

HEALTHCARE



AUGUST 2015

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HEALTHCARE



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EXECUTIVE SUMMARY

Sixth largest in the world

- India is expected to rank amongst the top three healthcare markets in terms of incremental growth by 2020
- India was the sixth largest market globally in terms of size in 2014

Impressive growth prospects

- 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

Strong fundamentals

- Rising income levels, ageing population, growing health awareness and 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, favorable government policies coupled with promising growth prospects have helped the industry attract private equity, venture capitals and foreign players

Source: Deloitte, TechSci Research

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



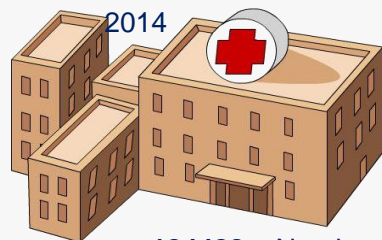
0.9

Hospitals Bed Per Thousand
Population till 2014



0.7

Physicians Per Thousand
Population till 2014



152326-
Number of Sub-
centers

184488 – Number of Hospitals
in India

3601 AYUSH Hospitals



2760 Blood Bank till
February, 2015



249 Eye Banks
till 2013

404 Medical Colleges for
MBBS till 2015

215 Private medical
colleges till 2015



189 Government medical
colleges till 2015

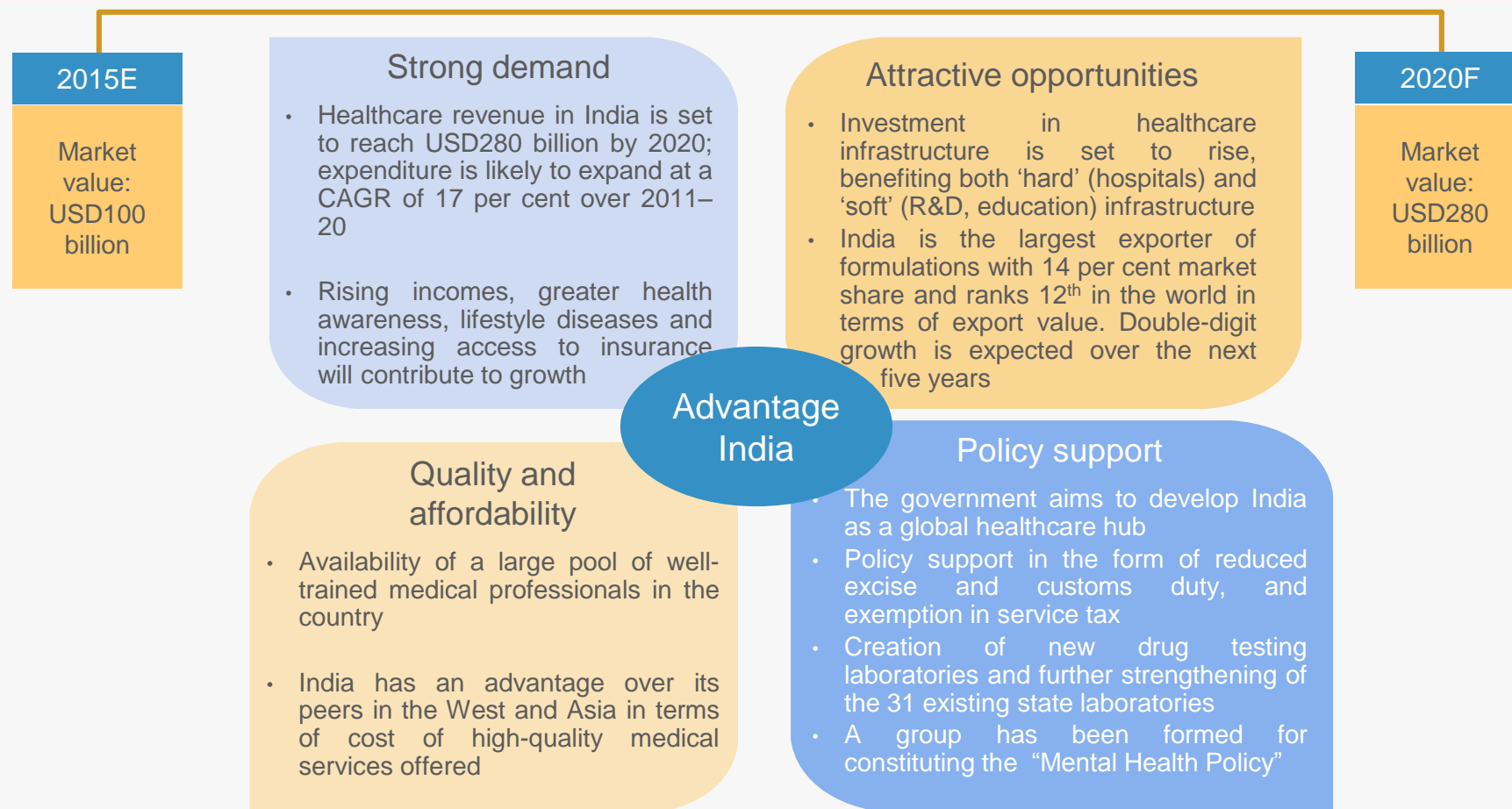
25346 Postgraduate students
per year till 2015

