



# HEALTHCARE

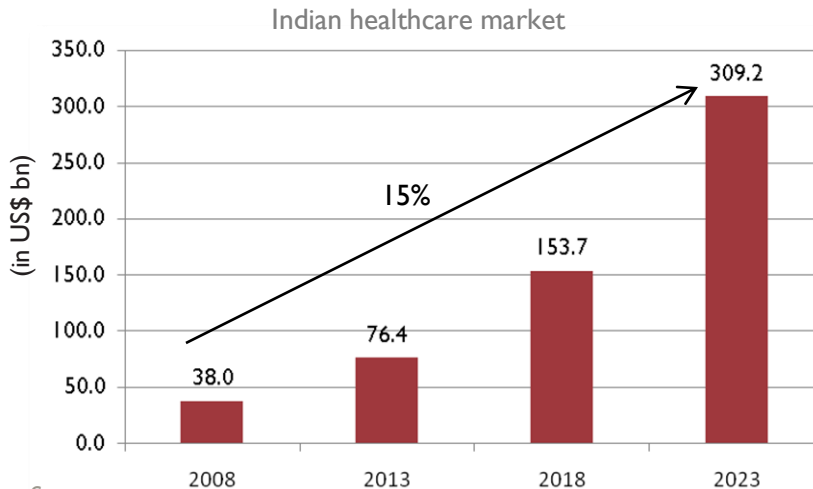
September 2009

## The focus of this presentation is to discuss...

- ❖ Market overview
- ❖ Policy initiatives
- ❖ Key trends and drivers
- ❖ Key players
- ❖ Key opportunities

## Indian healthcare, a US\$ 38 billion market

- Indian healthcare market estimated to touch US\$ 77 billion by 2013<sup>1</sup>
- Healthcare industry accounted for 5.1 per cent of the country's GDP in 2006<sup>2</sup>
- Private healthcare to form a large share of the healthcare spend, and would increase to US\$ 33.6 billion in 2010 from US\$ 14.8 billion in 2002<sup>3</sup>
- Share of private expenditure as a percentage of total expenditure on healthcare has grown from 60 per cent to nearly 80 per cent over the last decade.



Sources:

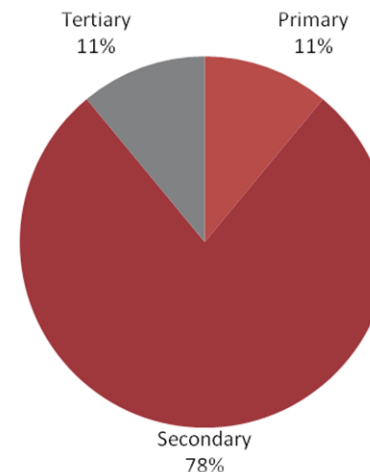
- 1: Ten industry trends 2009, Technopak healthcare outlook, 2009, p. 1
- 2: *Fostering quality healthcare for all*, Ernst & Young, 2008
- 3: Ministry of External Affairs

- Sector estimated at about US\$ 38 billion and expected to grow at a compound annual growth rate (CAGR) of 15 per cent for the next 15 years
- Expected to rise to US\$ 77 billion in 2013 at a CAGR of 15 per cent
- Expected to generate employment opportunities for nine million people by 2012

## Healthcare market — growth perspective

- Share of tertiary care in the total healthcare market is around 11 per cent.
- Market for tertiary care is expected to grow at a faster rate, due to rise in complex ailments such as heart diseases and cancer.
- The per capita healthcare expenditure in India grew by 9.3 per cent between the years 1993-94 and 2001-02.
- After the economic reforms in 1986, public health expenditure has remained more or less stagnant between 0.9 per cent to 1.2 per cent of GDP
- With rise in income levels and increasing adoption of health insurance, the demand for tertiary care is expected to grow.
- During 2006-2011, the average annual growth in health expenditure by the BRIC countries is estimated at 11 per cent. It is expected to touch US\$ 413 billion by 2011.

Healthcare infrastructure in 2008



Source: Fostering quality healthcare for all, Ernst & Young, 2008

## Medical infrastructure in India

- India has 0.7 beds per thousand patients as against a world average of 2.6<sup>1</sup>
- Bed to thousand-population ratio of 1.85 is likely to be reached by 2012.
- Most private hospitals operate as a proprietorship or partnership business.
- Corporate Hospitals account for approximately 10 per cent of total private ownership.
- Use of technologically advanced diagnostic equipments and excellent infrastructure are making India a medical value travel hub.

### Special economic zones

- Under the SEZ (Special Economic Zone) Act 2005, 'Healthcare' has been defined as an approved service under the SEZ act.
- For a sector specific zone, a hospital with minimum bed strength of 25 is stipulated; for a multi-product SEZ, it goes up to 100 beds.
- With the latest approvals given by an inter-ministerial Board of Approval, the total number of formally approved SEZ now stands at 395, of which, 154 have been notified by the Law Ministry.

Source: 1,2: Fostering quality healthcare for all, Ernst & Young, 2008; Ernst & Young analysis

Public Healthcare Infrastructure	
Primary health centres (PHCs) <sup>2</sup>	22,669
Community health centres (CHCs) <sup>2</sup>	3190
District hospitals (DH)	4,400
State-owned hospitals	1,200

Source: India Chronicle: 2007, *Fostering quality healthcare for all*, Ernst & Young, 2008

## Medical education and workforce— India's advantage

### Workforce statistics

- Number of Doctors<sup>1</sup> - 688,000
- Number of Nurses<sup>1</sup> - 14,62,000

### Medical education

- 229 recognised medical colleges, of which 106 established through the private route
- 25,000 medical graduates pass out each year
- 136 medical schools admit more than 6,000 PG trainees in their programmes

### Medical institutions pan India

- Density of registered doctors and nurses in India is 1.9 per '000 population, which is less than half of the world average of 4.1 and lower even when compared to global norms(5) as well as the norm of 2.25 set by NCMH.
- The number of non-allopathic doctors in India is slightly more than the number of allopathic doctors.
- Ayurvedic doctors are almost 63 per cent of AYUSH doctors (practitioners of Ayurvedic, Unani, Siddha and Homeopathy systems of medicine).
- General Practitioners constitute almost 90 per cent of total doctors.

