
<td>35.4</td>
</tr>
<tr>
<td>2012</td>
<td>45.0</td>
</tr>
<tr>
<td>2014</td>
<td>54.0</td>
</tr>
</tbody>
</table>

Source: WHO Statistical Information System, Yes Bank, TechSci Research
Note: E - Estimates
**HEALTHCARE**

**GROWING IN-PATIENT / OUT-PATIENT AND DIAGNOSTIC MARKET**

**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>47.00%</td>
<td>53.00%</td>
</tr>
<tr>
<td>2015E</td>
<td>19.00%</td>
<td>81.00%</td>
</tr>
<tr>
<td>2020F</td>
<td>17.00%</td>
<td>83.00%</td>
</tr>
</tbody>
</table>

**Market size of diagnostic market (USD billion)**

<table>
<thead>
<tr>
<th>Year</th>
<th>In-Patient</th>
<th>Out-Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2013E</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2014E</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>2015E</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>2022E</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** E - Estimates, IVD - In Vitro Diagnostic

- Over 2015-20, the In-Patient market is expected to grow at CAGR of 13 per cent
- Over 2015-20, the Out-Patient market is expected to grow at CAGR of 10 per cent
- Over 2012-22, diagnostic market is expected to grow at CAGR of 20 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

*Source: Apollo Investor Presentation, Apollo Hospitals Annual Report 2015, Fortis Investor Presentation, TechSci Research*

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HEALTHCARE IS A KEY FOCUS AREA UNDER THE 12TH FIVE-YEAR PLAN (2012–17)

- The Planning Commission 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 focuses 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)

- Department of Health and Family Welfare: 49.4 billion
- AYUSH: 2.1 billion
- Department of Health Research: 1.8 billion

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

- Department of Health and Family Welfare: 18.4 billion
- AYUSH: 0.3 billion
- Department of Health Research: 0.7 billion

Notes: AYUSH - Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy

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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

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 five years

Tax incentives

- Customs duty on life-saving equipment has been reduced to 5 per cent from 25 per cent and exempted from countervailing duty
- Import duty on medical equipment has been reduced to 7.5 per cent
- A weighted tax deduction is given under Income Tax Act for R&D related projects
- Full exemption from excise duty is being provided for HIV/AIDS drugs and diagnostic kits supplied under National AIDS Control Programme funded by the global fund to fight AIDS, TB and Malaria (GFATM)
- The customs duties on the said drugs are also being exempted

Source: Union Budget FY16, Health Ministry, TechSci Research
The primary aim is to inform, clarify, strengthen and priorities government’s role in shaping the health systems

The policy envisage to address the need for improving 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 and universal access to affordable healthcare services in an assured mode

Incentives and tax holidays are being offered to hospitals and dispensaries providing health travel facilities

Source: Ministry of Health & Family Welfare, TechSci Research
**HEALTHCARE**

**STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR … (3/3)**

**Union Budget FY2015-16**

- Ministry of Health and Family Welfare allocated USD5.5 billion for FY16, decrease by 11 per cent from FY14
- Creation of new National Health Mission (NHM) for providing effective healthcare to both urban and rural population, with emphasis on states with weak health infrastructure and indicators
- NHM extended to encompass Ayurveda, Unani, Siddha and Homeopathy to strengthen traditional medical forms
- Scope of Rashtriya Swasthya Bima Yojana (RSBY) enhanced to include rickshaw pullers, taxi drivers, sanitation workers, rag pickers and mine workers
- Fund allocation to provide accessible and affordable services to elderly under National Programme for the Health Care of Elderly
- Allocation of USD875.4 million for improving medical education, training and research

**Laboratories**

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

**Medical institution**

- Allocation of USD82.6 million to set up four more institutions of the stature of AIIMS in Andhra Pradesh, West Bengal, Maharashtra and Uttar Pradesh

*Source: Union Budget FY16, TechSci Research*
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 – May 2015, FDI inflows for drugs and pharmaceuticals stood at USD13.28 billion.

Inflows into hospitals and diagnostic centers, and medical appliances stood at USD3.11 billion and USD0.96 billion, respectively, during the same period.

**SUPPORTIVE POLICIES DRIVE FDI INFLOWS**

FDI inflows (Up to May 2015) into the healthcare sector (billion)

- Drug & Pharmaceuticals: 13.28 (5.21%)
- Hospital & diagnostic Centres: 3.11 (1.22%)
- Medical & Surgical Appliances: 0.96 (0.38%)

**Source:** Department of Industrial Policy & Promotion, TechSci Research

**Note:** FDI – Foreign Direct Investment

**AUGUST 2015**
# 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

## Opportunities for investments in healthcare

<table>
<thead>
<tr>
<th>Service</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic &amp; pathology services</td>
<td>High cost differential in India allows for outsourcing of pathology and laboratory tests by foreign hospital chains</td>
</tr>
<tr>
<td>Clinical trials</td>
<td>India offers both a huge patient pool, favourable regulatory environment and cost advantage for conducting clinical trials</td>
</tr>
<tr>
<td>Health insurance</td>
<td>Less than 25 per cent of the Indian population is covered by any kind of health insurance; this provides significant opportunity to a new player in the health insurance market</td>
</tr>
<tr>
<td>Telemedicine</td>
<td>Provides access to better quality healthcare in rural areas</td>
</tr>
<tr>
<td>Equipment</td>
<td>Huge untapped market of medical equipment in the country</td>
</tr>
</tbody>
</table>

SECTOR IS ATTRACTING LUCRATIVE M&A DEALS

* Pharma, healthcare and biotech have witnessed significant increases in M&A activities over the years; over the last three years, pharmaceuticals segment has accounted for more than 70 per cent of M&A deals