54348 Total Admission
capacity 2015

Source: WHO, IMH, Deloitte, TechSci Research



ADVANTAGE INDIA



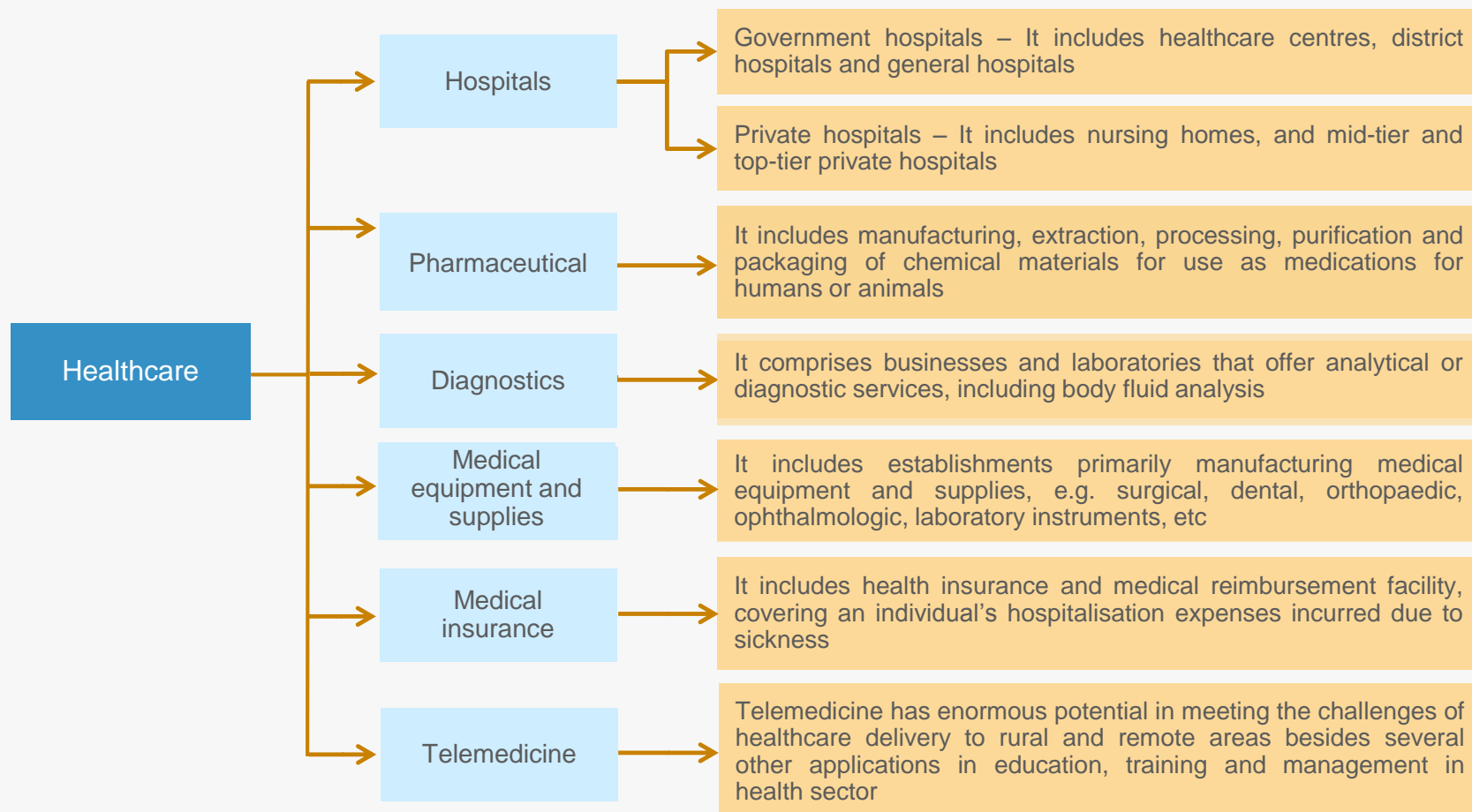
Source: KPMG, Deloitte, Hospital Market – India by Research on India, Frost & Sullivan, LSI Financial Services, 'Report on Healthcare, Telemedicine & Medical Tourism in India' - ASA & Associates LLP, TechSci Research

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



MARKET OVERVIEW AND TRENDS

THE HEALTHCARE MARKET FUNCTIONS THROUGH FIVE SEGMENTS

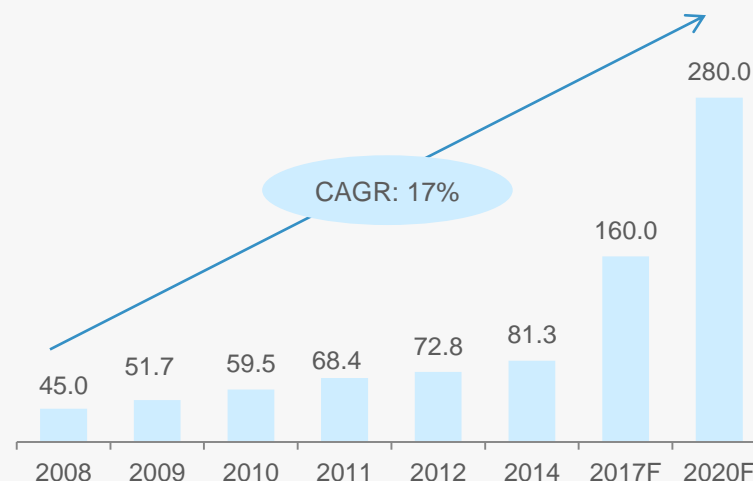


Source: Hospital Market – India by Research on India, TechSci Research

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 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)

Healthcare sector growth trend (USD billion)

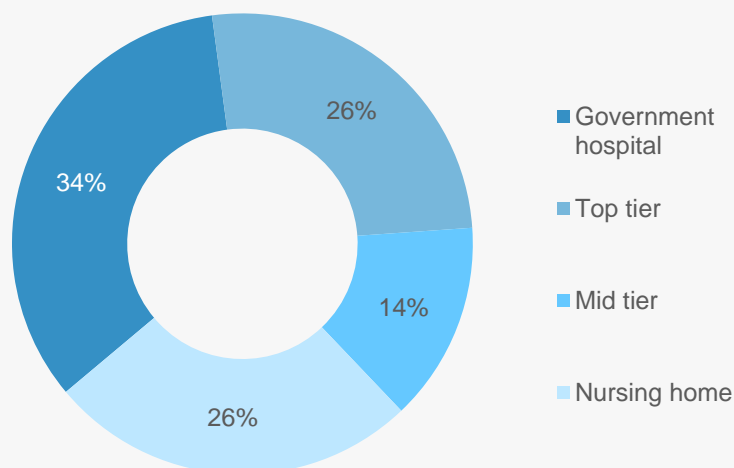


Source: Frost & Sullivan, LSI Financial Services,
Deloitte, TechSci Research
Notes: E - Estimate, F - Forecast

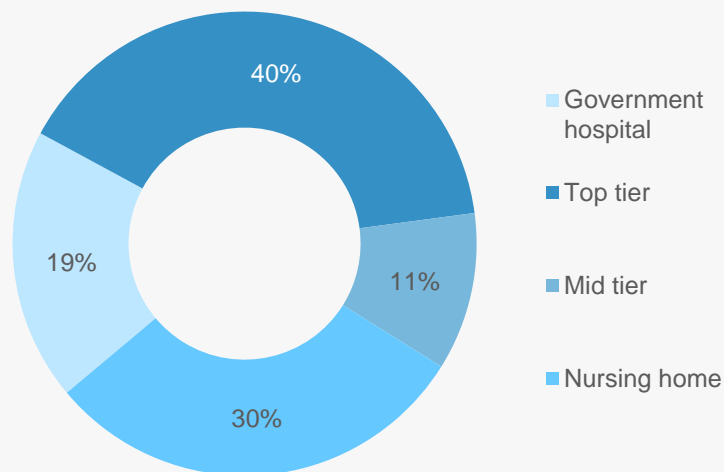
PRIVATE SECTOR HAS A STRONG PRESENCE IN INDIA'S HEALTHCARE SECTOR

- * The private sector has emerged as a vibrant force in India's healthcare industry, lending it both national 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

Shares in healthcare spending in India, 2005



Shares in healthcare spending in India, 2015

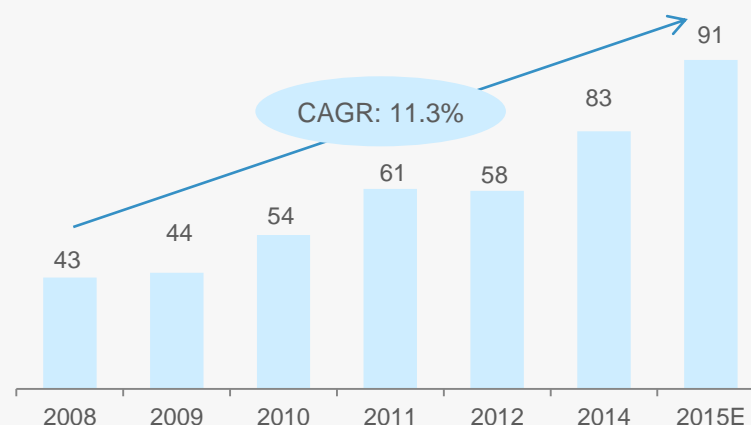


Source: A report on 'Indian Hospital Services Market Outlook' by consultancy RNCOS, Grant Thornton, LSI Financial Services, OECD, TechSci research