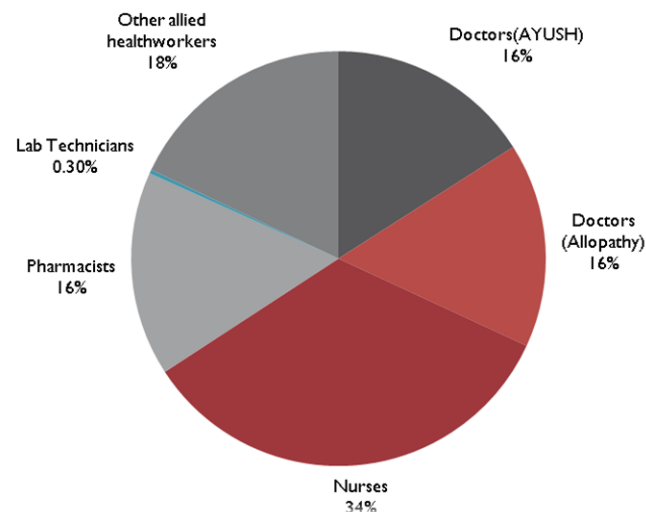
Source: 1: Fostering quality healthcare for all, Ernst & Young, 2008; Ernst & Young analysis

## Medical education and workforce— India’s advantage

### Indian system of medicine : Gaining national acceptance

- Provision and practice of alternative medicine like ayurveda, pranic healing, aromatherapy, music therapy, meditation and yoga
- Russia, US, Japan, Australia, Netherlands, South Africa, Argentina, UK, France and Italy have accepted ayurveda as a medical system and have expressed interest in the ayurveda curriculum and research

Composition of India’s human resources for health



Source: Global atlas of the health workforce [online database]. Geneva, World Health Organization, 2008. Period of data is 2000-2006.

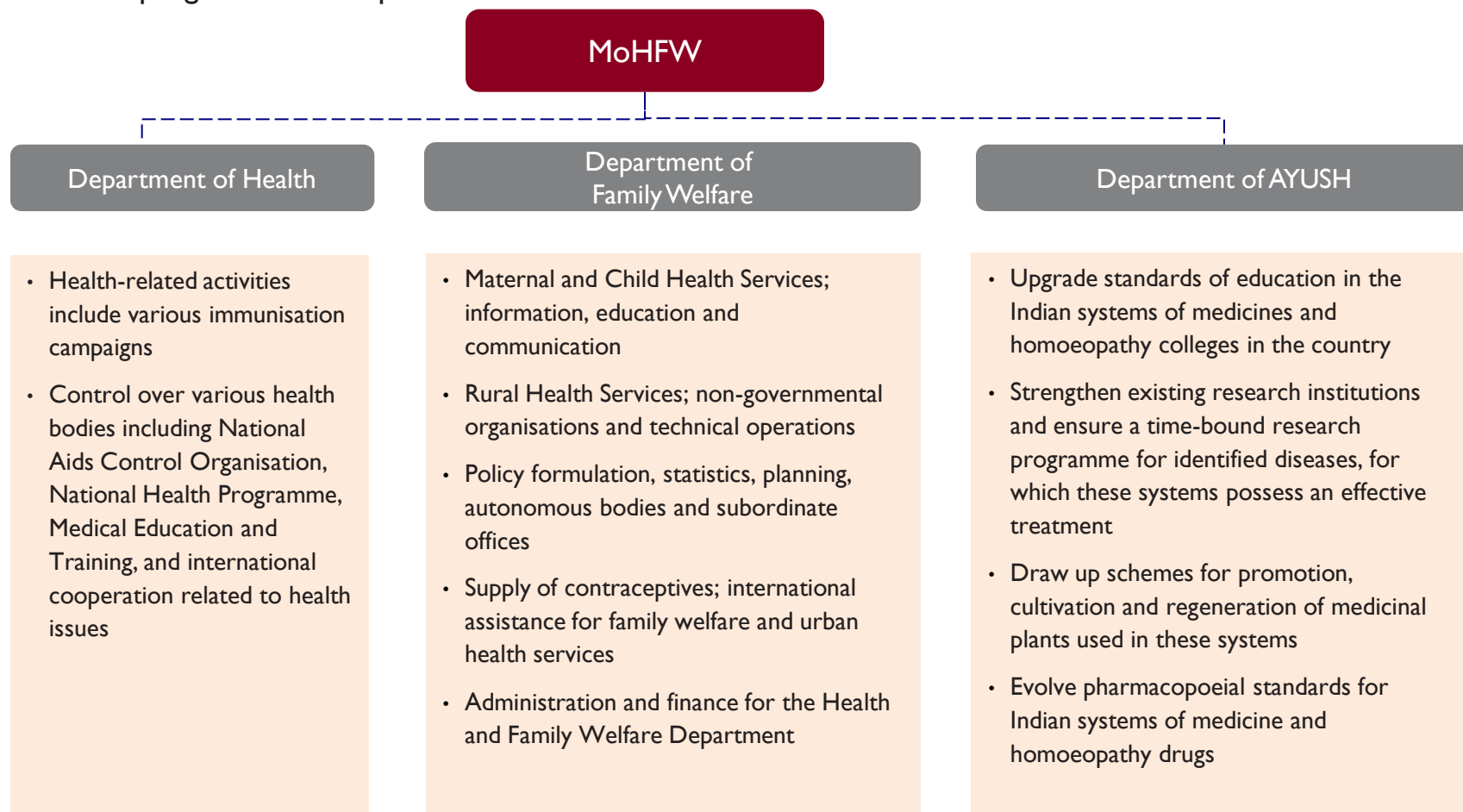
Numbers for ‘other allied health workers’ are for the year 2004

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## Regulatory framework

- The Union Ministry of Health and Family Welfare (MoHFW) is responsible for the implementation of national programmes and sponsored schemes on healthcare as well as technical assistance.



## National Rural Health Mission (NRHM)

- Launched in April 2005 by the Government of India, NRHM aims to fulfill the government's commitment to meet people's aspirations for better health and access to healthcare services.
- NRHM's ambitious goals include training 250,000 women volunteers designated as Accredited Social Health Activists (ASHAs) over the next three years across the 18 states that have weak rural health infrastructure.
- A task force has been constituted by the Union Ministry of Health to revise and restructure the existing MBBS curriculum keeping in mind the needs of NRHM. The task force has developed a discipline-based draft with emphasis on necessary internship in rural areas.

### Progress Under NRHM

- Currently, over 6.96 lakh trained ASHAs working actively in the field to connect households with health facilities. 4.50 lakh ASHAs have drug kits as well.
- 4.02 lakh Village Health and Sanitation Committees constituted and untied funds made available to them for local public health action.
- 1.45 lakh Health Sub Centres made more effective through utilisation of untied funds, availability of drugs and addition of 39,633 Auxiliary Nurse Midwives (ANM) on contract.
- 7,438 PHCs which function 24 hours as against 1,263 before implementation of NRHM, with provision of drugs, untied grants, maintenance grants and Rogi Kalyan Samiti (RKS) grants.