* In 2014, the M&A deal value in healthcare and pharmaceuticals stood at USD5.78 billion, an increase of more than 44.5 per cent compared to those in 2013

  * Total no of deals in 2014 was 65 as compared to 44 deals in 2013

  * Pharma, healthcare and biotech have witnessed USD5.78 billion of M&A deals in 2014

<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>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 and biotech</td>
<td>100.0</td>
<td>2013</td>
</tr>
<tr>
<td>Agila Specialities Pvt Ltd</td>
<td>Mylan, Inc</td>
<td>Pharma, healthcare and biotech</td>
<td>100.0</td>
<td>2013</td>
</tr>
<tr>
<td>Orchid Chemical and Pharmaceuticals</td>
<td>Hospira, Inc</td>
<td>Pharma, healthcare and biotech</td>
<td>-</td>
<td>2012</td>
</tr>
</tbody>
</table>

Source: Grant Thornton Dealtracker, 2014, TechSci research
Note: M&A – Mergers and Acquisitions
For updated information, please visit www.ibef.org
HEALTHCARE SECTOR, A HOT SPOT FOR PE INVESTORS

- Healthcare, pharma and biotech sector in India is attracting a number of PE investors; of total PE deals in India, healthcare, pharma and biotech accounted for 14 per cent deals in 2015 first quarter.
- About 50 PE deals were concluded in the healthcare sector in 2014, from 70 deals in 2013
- In 2014, the pharma, healthcare and biotech sector witnessed USD632 million of PE investment, marking a continuous uptrend in deal activity

<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>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>
<tr>
<td>Krishna Institute of Medical Sciences Limited</td>
<td>ICICI Venture</td>
<td>Healthcare Service</td>
<td>28%</td>
<td>2014</td>
</tr>
<tr>
<td>Aster DM Healthcare</td>
<td>Olympus Capital</td>
<td>Healthcare service</td>
<td>5%</td>
<td>2014</td>
</tr>
<tr>
<td>Torrent Pharma</td>
<td>Chrys Capital</td>
<td>Drug company</td>
<td>3%</td>
<td>2014</td>
</tr>
<tr>
<td>Fortis Healthcare Ltd</td>
<td>IFC</td>
<td>Hospital</td>
<td></td>
<td>2013</td>
</tr>
<tr>
<td>Apollo Hospital Enterprise</td>
<td>Oppenheimer Fund</td>
<td>Pharma, healthcare and biotech</td>
<td>-</td>
<td>2013</td>
</tr>
</tbody>
</table>

Source: Grant Thornton Dealtracker, 2014, TechSci research
Note: PE – Private Equity
### 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
- Investment of USD86 billion required to achieve these targets
- Over USD200 billion is expected to be spent on medical infrastructure by 2024

### 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) 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 poised to grow at 30 per cent annually into a USD1.79 billion business by end-2015
- By 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
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 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

* Additional 1.54 million doctors and 2.4 million nurses required to meet the growing demand

---

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></td>
<td>4.2%</td>
</tr>
</tbody>
</table>

---

Health infrastructure per 10,000 individual (2006 - 2013)

<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>7</td>
<td>17.1</td>
<td>7.0</td>
</tr>
<tr>
<td>World median</td>
<td>12.8</td>
<td>28.4</td>
<td>26</td>
</tr>
</tbody>
</table>

HEALTHCARE

OPPORTUNITIES IN HEALTH INSURANCE

- As per latest data, 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

Health insurance premium collection (USD billion)

<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>2.90</td>
</tr>
</tbody>
</table>

CAGR: 23.02%

- With increasing demand for affordable and quality healthcare, penetration of health insurance is poised to grow exponentially in the coming years
- Health insurance premium reached USD2.9 billion by the end of 2013
- Health insurance premiums are expected to increase at a CAGR of 23.02 per cent during 2008–14

Source: IRDA, Hospital Market India – By Research on India, LSI Financial Services, TechSci Research, World Bank
Note: IRDA – Insurance Regulatory and Development Authority

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SUCCESS STORIES
MAX HEALTHCARE: WELL POISED TO TAP GROWTH OPPORTUNITIES

- Award for ‘Excellence in Healthcare delivery’
- Received DL Shah National Award on ‘Economics of Quality’
- NABH certified
- NABL accredited

2000
Established first hospital Max Medcenter

2002
Organic growth through expansion of hospital network

2004
Strengthens capabilities to provide primary, secondary & tertiary/quaternary care

2006
Network of highly qualified doctors, nurses and medical personnel

2008
Further expansion in North India

2010
JV with Life Healthcare, South Africa, extending global reach

2011
Q32013
Registered patient base touched 2.4 million

2012
2014-15 USD2467.98 million revenue

2013
2015
2014
2013
2012
2011
2010
2008
2006
2004
2002
2000

2012
Opened its first Super Speciality hospital in Uttarakhand

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

Source: Company website, Company reports, TechSci Research

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AUGUST 2015
Global Hospitals: Set to Grow with Hospital Network Expansion

For updated information, please visit www.ibef.org

Source: Company website, Company reports, TechSci Research

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

AUGUST 2015
HEALTHCARE

FORTIS: LEADING THE WAY THROUGH DIVERSIFICATION

Source: Research on India, TechSci Research
Note: *Fortis Financial Report 2014-15

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HEALTHCARE

APOLLO HOSPITALS: LEADER IN SUPER-SPECIALITY HEALTHCARE

1983
150 beds

1983
1986
1989
1992
1995
1998
2002
2008
2012
2015

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

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 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

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Fax: 91 11 2337 9470, 2337 9178
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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
**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 (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(Expected)</td>
<td>60.28</td>
</tr>
</tbody>
</table>

### Exchange rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one USD</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(Expected)</td>
<td>61.03</td>
</tr>
</tbody>
</table>
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