PER CAPITA HEALTHCARE EXPENDITURE HAS RISEN AT A FAST PACE








- * 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

Per-capita healthcare expenditure (USD)



Source: World Bank, BMI Report, TechSci Research
Notes: E - Estimates; 2015E - Estimates for 2015 (by BMI)

KEY PLAYERS IN THE MARKET

	Company	No of beds*	Presence
	Apollo Hospitals Enterprise Ltd	9,215	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, Bachel, Bellary, Goa, Lavasa, Nashik, Nellore, Trivannamalai, Trichi
	Aravind Eye Hospitals	3,649	Theni, Tirunelveli, Coimbatore, Puducherry, Madurai, Amethi, Kolkata, Dindigul, Tirupur, Salem, Tuticorin, Udumalpet
	CARE Hospitals	2,100	Hyderabad, Vijayawada, Nagpur, Raipur, Bhubaneswar, Surat, Pune, Visakhapatnam, Jabalpur, Raigarh
	Fortis Healthcare Ltd	10,000	Mumbai, Bengaluru, Kolkata, Mohali, Noida, Delhi, Amritsar, Raipur, Jaipur, Chennai, Kota, Faridabad, also the company present in Singapore, Dubai, Mauritius and Sri Lanka
	Max Hospitals	1,973	Delhi, NCR, Punjab, Uttarakhand
	Manipal Group of Hospitals	4,900	Udupi, Bengaluru, Manipal, Attavar, Mangalore, Goa, Tumkur, Vijaywada, Kasaragod, Visakhapatnam
	Narayana Health	6,498	Ahmedabad, Bengaluru, Berhampore, Davangere, Dharwad, Durgapur, Guwahati, Hyderabad, Jaipur, Jamshedpur, Kolar, Kolkata, Kuppam, Mahuva, Mysore, Raipur, Shimoga, Bellary, Palanpur

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

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

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NOTABLE TRENDS IN THE INDIAN HEALTHCARE SECTOR ... (1/2)

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

NOTABLE TRENDS IN THE INDIAN HEALTHCARE SECTOR ... (2/2)

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



PORTERS FIVE FORCES ANALYSIS

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



STRATEGIES ADOPTED

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 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

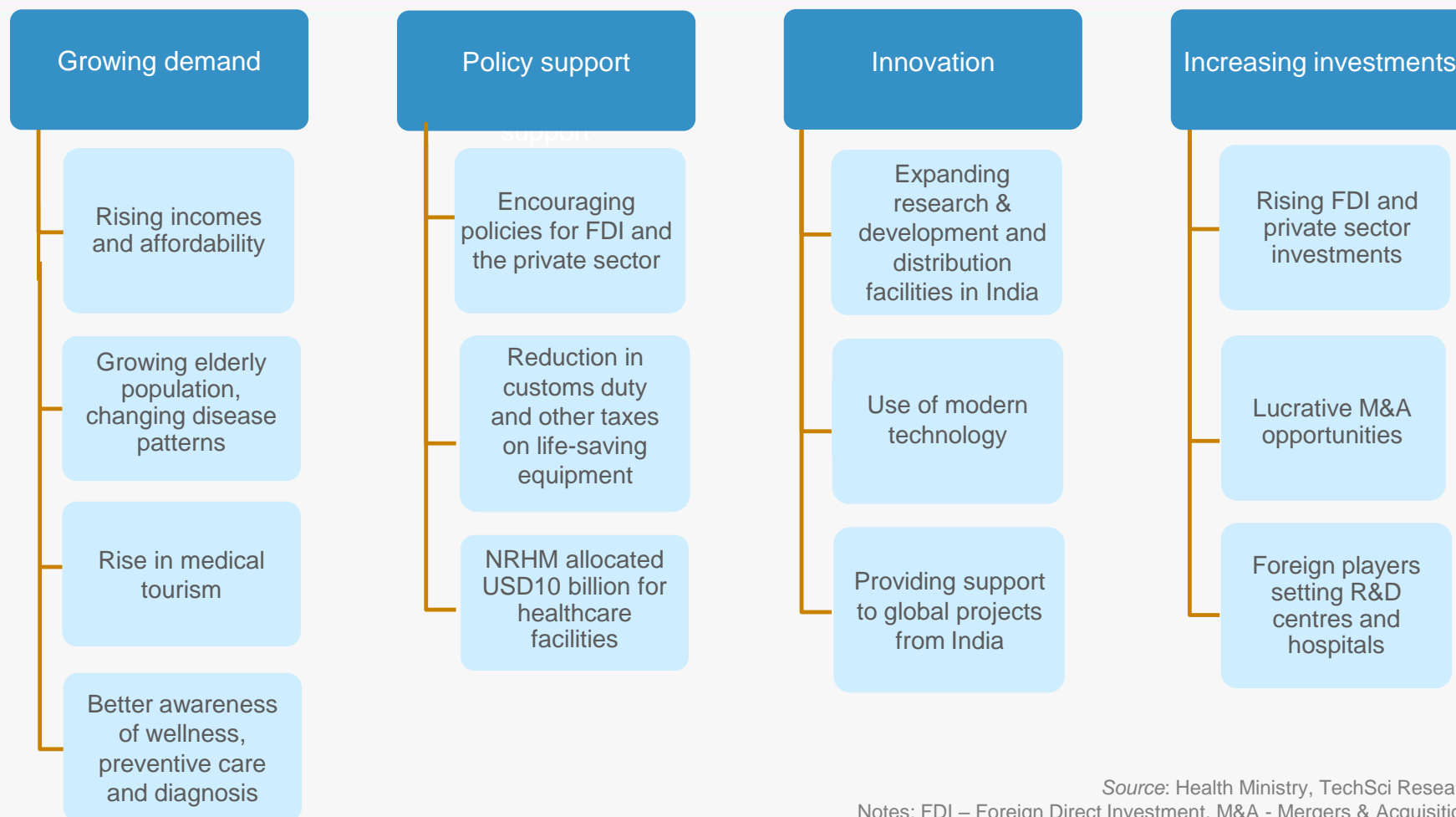
- Offering a range of healthcare and wellness services under a single brand has become a trend. Patients and healthcare services seekers find it convenient. Demand of such arrangements boosts the healthcare sector