Source: Four years of NHRM, Ministry of Health and Family Welfare, May 2009, p. 23

## Progress under NHRM

- 6,906 MBBS Doctors, 5,321 AYUSH doctors, 5,428 other paramedic staff, 3 staff nurses in 5,806 PHCs. 2,266 specialists taken on contract, upgradation of physical infrastructure completed in 722 CHCs.
- 23,100 Rogi Kalyan Samitis established in DHs, CHCs, PHCs.
- 565 Integrated District Health Action Plans completed.
- Community monitoring initiative in partnership with NGOs in nine states undertaken.
- 304 districts have functional Mobile Medical Units.
- Coverage under the 'Full immunization in United Nations Children's Fund's (UNICEF) Coverage Evaluation Survey 2006' — 62.4 per cent
- Innovative partnerships with the non-governmental sector for delivery of quality health services such as institutional delivery, diagnostics, etc.
- Increase in out-patient, in-patient, institutional delivery, family planning services and immunisation reported from most states/union territories.

## Progress under NHRM

- Nutrition initiatives under NRHM in MP, AP, West Bengal, Gujarat, Bihar, etc.
- School health programmes initiated in more than 20 states.
- Co location of AYUSH in 7,244 PHCs/CHCs/District Hospitals and others. Nearly 13.76 million Village Health and Nutrition Days held over the last three years to provide immunisation, maternal, child and other public health related services at the Aanganwadi Centre.

*Source:* "Four years of NHRM," Ministry of Health and Family Welfare, May 2009, p. 23

## National Health Policy 2002

- The National Health Policy 2002 focuses on the need for enhanced funding and organisational restructuring of the national public health initiatives in order to facilitate more equitable access to health facilities.
- It focuses on those diseases that are principally contributing to the disease burden - TB, malaria and blindness from the category of historical diseases; and HIV/AIDS from the category of newly emerging diseases.
- This policy aims at achieving gradual convergence of health under a single field administration and lays emphasis on implementation of programmes through local self-government institutions.
- It also aims at identification of specific programmes targeted at women's health and strengthening of food and drug administration, in terms of both laboratory facilities and technical expertise.
- Under this policy, greater contribution from the Central Budget for the delivery of public health services at the state level is proposed.

## Budget 2009–2010: healthcare perspective

- The government has provided considerable support to the healthcare industry through the 2009-10 budget.
- All Below Poverty Line (BPL) families to be covered under Rashtriya Swasthya Bima Yojana (RSBY).
- Allocation under RSBY increased by 40 per cent over previous allocation to US\$ 74 million in B.E. 2009-10.
- The government has announced several measures which will have a positive impact on the sector such as:
  - 150 per cent reduction in R&D outsourcing expenditure would encourage higher research spend and improve competitiveness of outsourcing players
  - Allocation under National Rural Health Mission (NRHM) proposed to be increased by US\$ 431 million over and above US\$ 2.53 billion provided in the Interim Budget.

Source:

India Budget 2009, Ernst & Young 2009;

Budget 2009–2010” *India budget website*, <http://indiabudget.nic.in/>, accessed 24

September 2009

Note

B.E. : Budget estimates

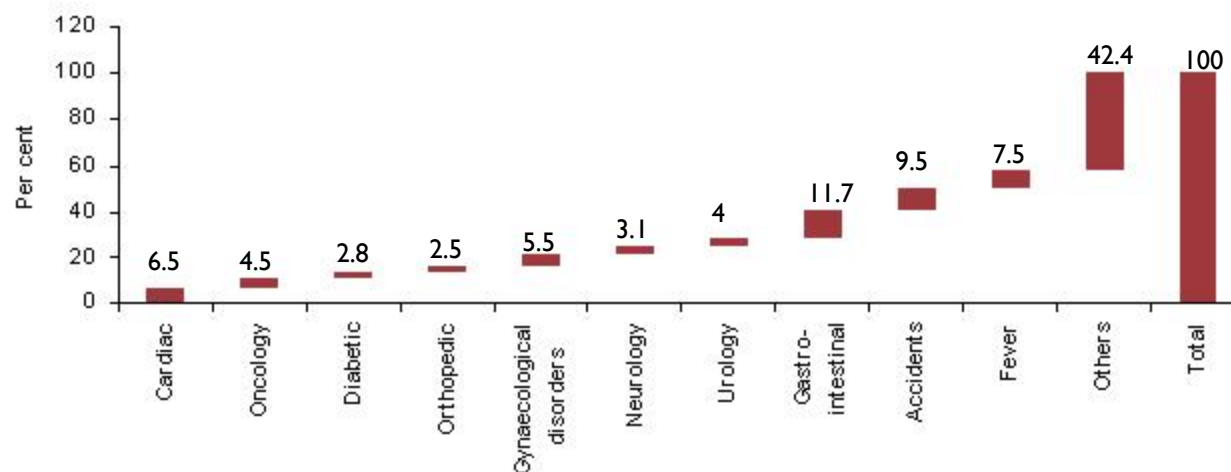
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## Shift to lifestyle-related diseases

- While the occurrence of communicable diseases is likely to decrease, that of non-communicable diseases is rising

Hospitalisation cases, 2008



- Cardiac, oncology and diabetes collectively accounted for 13.8 per cent of the hospitalisation cases in 2008. In terms of value, these three ailments accounted for 39 per cent of the in-patient revenues. These ailments are estimated to account for 17.4 per cent and 20.0 per cent of the hospitalisation cases in the year 2013 and 2018, respectively.

Sources:

Hospitals: Industry profile, August 2009, CRIS INFAC;

Ernst & Young analysis

## Holistic wellbeing - blend of modern and traditional medicine

- Hospitals and wellness centres are now looking at a comprehensive and holistic approach towards treating their patients.
- Tie-ups of hospitals with holistic health centres have helped combine traditional healthcare knowledge and practices with the conventional system.

### Wellness centres

- The Golden Palms Spa and Resort, Bengaluru
- The Ananda Spa, Rishikesh
- The Ayurvedgramm, Bengaluru
- The Vedic Village: spa and wellness centre, Kolkata
- Soukya, Bengaluru

### Services offered in wellness centres

- Diet and nutrition
- Gym and fitness
- Yoga
- Tai Chi (Chinese therapy for improving flexibility, coordination and stress reduction)
- Herbal medicine
- Humour therapy
- Healing touch therapy
- Stress management techniques including relaxation, and meditation
- Biofeedback
- Acupuncture including techniques such as emotional freedom technique (EFT)
- Pranic and crystal healing

## Quality driven approach: accreditations

- It has become imperative for healthcare institutions in India to assure quality healthcare to all.
- In India, Quality Council of India (QCI) operates the national accreditation structure and obtains international recognition for its accreditation schemes.

### International accreditation bodies present in India - JCI

#### JCI (Joint Commission International)

- JCI surveys, which began in 1999, currently survey nearly 20,000 healthcare programmes through a voluntary accreditation process.
- In 2005, The World Health Organization (WHO) designated the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and Joint Commission International as its collaborating centre for improving patient safety.