Source: TechSci Research



GROWTH DRIVERS

INDIAN HEALTHCARE SECTOR IS POISED TO GROW



Source: Health Ministry, TechSci Research

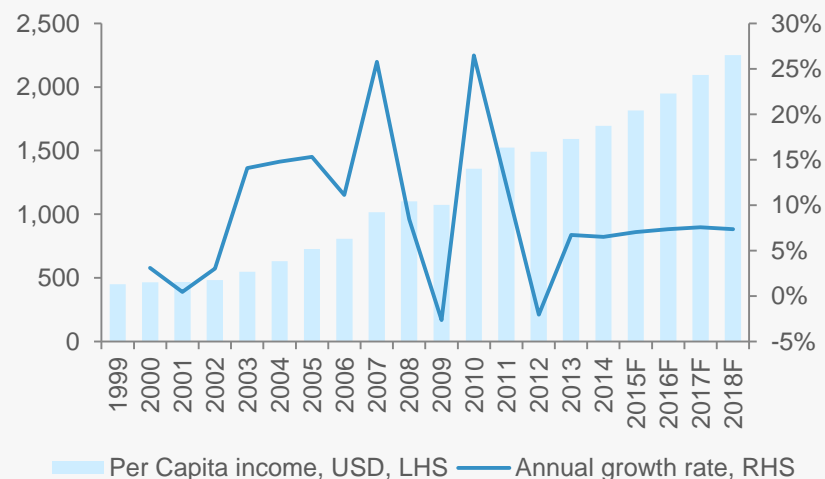
Notes: FDI – Foreign Direct Investment, M&A - Mergers & Acquisitions

NRHM - National Rural Health Mission

RIISING 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

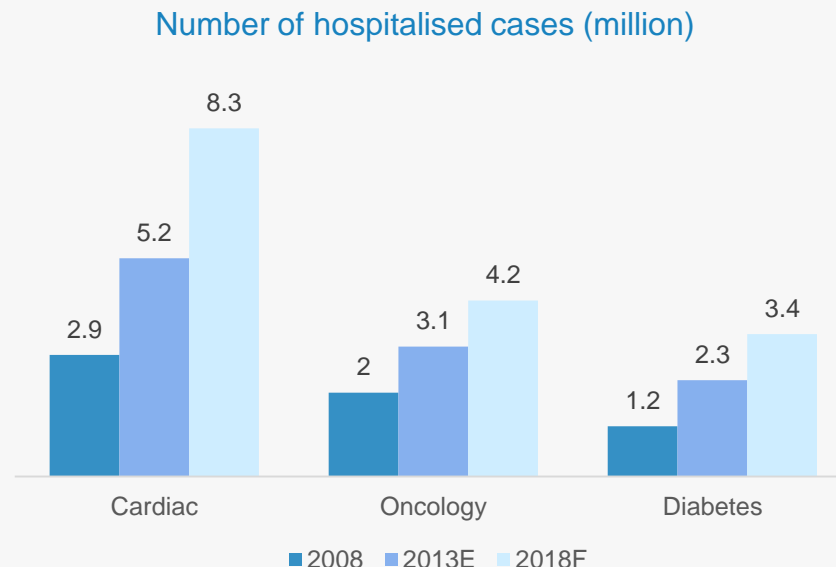
Trends in per capita income in India (USD)



Source: IMF, World Bank Data,
Population Reference Bureau, TechSci Research
Note: F – Forecasts

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

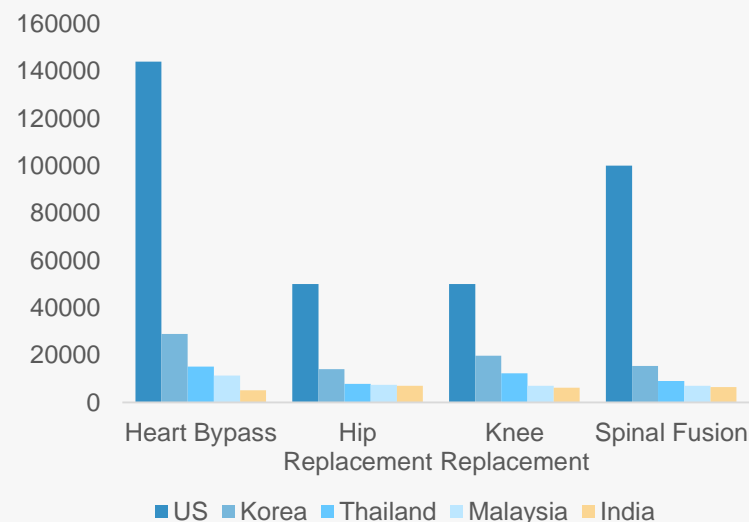


Source: Apollo Investor Presentation August 2013,
TechSci Research
Note: F - Forecast

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 USD1.79 billion in 2015 from USD980 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

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 this is expected to rise at a CAGR of 20 per cent over 2011–15

Services offered

- 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

- 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

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

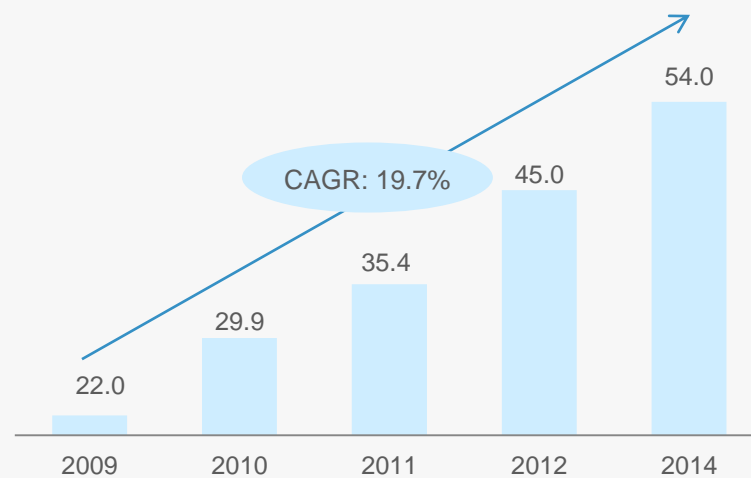
- In 2014, country has developed vast AYUSH infrastructure comprising of 686,319 registered practitioners, 26,107 dispensaries and 3,167 hospitals in public sector, 652 colleges/ institutes for undergraduate/post graduate education and 7,000 licensed drug manufacturing units

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

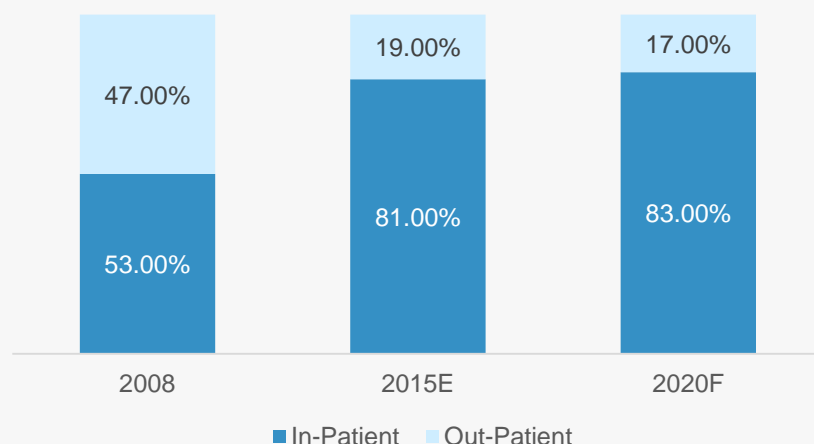
Market size of private hospitals (USD billion)



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

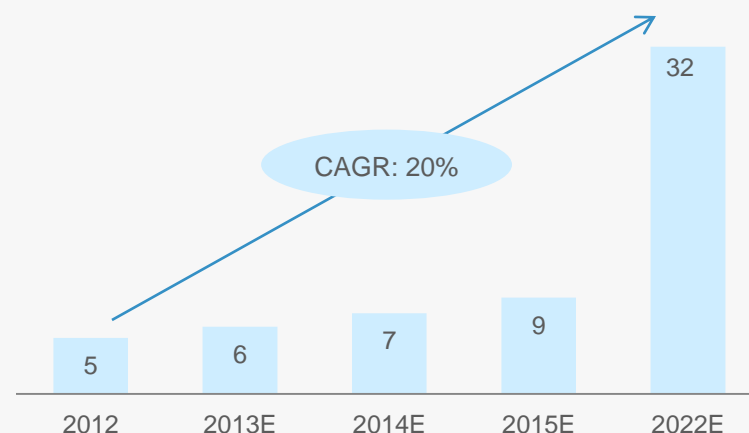
GROWING IN-PATIENT / OUT-PATIENT AND DIAGNOSTIC MARKET

Market size of In-patient/Out-patient



- ✳ 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

Market size of diagnostic market (USD billion)



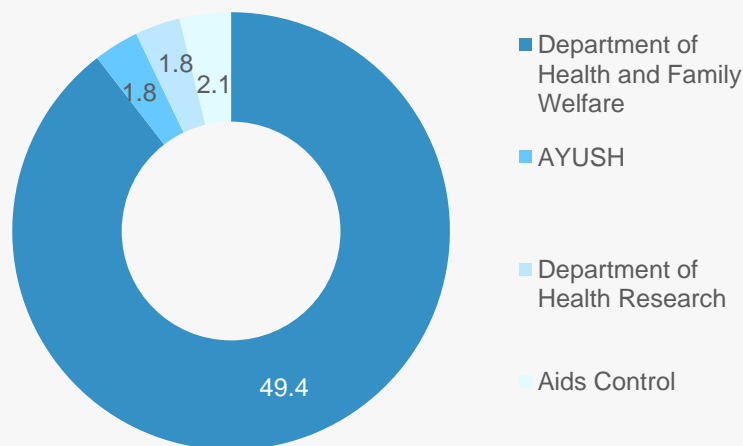
- ✳ Over 2012-22, diagnostic market is expected to grow at CAGR of 20 per cent to USD32 billion from USD5 billion in 2012
- ✳ Sub-sector of diagnostic, IVD Equipment market is expected to grow at a CAGR of around 15 per cent from 2012 to 2015
- ✳ Diagnostic market is split between Imaging and pathology with 30 per cent and 70 per cent share respectively

Source: Apollo Investor Presentation, Apollo Hospitals Annual Report 2015, Fortis Investor Presentation, TechSci Research
Notes: E - Estimates, IVD - In Vitro Diagnostic

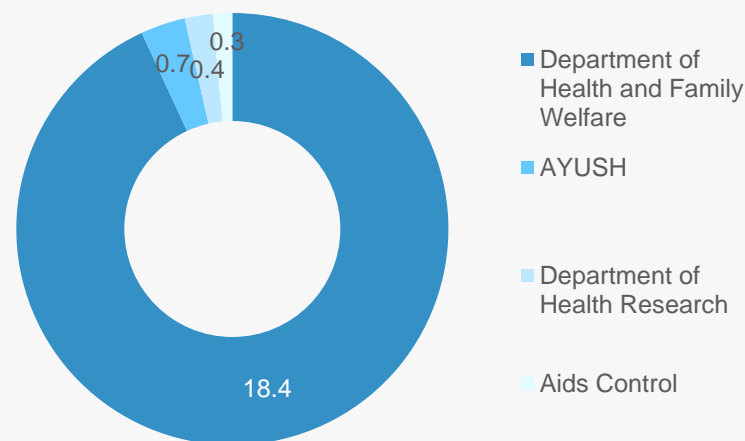
HEALTHCARE IS A KEY FOCUS AREA UNDER THE 12TH FIVE-YEAR PLAN (2012–17)

- * 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 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)



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



Source: Planning Commission, Ministry of Health & Family Welfare, TechSci Research
Notes: AYUSH - Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy

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

STRONG POLICY SUPPORT CRUCIAL IN DEVELOPING THE SECTOR ... (2/3)

National Health Policy 2015 Draft

- 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 in the medical travel industry

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

Source: Ministry of Health & Family Welfare, TechSci Research

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

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

Laboratories

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

Union Budget FY2015-16

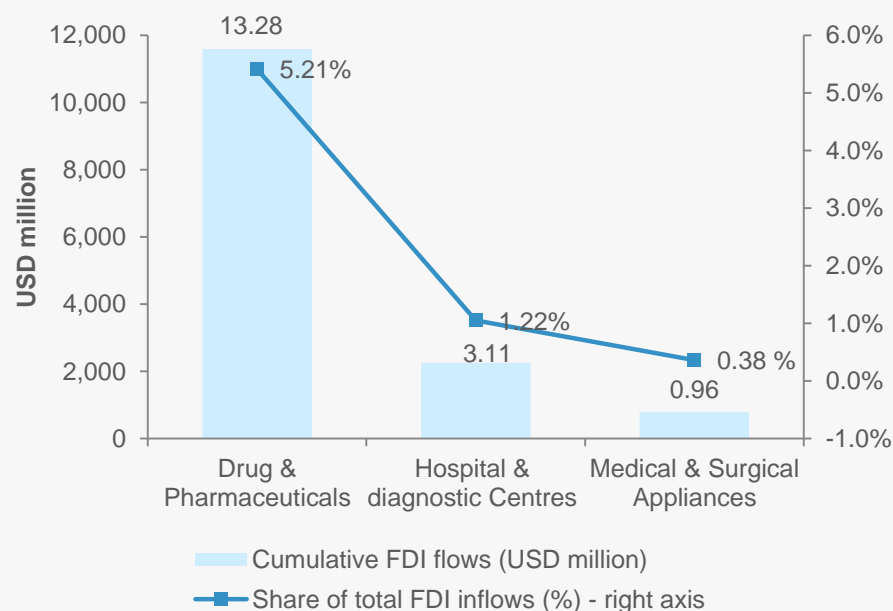
- Ministry of Health and Family Welfare allocated USD5.5 billion for FY16, decrease by 11 per cent from FY14
- Creation of new National Health Mission (NHM) for providing effective healthcare to both urban and rural population, with emphasis on states with weak health infrastructure and indicators
- 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

Source: Union Budget FY16, TechSci 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 – 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

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



Source: Department of Industrial Policy & Promotion, TechSci Research
 Note: FDI – Foreign Direct Investment

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	
Diagnostic & pathology services	High cost differential in India allows for outsourcing of pathology and laboratory tests by foreign hospital chains
Clinical trials	India offers both a huge patient pool, favourable regulatory environment and cost advantage for conducting clinical trials
Health insurance	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
Telemedicine	Provides access to better quality healthcare in rural areas
Equipment	Huge untapped market of medical equipment in the country