#### JCI accredited organisations

- Apollo Hospitals, Bengaluru
- Apollo Hospitals, Chennai
- Apollo Hospitals, Hyderabad
- Apollo Gleneagles Hospital, Kolkata
- Asian Heart Institute, Mumbai
- Fortis Hospital, Mohali
- Grewal Eye Institute, Chandigarh
- Indraprastha Apollo Hospital, New Delhi
- Satguru Partap Singh Apollo Hospital, Punjab
- Shroff Eye Hospital, Mumbai
- Sri Ramachandra Medical Centre, Chennai
- Wockhardt Hospital, Bengaluru
- Wockhardt Hospital, Mumbai

Source: Joint Commission International (JCI) Accredited Organizations, *Joint Commission International website*, [www.jointcommissioninternational.org](http://www.jointcommissioninternational.org), accessed 22 September 2009

## Quality driven approach: accreditations

### Accreditation bodies In India- NABH

- Launched in 2005, National Accreditation Board for Hospitals (NABH) is a constituent board of Quality Council of India, set up to establish and operate the accreditation programme for healthcare organisations in India.
- NABH has standards specific to the Indian healthcare setting, major aspects including assurance of uniform access, assessment, care of patients and protection of patient's rights.
- A total of 38 hospitals have been accredited in India
- A recent circular issued by Directorate General of Health Services stated that NABH accreditation is compulsory for hospitals for empanelment under Central Government Health Scheme (CGHS)\*

#### Selective NABH accredited Hospitals

- B.M. Birla Heart Research Centre, Kolkata
- MIMS Hospital, Calicut
- Max Super Specialty Hospital, New Delhi
- Max Devki Devi Heart and Vascular Institute, New Delhi
- Kerala Institute of Medical Sciences, Thiruvananthapuram
- Moolchand Medcity, New Delhi

#### NABH: Accreditations for allied services to be started soon

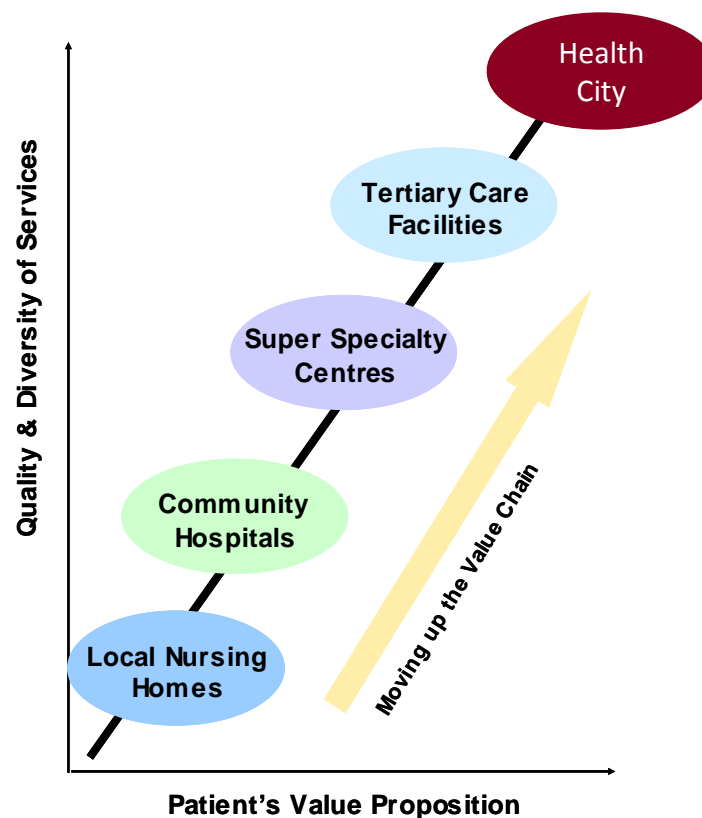
- Blood banks
- Diagnostic centres
- Dental hospitals/clinics
- Ayurveda hospitals

Source: "NABH Accredited Hospitals," NABH website, www.qcin.org/nabh, accessed 22 September 2009

Note: \*CGHS has an approximate membership of 4.5 million employees; Source: *Fostering quality healthcare for all*, Ernst & Young, 2008

## Health cities: the evolving concept of healthcare in India

- Major corporate hospital groups in India are making significant investments in setting up state-of-the-art Health Cities in major Indian cities.
- Around 15-20 Health Cities are expected to come up in India in the next five years.
- Health cities are looking at serving larger populations by offering facilities including hotels, residential facilities, recreational facilities of spa, gym and golf courses.
- Greater emphasis on education, research and development



Source: Ernst & Young analysis

## Health cities: the evolving concept of healthcare in India

Upcoming health cities			
Health City	No. of beds	Area (acres)	Investment (US\$ Million)
Dr Naresh Trehan's MediCity, Gurgaon	1,600	93	293
Fortis MediCity, Gurgaon	600-800		293
Fortis MediCity, Lucknow	800	52	122 – 195
Apollo Health City, Hyderabad	700	33	243
Nagpur Health City, Nagpur	2,000	100	N.A.
Chennai Health City, Chennai (Global Group)	1,000	46	245
Bengal Health City Near Durgapur	50000	800	487
Narayana Health City, Bengaluru	5,000	100	488

Source: The Economic Times, Realty Plus :July 2007

### Other Health City plans in the pipeline

- MIOT hospitals, Chennai have plans to set up a multispecialty medical city.
- Reliance ADAG has expressed interest in building a 60-acre health city in Kolkata.
- CMCH, Ludhiana has initiated a US\$ 12.2 million MediCity project in Ludhiana.

## Health insurance: current and future scenario

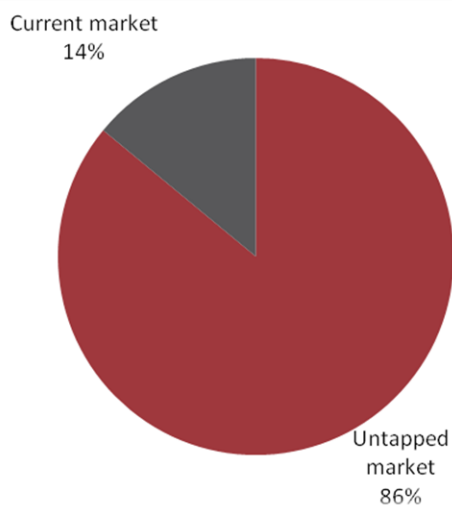
- Revenue attributable to insurance or Third Party Administrators (TPAs) has grown from two per cent in 2001-02 to 16 per cent in 2005-06.
- Total credit billing has increased to 32 per cent in 2005-06 and it is likely to increase further to 50 per cent by 2011-12.
- Domestic health policy premiums have shown a 47 per cent increase in the first quarter of 2006.
- The number of policies issued as Mediclaims, ESIS, and CGHS are 4,631,534, 8,400,000 and 1,040,000, respectively.
- Health insurance is projected to grow to US\$ 5.75 billion by 2010<sup>2</sup>.