Source: Healthcare Outlook "A Quarterly Report by Technopak" Feb 2007, World Bank, TechSci Research

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

Indian partner	Foreign players	Type of business	Stake (%)	Year
Panacea Biotech Ltd	Apotex Inc	Pharmaceutical	-	2014
Lupin Pharmaceutical Inc	Grin	Pharma, healthcare and biotech	-	2014
Medreich Ltd.	Meiji Seika Pharma	Pharmaceutical	100%	2014
Wyeth Ltd	Pfizer Ltd	Pharma, healthcare and biotech	-	2013
Torrent Pharmaceuticals	Elder Pharmaceuticals	Pharma, healthcare and biotech	100.0	2013
Agila Specialities Pvt Ltd	Mylan, Inc	Pharma, healthcare and biotech	100.0	2013
Orchid Chemical and Pharmaceuticals	Hospira, Inc	Pharma, healthcare and biotech	-	2012

Source: Grant Thornton Dealtracker, 2014, TechSci research
Note: M&A – Mergers and Acquisitions

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

Investee	Investor	Type of business	Stake (%)	Year
Nova Specialty Hospitals	Apollo Hospitals	Healthcare service	-	2015
Laurus Labs Pvt. Ltd.	Warburg Pincus	Pharma & Healthcare	32%	2014
Krishna Institute of Medical Sciences Limited	ICICI Venture	Healthcare Service	28%	2014
Aster DM Healthcare	Olympus Capital	Healthcare service	5%	2014
Torrent Pharma	Chrys Capital	Drug company	3%	2014
Fortis Healthcare Ltd	IFC	Hospital		2013
Apollo Hospital Enterprise	Oppenheimer Fund	Pharma, healthcare and biotech	-	2013

Source: Grant Thornton Dealtracker, 2014, TechSci research
Note: PE – Private Equity



OPPORTUNITIES

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 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

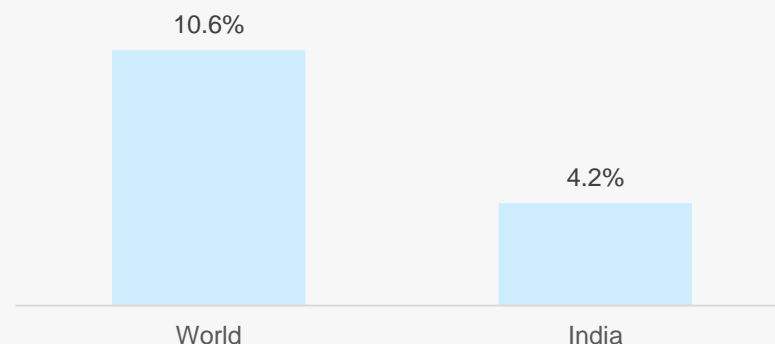
- The Indian medical tourism industry is poised to grow at 30 per cent annually into a USD1.79 billion business by end-2015
- By 2015, India is likely to see 3.2 million medical tourists annually
- Cost of surgery in India is nearly one-tenth of the cost in developed countries
- There are 21 Joint Commission International (JCI) - accredited hospitals in India and growing

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

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)



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

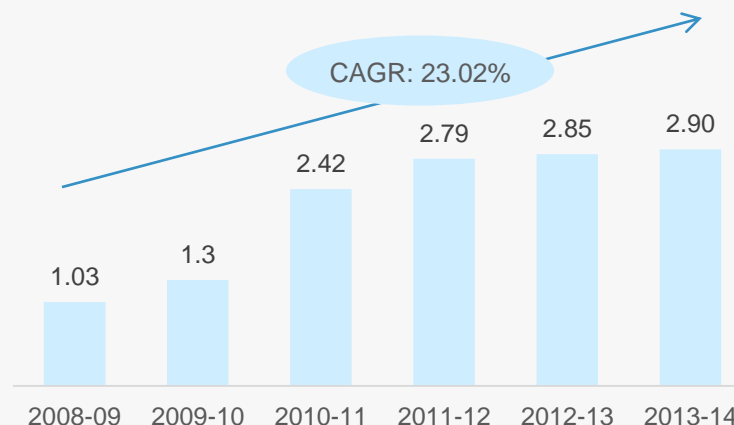
	Physicians	Nurses and midwifery personnel	Hospital beds
India	7	17.1	7.0
World median	12.8	28.4	26

Source: WHO World Health Statistics 2014, E&Y, LSI Financial Services, Fortis Investor Presentation, TechSci Research

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)



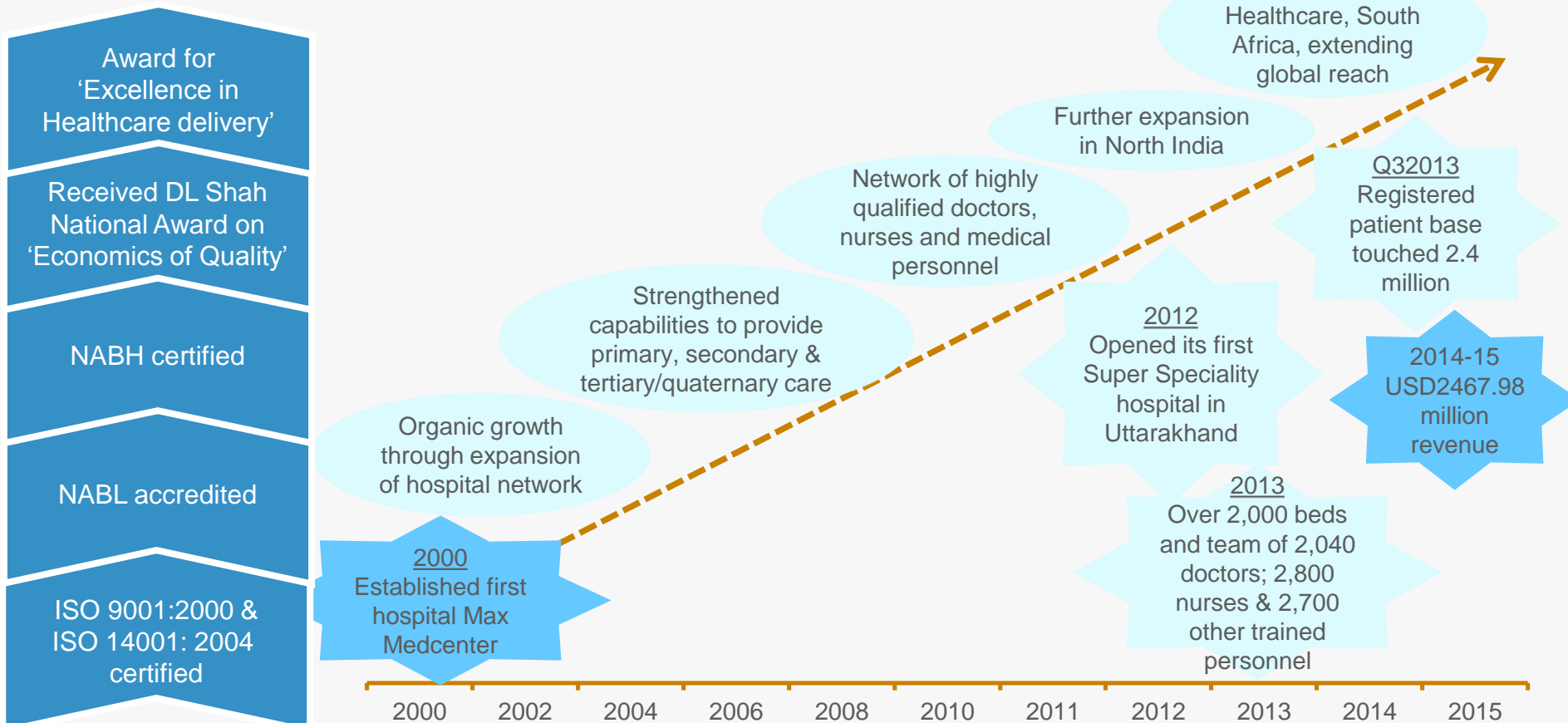
- With increasing demand for affordable and quality healthcare, penetration of health insurance is poised to grow exponentially in the coming years
- Health insurance premium reached USD2.9 billion by the end of 2013
- Health insurance premiums are expected to increase at a CAGR of 23.02 per cent during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



SUCCESS STORIES

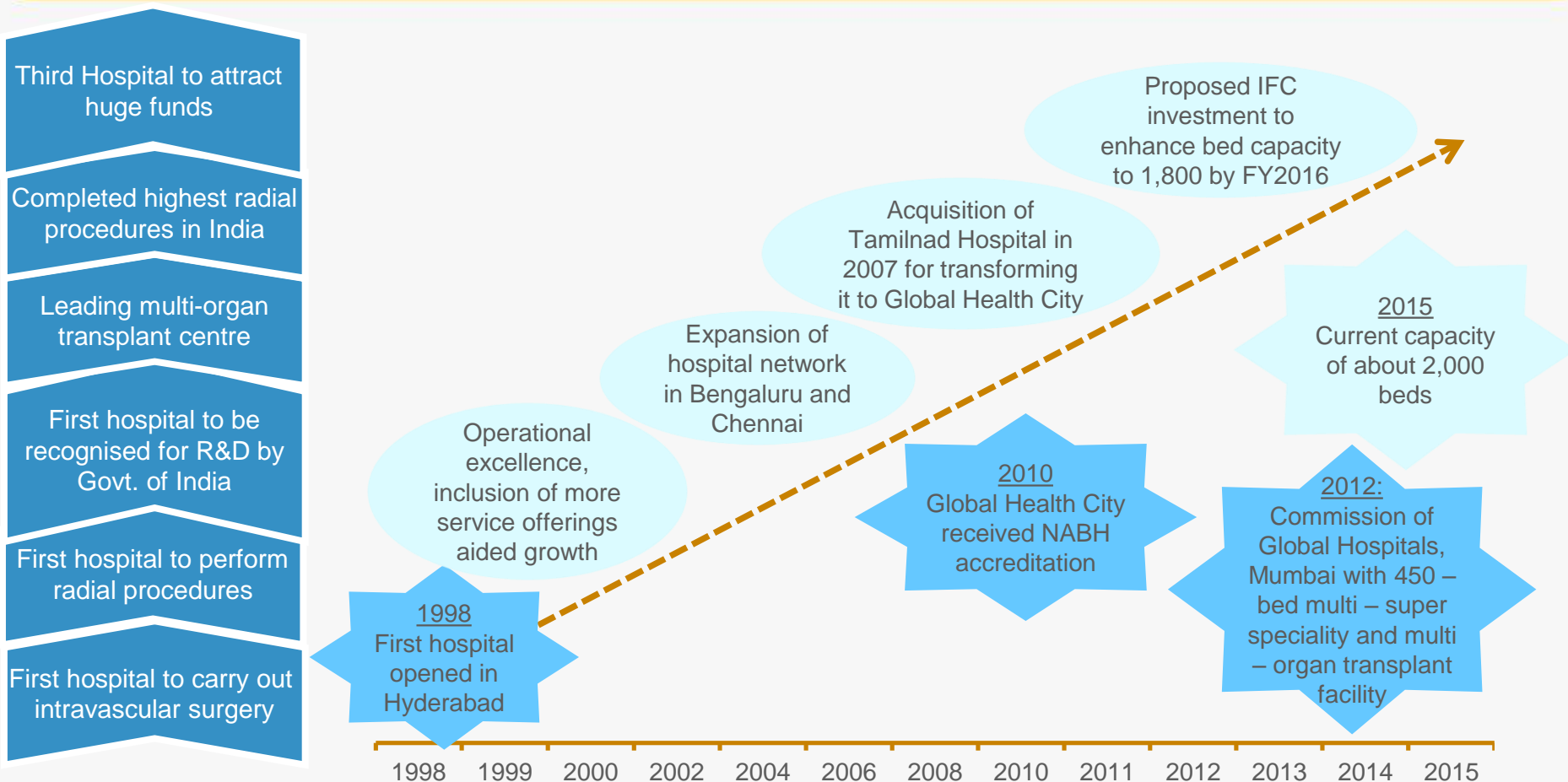
MAX HEALTHCARE: WELL POISED TO TAP GROWTH OPPORTUNITIES



Source: Company website, Company reports, TechSci Research

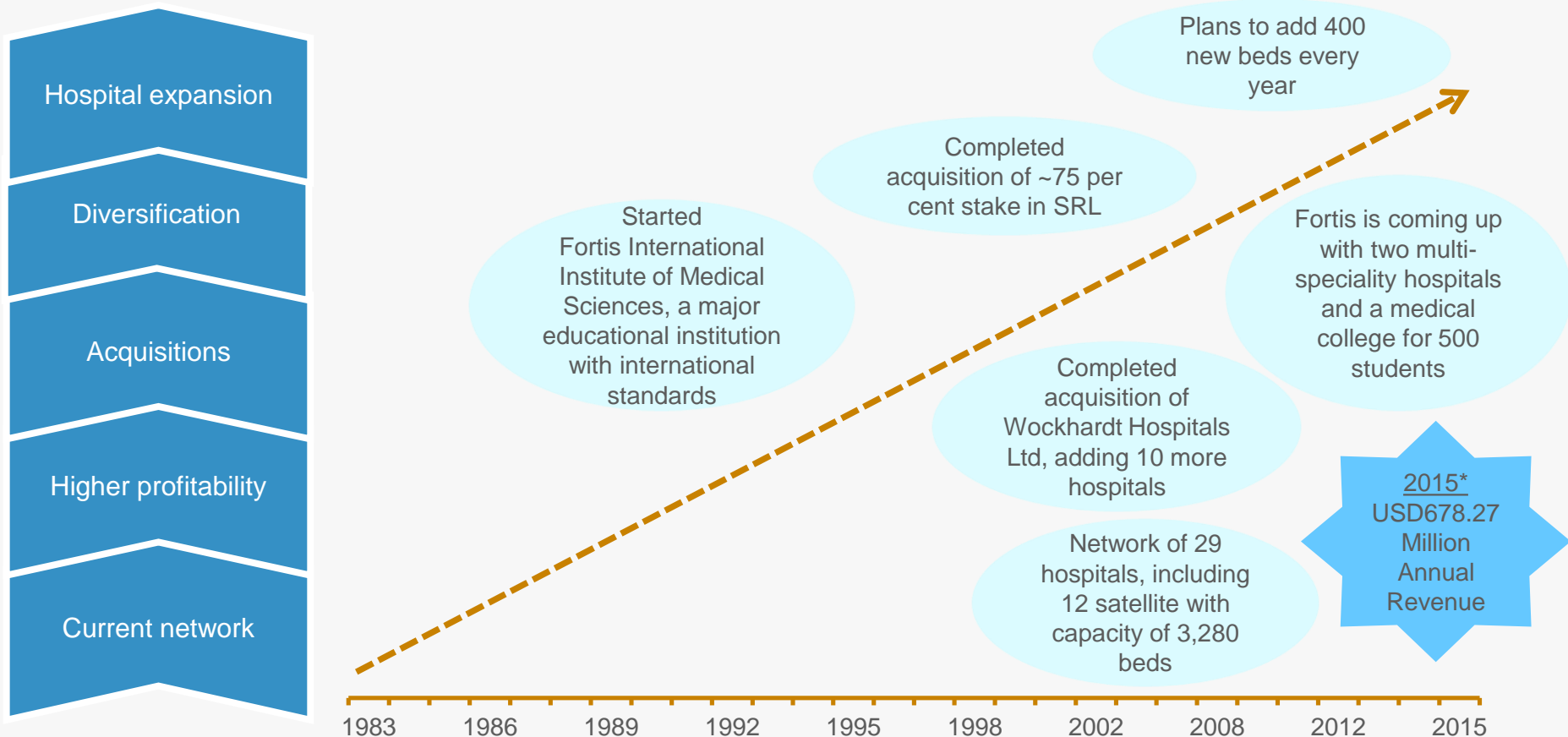
Notes: JV – Joint Venture; NABH - National Accreditation Board for Hospitals & Healthcare, NABL - National Accreditation Board for Testing & Calibration Laboratories, ISO – International Organisation for Standardisation

GLOBAL HOSPITALS: SET TO GROW WITH HOSPITAL NETWORK EXPANSION



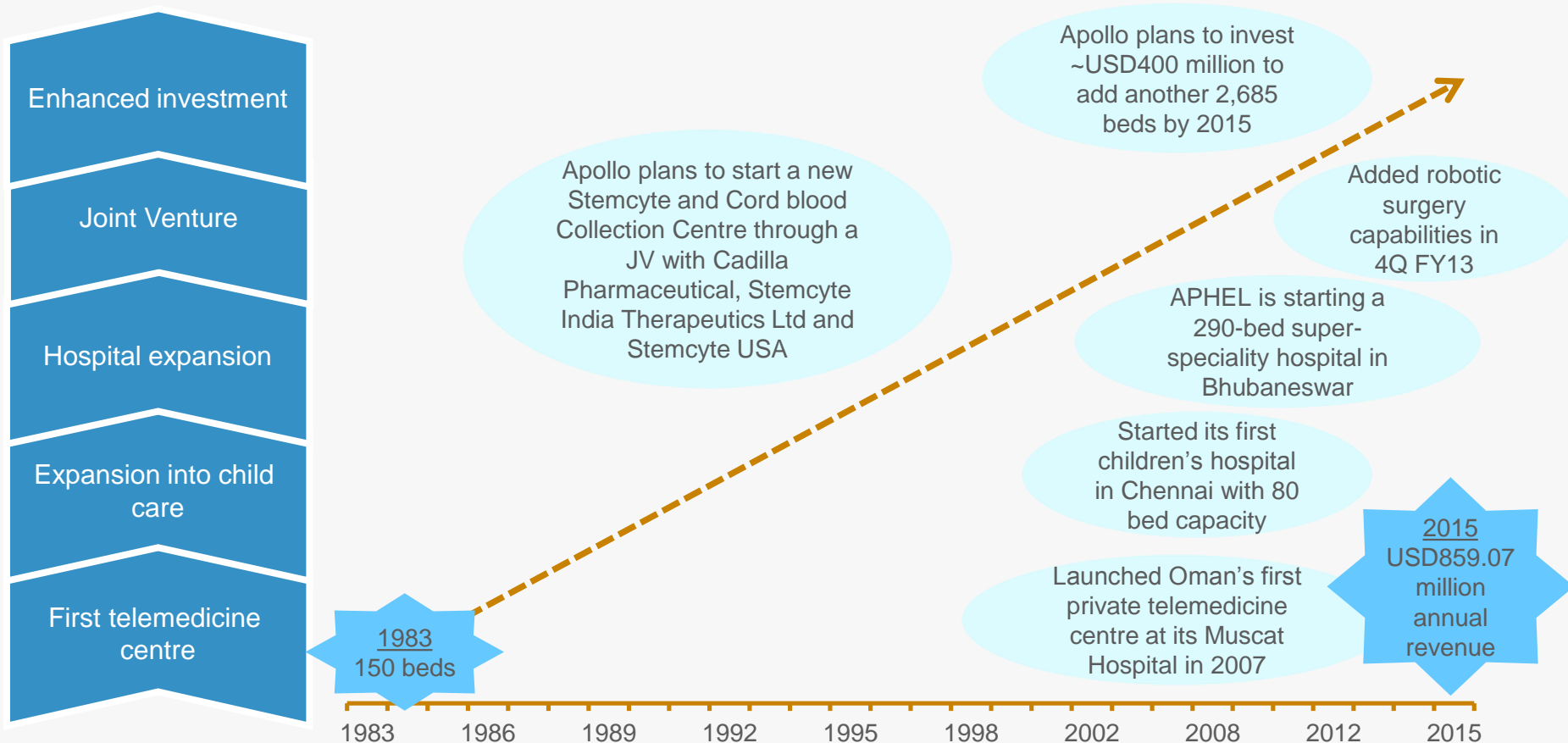
Source: Company website, Company reports, TechSci Research
Note: IFC - International Finance Corporation, NABH - National Accreditation Board for Hospitals & Healthcare, R&D - Research & Development

FORTIS: LEADING THE WAY THROUGH DIVERSIFICATION



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

APOLLO HOSPITALS: LEADER IN SUPER-SPECIALITY HEALTHCARE



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



USEFUL INFORMATION

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

GLOSSARY ... (1/2)

- * **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)

Year	INR equivalent of one USD
2004–05	44.81
2005–06	44.14
2006–07	45.14
2007–08	40.27
2008–09	46.14
2009–10	47.42
2010–11	45.62
2011–12	46.88
2012–13	54.31
2013–14	60.28
2014-15(Expected)	60.28

Exchange rates (Calendar Year)

Year	INR equivalent of one USD
2005	43.98
2006	45.18
2007	41.34
2008	43.62
2009	48.42
2010	45.72
2011	46.85
2012	53.46
2013	58.44
2014	61.03
2015(Expected)	61.03

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