Source:

2: Industry reports

## Health insurance: current and future scenario

Scheme wise<sup>1</sup> penetration of relevant market segments



- Total income from medical insurance premium would grow to US\$ 3.8 billion by 2012.
- Over 75 per cent of private health insurance is concentrated with six leading players — ICICI Prudential, SBI life, Bajaj Allianz, Reliance Life, Birla Sun Life and HDFC Standard<sup>1,3</sup>

Note:

1: Community health insurance, Central Government Health Scheme (CGHS), Employees State Insurance Scheme (ESIS), Group insurance, Government schemes for poor including BPL and voluntary insurance;

Sources:

1: *Insurance industry: key trends and perspectives*, Ernst & Young, 2009

3: Ernst & Young analysis

## Rapid advances in technology

- Life cycles of high-end medical equipments becoming shorter due to high level of innovation.
- Telemedicine being used by major healthcare providers to provide quality care especially in eye, cardiac and other surgeries for the rural populace in India.
- Teleradiology being used to leverage the time difference advantage with other developed countries
- Indian diagnostics market estimated at US\$ 100 million\*
- The Indian diagnostic industry is growing at an annual rate of 30-40 per cent.

### IT driven tools and services in healthcare

- Hospital management systems
- Decision support systems that improve diagnosis and treatment
- Telemedicine and electronic record generator

### Current trends in medical technology

- Microprocessor-based implantables in patients
- CPU-driven technology supported by artificial intelligence
- Robotics in OTs, path-labs / research
- Laser technology in surgery
- Increasing usage of advanced instruments in medical and surgical practices
- Biotechnology, genomics, molecular biology and stem cell research
- 'Five in five innovations', IBM's forecast of five innovations that have the potential to change the way people live and work. Also health of cardiac and diabetic patients to be monitored with sensors installed in homes or through devices such as mobiles
- Helping hand pill dispenser
- Virtual doctor checkups at home
- Digital pen
- EMRs – electronic medical records

Source: Express Healthcare, May 2008

## Medical professionals returning to India

- Medical professionals of Indian origin, working in other countries, are willing to return and settle in India which is an encouraging trend.

### Medical professionals are returning because of:

- Availability of significantly improved international grade healthcare infrastructure in India
- Increase in number of visitors to India for medical purposes
- Improved salary levels, almost at par with the West
- Growing restrictions on licensing and practicing in the UK and other EU countries

The Apollo Hospitals Group receives about 15-20 applications per week from NRI doctors while at the Aditya Birla Memorial Hospital (ABMH), Pune, 15 to 25 per cent of the applicants are NRI doctors.

## Healthcare players are now targeting smaller cities

- Increasing focus on unexplored regions of India in terms of healthcare
- Growing need for improved healthcare infrastructure in tier II and III cities
- Better access owing to development of new national/international airports, e.g., Visakhapatnam, Nagpur

Healthcare players are reaching smaller cities	
Apollo Hospitals	Vishakhapatnam, Bhubaneswar, Ahemadabad, North East
Wockhardt	Nagpur, Surat, Bhavnagar, Nasik, Ludhiana, Jabalpur
Max Healthcare	Eastern India
Global Hospitals	Dehradun

## Mergers and Acquisitions (M&A)

Deal	Deal Type	Announce Date	Deal Status	Announced Total Value (US\$ mn)	Target Name	Acquirers Name
Domestic	DIV	24 August, 2009	Pending	N/A	10 HOSPITALS	FORTIS HEALTHCARE LTD
Inbound	DIV	1 March, 2009	Complete	2.3	PARAMOUNT HEALTHCARE SERVICE	PRIVATE INVESTOR
Domestic	Private Equity	27 February, 2009	Complete	17.6	KAVERY MEDICAL CENTRE AND HOSPITAL	INDIA VENTURE ADVISORS
Domestic	DIV	27 February, 2009	Pending	N/A	APOLLO MODI HOSPITAL	FORTIS HEALTHCARE LTD
Outbound	ACQ	29 January, 2009	Complete	N/A	FORTS CLINIQUE DARNE	Fortis Healthcare and Novelife
Domestic	ACQ	28 January, 2009	Complete	N/A	KERALA VAIDYASHALA	YASH BIRLA GROUP

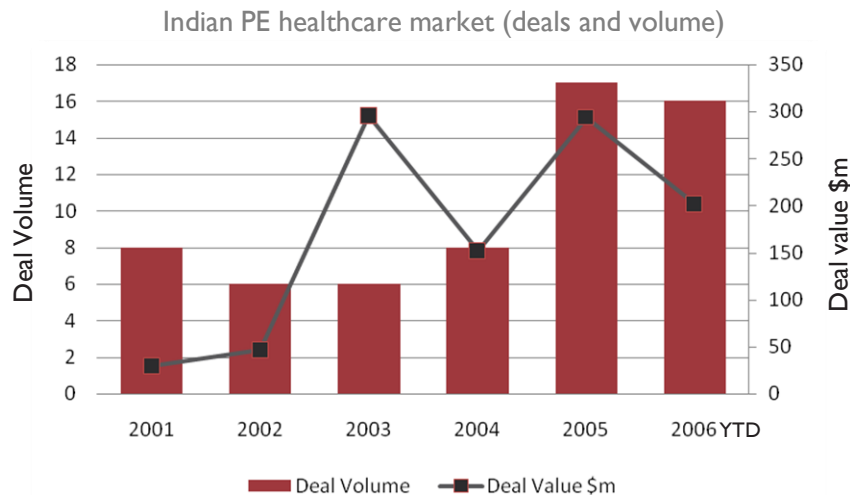
- In 2008, M&A has been the key strategy adopted by Indian companies to gain a foothold in growing overseas markets although a significant slowdown was seen in outbound activity
- Fortis Healthcare's acquisition of 10 Wockhardt Hospitals in 2009 was the largest deal in the sector.

Source: Transactions, Bloomberg, accessed 14 September, 2009

Note: DIV: Divestment ACQ: Acquisition

## Funding by private equity and venture capital

- Emerging healthcare segments like diagnostic chains, medical device manufactures as well as hospital chains are increasingly attracting investments from a variety of venture capitalists.
- PE funding is predicted to rise from US\$ 14.8 billion in 2006-2007 to US\$ 33.6 billion in 2012.



Source: Biocentury 2006, Ernst & Young analysis

Source:

1: "IFC To Invest Rs 150 Crore In Max India," *Venture Capital website*, www.vccircle.com/, accessed 22 September 2009

2: "PE Firm GTI Group Invests in Day-Care Surgery Centre Chain," *Venture Capital website*, www.vccircle.com/, accessed 22 September 2009

3: Aavishkaar India Micro Venture Capital Fund (Aavishkaar) has invested US \$ 0.4 million in Swas Healthcare.

### Recent PE funding deals In healthcare

- International Finance Corporation (IFC) has picked up 4.4 per cent stake in Max India Ltd for a consideration of US\$30 million<sup>1</sup>
- Global Technology Investment Group (GTI), a New York-based private equity firm, has invested in a day care surgery center chain Nova Medical Centres India. The private equity firm will invest around US\$ 50 to 60 million to set up centres across the country<sup>2</sup>
- Aavishkaar India Micro Venture Capital Fund (Aavishkaar) has invested US\$ 0.4 million in Swas Healthcare. Swas Healthcare is a Gujarat-based venture engaged in setting up a chain of naturopathy clinics and hospitals across the state<sup>3</sup>

## Investments and strategic alliances in healthcare

### Investments in healthcare industry

- Singapore's Parkway Group, Asia's largest chain of hospitals, has taken up a 50 per cent stake in the Mumbai-based Khubchandani chain of hospitals with an investment of US\$ 31 million. Mauritius-based PE fund Koncentric Investments will hold the remaining 50 per cent stake.
- Texas-based Perot Systems is on the look out for healthcare technology firms in India.
- Ranbaxy Groups' venture Fortis Healthworld, along with private equity player Oscar Investments, has acquired 62.17 per cent stake in Chennai based Malar Hospitals.
- Aiming to tap the booming healthcare sector, Piramal Healthcare's diagnostic division, Piramal Diagnostic Services has narrowed down on 15 diagnostic centres for acquisition. By 2010, the company plans to have a centre in every city with population above a million.

### Strategic alliances in healthcare industry

- Manipal Cure and Care invested US\$ 82 million in a tie-up with Aditya Birla Group and Jubilant Retail for building over 100 health outlets across India by 2012.
- Hinduja Group has tied up with a Dubai based firm for a chain of hospitals, clinics and medi-cities in metros and in tier II cities.
- Hindustan Latex has tied up with US-based Venture Capital fund Acumen (a US\$ 30 million company), for setting up a chain of hospitals in India.
- GE Healthcare, a 51:49 venture between US-based GE and Wipro, has decided to move more projects from its US and Japan divisions to India.
- In a step to empower rural India, Fortis Health World has tied up with a division of Godrej Agrovet Ltd, i.e., Godrej Adhaar to open pharmacies in rural India.

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## Key players in India

### Apollo Hospitals Enterprise Ltd

- It manages a network of 43 specialty hospitals and clinics with a bed capacity of over 7,543 across the country and abroad.
- Besides the recently launched Health City in Hyderabad, it plans to launch similar facilities pan India.
- Has tied up with insurers like BUPA (UK), Vanbreda (Belgium) and Mondial (France) to direct inflow of foreign patients to India
- Has a joint venture with Singapore-based Parkway Group Healthcare PTE Ltd.
- Has tied up with Indian Oil Corporation (IOC) to set up its pharmacies at the latter's petrol stations.

*Sources:*

Hospitals: Industry profile, August 2009, CRIS INFAC;  
Ernst & Young analysis

Apollo Group : business structure			
Service	Brand name	No. of units	Details
Hospitals	Apollo Hospitals		
Owned		26	Has hospitals all over India and abroad
Managed		17	
Clinics	Apollo Clinics	27	
Pharmacy	Apollo Pharmacies	873	Retail pharmacy- direct access to patients, low capital requirement for hospital pharmacies, higher bargaining power with pharma companies
Tele-medicine	Apollo Telemedicine Networking Foundation (ATNF)	Over 60	Access to huge medical network; helps expand, reach and achieve growth
Insurance	(As Third Party Administrators)	-	Access to patients, medical network, and claim processing
Outsourcing (BPO)	Apollo Health Street	-	Caters to health Information needs of US based physician groups and hospitals

## Key players in India



### Fortis Healthcare

- Has a chain of hospitals with an installed bed capacity of about 2,888 beds
- Has operations across North India - Delhi, Noida, Mohali, Amritsar, Faridabad, Raipur and Srinagar
- Has a joint venture with real estate player DLF to set up hospitals across the country with an investment of about US\$ 1.5 billion
- Owns a pharmacy chain by the name of Fortis Health World and plans to open 250 outlets with an investment of US\$ 195 million all over India
- Acquisition of Wockhardt Hospitals would add 1902 beds to Fortis, taking the total count to 5180 beds in 38 hospitals<sup>1</sup>

#### Sources:

1: "Fortis Acquires 10 Hospitals From Wockhardt For Rs 909 Crore," Press Trust of India – News, 24 August 2009, via ISI emerging markets;

Hospitals: Industry profile, August 2009, CRIS INFAC;  
Ernst & Young analysis

## Key players in India

### Manipal Health Systems



- Chain consists of
  - Eight primary health centres
  - Ten secondary hospitals at urban and semi-urban locations
  - Five tertiary hospitals at urban and semi-urban locations
- MHS is building another 600-bed multi specialty hospital in Devanahalli, Bengaluru
- It has entered into a joint venture with Pantaloon Retail to foray into comprehensive retail healthcare services
- Plan to invest over US\$ 195 million in healthcare business over the next five years



### Narayana Hrudayalaya

- First-of-its-kind cardiac care hospital in Bengaluru, set up by the Shankar Narayana Construction Company
- Capability to perform 25 major heart surgeries and over 20 cardiac catheterisations per day
- It is a hub for telecardiology networks with a joint venture between the governments of seven hill states and West Bengal, Karnataka Health Systems and ISRO
- A 5,000-bed Health City is coming up at Bengaluru, which will comprise of 10 hospitals

#### Sources:

Hospitals: Industry profile, August 2009, CRIS INFAC;  
Ernst & Young analysis

## Key players in India

### Max Healthcare



- Max Healthcare (MHC) operates eighteen healthcare facilities in the National Capital Region (NCR) of Delhi.
- Has a bed capacity of around 865 beds and is expected to increase to 1,500–1,600 beds in the next few years.
- Has collaborated with Singapore General Hospital in the areas of medical practices, nursing, paramedical research and training.
- Plans to raise US\$ 85.36 million to expand its hospital chain

### Columbia Asia



- First healthcare provider to enter through the FDI route
- Opened the first community healthcare, multi specialty facility at Bengaluru
- Planning to invest US\$ 15.85 million to set up more hospitals in Bengaluru
- Has tied up with General Electric (GE) to collaborate on a number of initiatives for creating a medical institute of world-class standards

### Global Hospitals



- The US\$ 9.75 million facility functions from two locations in Hyderabad.
- Invested US\$ 36.58 million to set up 'BGS Global Hospital' in Bengaluru.
- Tied up with the Sureka Group to set up a 300-bed transplantation and tertiary care centre in Kolkata
- Planning to establish a US\$ 240 million Health City in Chennai on a 46-acre hospital site

Sources:

Hospitals: Industry profile, August 2009, CRIS INFAC;  
Ernst & Young analysis

## New entrants and key foreign players

### Artemis Health Institute



- Delhi-based Apollo Tyres has made a foray into the healthcare sector with the launch of its US\$ 48.78 million project, Artemis Health Institute in Gurgaon
- First hospital in entire northern India to offer Image Guided Radiation Therapy (IGRT) to its patients
- Artemis plans to grow into a 10-hospital chain by 2012.

### Naresh Trehan's MediCity

- Reputed medical professional, Dr Naresh Trehan, is promoting a US\$ 250 million world-class integrated healthcare facility known as 'MediCity'
- Has been planned as a multi-disciplinary high-tech medical institute spread over 43 acres in Gurgaon.
- Apollo would examine the possibility of investing in the proposed MediCity and merger of the MediCity with Apollo Group may also be considered in the future

### Aditya Birla Memorial Hospital



- A multi-speciality hospital located at Pimpri-Chinchwad in Maharashtra
- The quaternary (very advanced and specialised medical care) healthcare centre with 500-bed facility is spread over 16 acres

### Reliance ADAG Healthcare



- A 730-bed facility in Mumbai inaugurated in 2009.
- Planning a pan India chain of hospitals; has begun talks with leading private hospitals in Delhi, Mumbai and Bengaluru for possible acquisitions and joint ventures

## New entrants and key foreign players

### Foreign Players

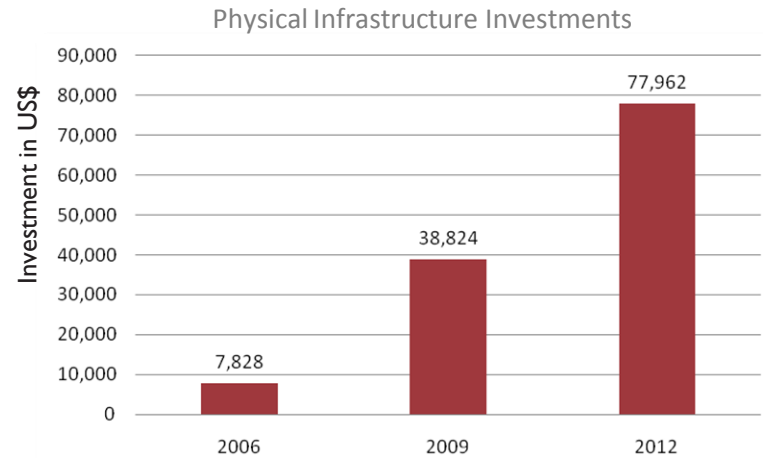
- Harvard Medical International and Cleveland Clinic have entered the country through joint ventures
- Pacific Healthcare Holding has opened its first hospital in Hyderabad
- Parkway Group from Singapore, Emaar from the Middle East and Prexeus Health Partners from the US have announced plans of entering India.

## The focus of this presentation is to discuss...

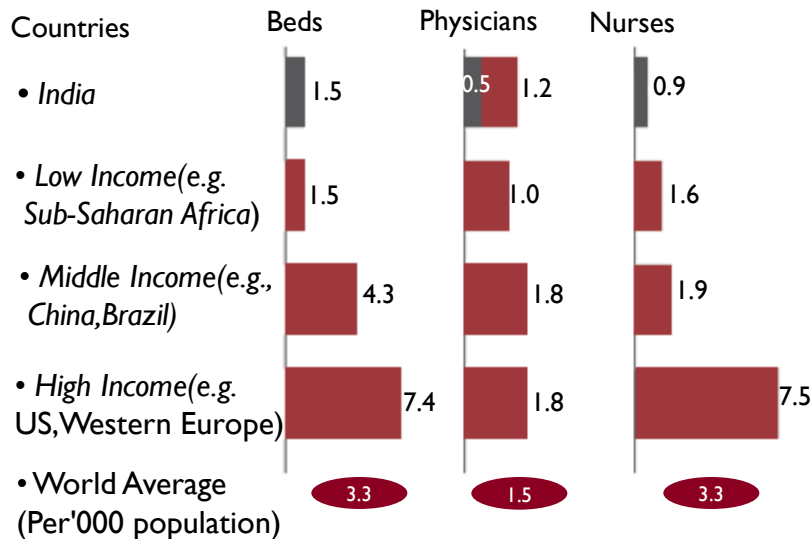
- ❖ Market overview
- ❖ Policy initiatives
- ❖ Key trends and drivers
- ❖ Key players
- ❖ Key opportunities

# Medical infrastructure development

- Medical infrastructure market expected to grow at 14.5 per cent over the next five years (starting 2007)
- To achieve a bed to population ratio of 1.98, a total investment of US\$ 88 billion would be required.
- Revenues from private beds in 2012 estimated at US\$ 38.8 billion
- Leading real estate players are looking at new business areas such as hospital properties to maximise amenities in their integrated townships.



Source: Opportunities in Healthcare Destination India  
Ernst & Young Report 2007



Source: Opportunities in Healthcare, HEAL -2007

## Medical infrastructure development

### Real estate players in healthcare

- DLF is inking a 26:74 joint venture with Fortis Healthcare for setting up hospitals in its 200-acre-plus integrated townships across the country at an investment of around US\$ 1.5 billion. The joint venture (JV) plans to set up a chain of 200-450 bed hospitals in 31 cities in India in three to five years.
- Fortis's Lucknow MediCity is being set up in Ansal's 1,500 acre upcoming mega township.
- Hinduja Group and Limitless LLC, the realty arm of Dubai World, are contributing about US\$ 1.1 billion each in their 51:49 JV to build hospitals and medicare cities.
- Ambuja Realty Development Ltd (ARDL), which had formed a joint venture — Neotia Elbit Hospital Venture Ltd— with the Elbit Group of Israel, plans to develop a couple of feeder hospitals in Siliguri (north Bengal) and Bardhaman (south Bengal) for its proposed multi-specialty hospital in Kolkata.

## General insurance companies looking at healthcare

- More number of insurers are promoting insurance policies that provide comprehensive health coverage. Multiple channels, including banks, are being used to sell group and individual health insurance policies.
- Three factors have changed the face of the medical insurance market
  - Privatisation in 2000 ending the monopoly of the public sector
  - Introduction of TPAs by the Insurance Regulatory and Development Authority in 2002 has made the medical insurance segment more attractive through provision of cashless hospitalisation facility
  - 'Detariffing' of general insurance from January 1, 2007 has also been a growth booster for the industry
- Insurance companies are in consultation with NABH to identify hospitals and diagnostic centres that will be allowed to process cashless claims

### New products in health insurance

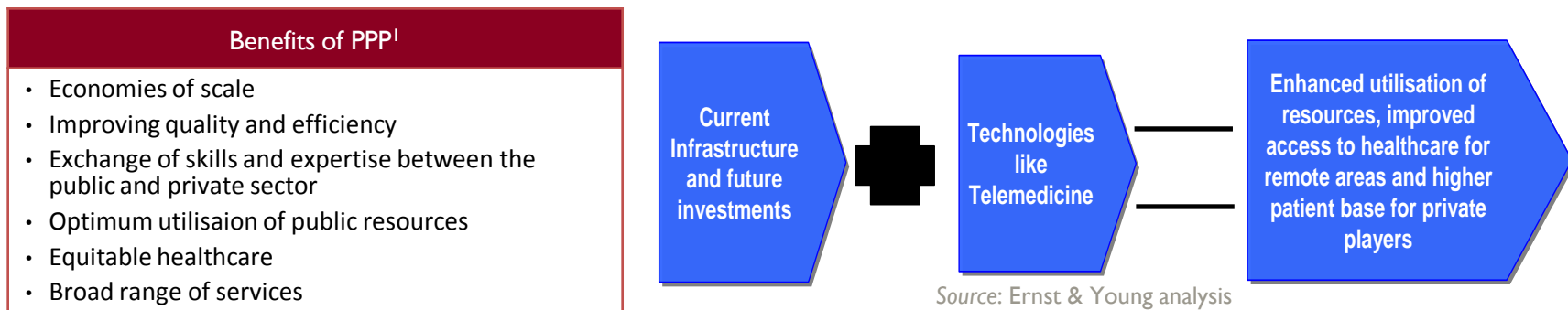
- ICICI Prudential is looking at introducing a policy where the premium will remain the same year after year, irrespective of the age of the policyholder
- Introduction of crisis cover by insurance companies, which provides for payment on detection of any of the 35 diseases covered

## Medical value travel

- Medical value travel is one of the most lucrative segments of the healthcare sector and is expected to grow into a US\$ 1.5 billion industry by 2010.
- It has the potential to contribute US\$ 1.2 - 2.4 billion additional revenue for upmarket tertiary hospitals by 2012, and will account for 3-5 per cent of the total healthcare delivery market.
- From 10,000 patients about five years ago, India was able to attract approximately 150,000 patients to the country in 2006-07.
- With an annual growth rate of 30 per cent, India is already inching closer to Singapore and Thailand, which are established medical care hubs that attract millions of medical tourists a year.
- The Ministry of Tourism (MOT), Government of India has further enhanced the Mvisa and MXvisa (Medical Visa) by extending it from six months to three years.
- India offers easy access to visa facilities for overseas patients along with best emerging medical infrastructure in large and tertiary towns. This shall generate earnings of about US\$ 19.5 billion in foreign exchange by 2012.

## Public Private Partnerships (PPP)

- Various state governments are collaborating with the private sector through PPP to improve the inefficiency and decrease the inequity in the health system.
- Partnership initiatives range from super-specialty tertiary-care hospitals (Apollo Hospital, Raichur; SMS hospital, Jaipur) to primary care (Karuna Trust in Karnataka) and slum communities (Arpana Swasthya Kendra, Delhi; urban slum care in the district town of Adilabad, Andhra Pradesh).
- Community health insurance initiatives have also been undertaken in terms of Arogya Raksha scheme in Andhra Pradesh and Yeshasvini scheme in Karnataka.
- Chiranjeevi Yojna is a public private partnership which has dramatically reduced maternal and infant mortality in the state of Gujarat.
- The NHS (National Health Service) of Britain, with an annual budget of US\$ 100 billion, is also eager to invest in PPP ventures in India, starting with West Bengal in the initial phase.



Sources: 1: Ten industry trends 2009, Technopak healthcare outlook, 2009, p. 2

## Hospital planning and consulting

- Special skill sets required for orchestrating a hospital project from ideation to implementation
- Major hospital chains are now hiring hospital planning consultancy firms for a faster scale up of their facilities
- Established firms provide ‘one stop solution’ services; new and emerging players prefer to work on few specialised areas
- Need for a statutory body to monitor hospital planning firms

### Key hospital planning consulting firms In India

- Hosmac, Mumbai
- Medicontrivers India Pvt Ltd Mumbai
- Ace Vision Health Consultant Pvt Ltd, Jaipur
- Professional Health Planners, New Delhi
- Hospic, Mumbai
- H-PAMCO, New Delhi
- KSA Technopak, New Delhi
- NOUS Hospital Consultancy (P) Ltd, New Delhi
- Apollo Hospital Enterprise Ltd, Chennai
- Total Hospital Solutions, Jaipur

## Medical equipment manufacturing and leasing

- The demand for equipment and devices in India is growing between 12-15 per cent annually.

Medical device market, 2006 (US\$)	
India	1,505 mn
Brazil	2,585 mn
China	3300 mn
Russia	1,075 mn

Source: BRIC Report:2006, Ernst & Young analysis

- Great potential for multinationals to enter the country to tap the growing demand for hi-tech devices
- Medical equipment leasing still in a nascent stage
- Global medical device majors such as GE, Siemens and Toshiba have an established presence in the Indian market

### Medical equipment leasing: advantages

- Increased use of equipment
- Flexibility
- 100 per cent cost coverage
- Conservation of capital
- Easier cash flow forecasting
- Keeping pace with the technology
- Fixed payments
- Preserve credits

## Medical textiles and clinical trials

### Medical textiles

- The Indian market for medical textiles is worth US\$ 350 million. The global market is expected to be worth US\$ 8.2 billion in 2010.

### Clinical trials

- India is one of the fastest growing clinical research destinations with a growth rate that is two and a half times the overall market growth.
- India participates in 7 per cent of global Phase III and 3.2 per cent of Phase II trials with industry-sponsored trials having grown at a spectacular 39 per cent CAGR between 2004-08.
- India is ranked 12th in the number of industry-sponsored Phase II-III clinical trial study sites (with the US trial registry) having grown at 116 per cent between 2006–08 and 2005–07.

Source:

1: *The glorious metamorphosis*, Ernst & Young, 2009

## Healthcare outsourcing

- Medical services outsourcing from the US has seen a CAGR of 150 per cent in the last two years.
- Indian service providers accounted for US\$ 115 million worth of outsourcing and offshoring services during 2005-06.
- In 2007, India had an estimated share of 65 per cent in the global IT services offshoring segment and around 46 per cent in the global BPO market.
- India's large pool of skilled IT workforce, its rapidly growing broadband connectivity and secure networks provide robust infrastructure for IT-enabled healthcare services

### Clinical research outsourcing

- Clinical research market expected to touch US\$ 400-500 million by 2010
- Moving with high CAGR of 30-35 per cent
- Outsourced clinical trials generated an estimated US\$ 220 million in revenues for Indian companies in this sector

### Healthcare BPO services

- Medical coding
- Medical billing
  - Patient demographics
  - Charge entry
  - Payment entry or cash posting
- Claims processing
  - Accounts receivable
  - Teleradiology
  - Medical transcription
  - Patient record management and EMR (Electronic Medical Record)

# Healthcare outsourcing

## Factors making India the preferred destination for healthcare outsourcing

- (Health Insurance Portability and Accountability Act) HIPAA-compliant processes
- American Academy of Professional Coders (AAPC) trained medical coders
- Thorough understanding of US medical coding, billing procedures and processes, including government regulations
- Software applications streamlining workflow
- College-educated, trained and experienced operations team

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