Healthcare in India

- A Perspective
- The Fortis Story

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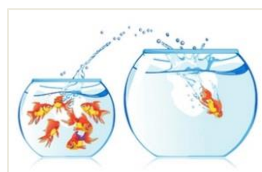
24 October 2013

Presentation Flow

Indian Healthcare – A Perspective

Challenges & Opportunities



Some Innovations

The Fortis Healthcare Story

India - A Nation of Many Dimensions

A Growing Economic Powerhouse

- World's third largest economy (PPP)
- Largest democracy and 2nd highest population
- Third largest standing army force and second largest labor force

But Facing Several Challenges

- Largest concentration of people below World Bank poverty line ($1.25/day)
- Ranked 127 in per capita GDP (PPP)
- Ranked 136 in UN Human Development Index

India - A Nation of Many Dimensions

Significant growth in last decade

- Vibrant and multi-pronged private sector
- A large and growing middle class – 300 mn
- Largest school going population
- Health receiving national attention
- Growth in high-end tertiary care and new deliver models

But Socio-Economic Challenges Exist

- 48% of children under 5 malnourished
- Almost one million deaths annually from contaminated water or polluted air
- Accessibility and affordability of healthcare a challenge especially in rural areas

India - A Nation of Many Dimensions

Aggressive policy making to improve socio-economic parameters

- Right to Education (RTE) to ensure primary education for all
- Food security (NFSB) through subsidized food grain for two-thirds of pop.
- Right to information (RTI) to ensure transparency in govt. activities

Unrealized implementation

- Slow reduction in actual poverty (from 37% in 2004 to 30% in 2010, Tendulkar Committee)
- Limited punishment for non-compliance
- Efficiency adversely effected because if red-tapism and systemic delays
- Delivery system leakages add to cost and delay implementation

Indian Healthcare - Some Disquieting Facts

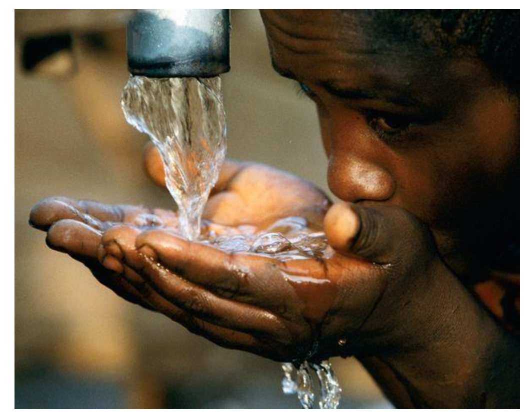
57% of children under 5 are underweight

1.72 million children die every year before turning one

Only 43.5% young fully immunized

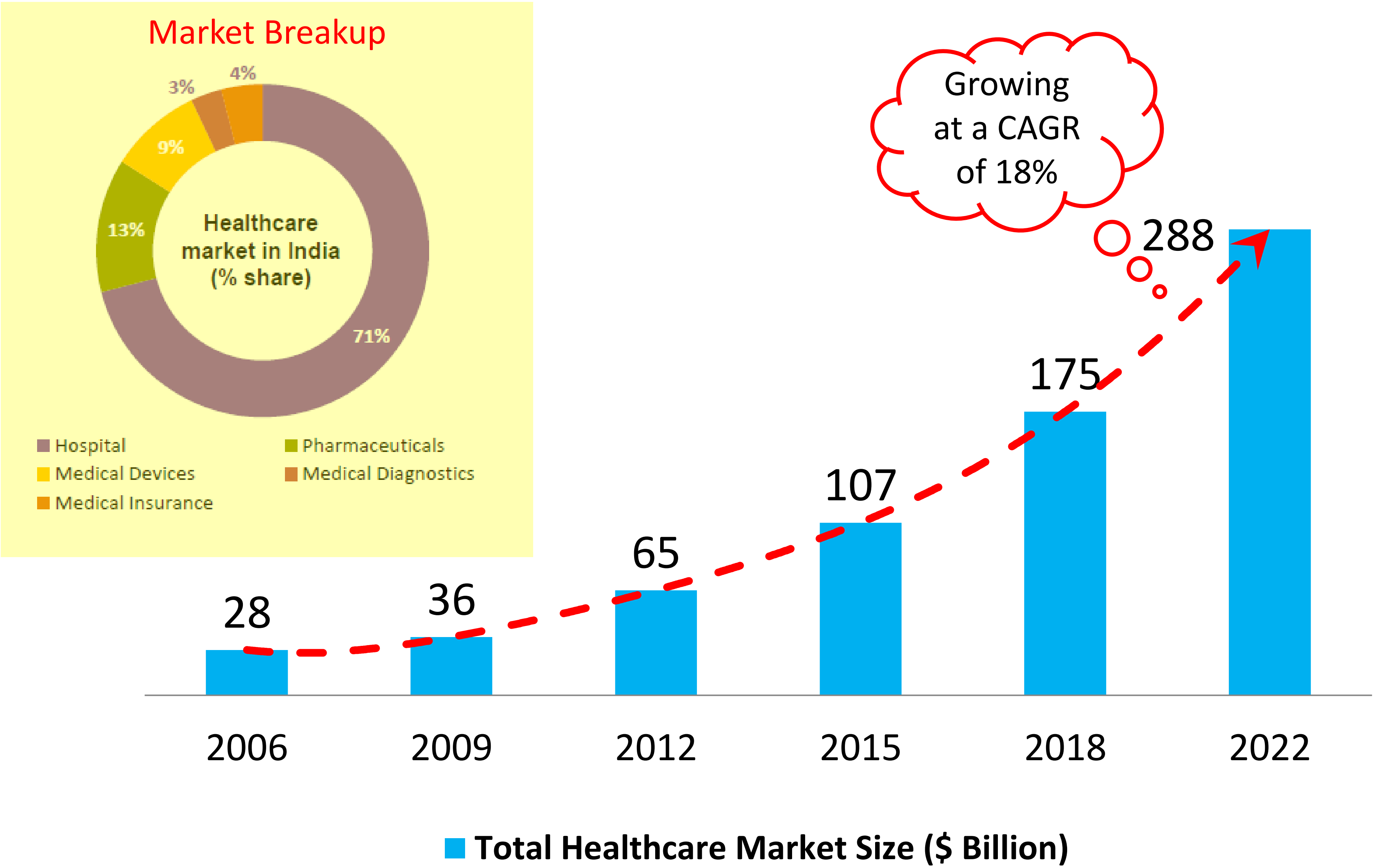
20% of world's disease burden but only 6% beds and 8% doctors

India adds 16 mn people every year – more than double the population of Switzerland

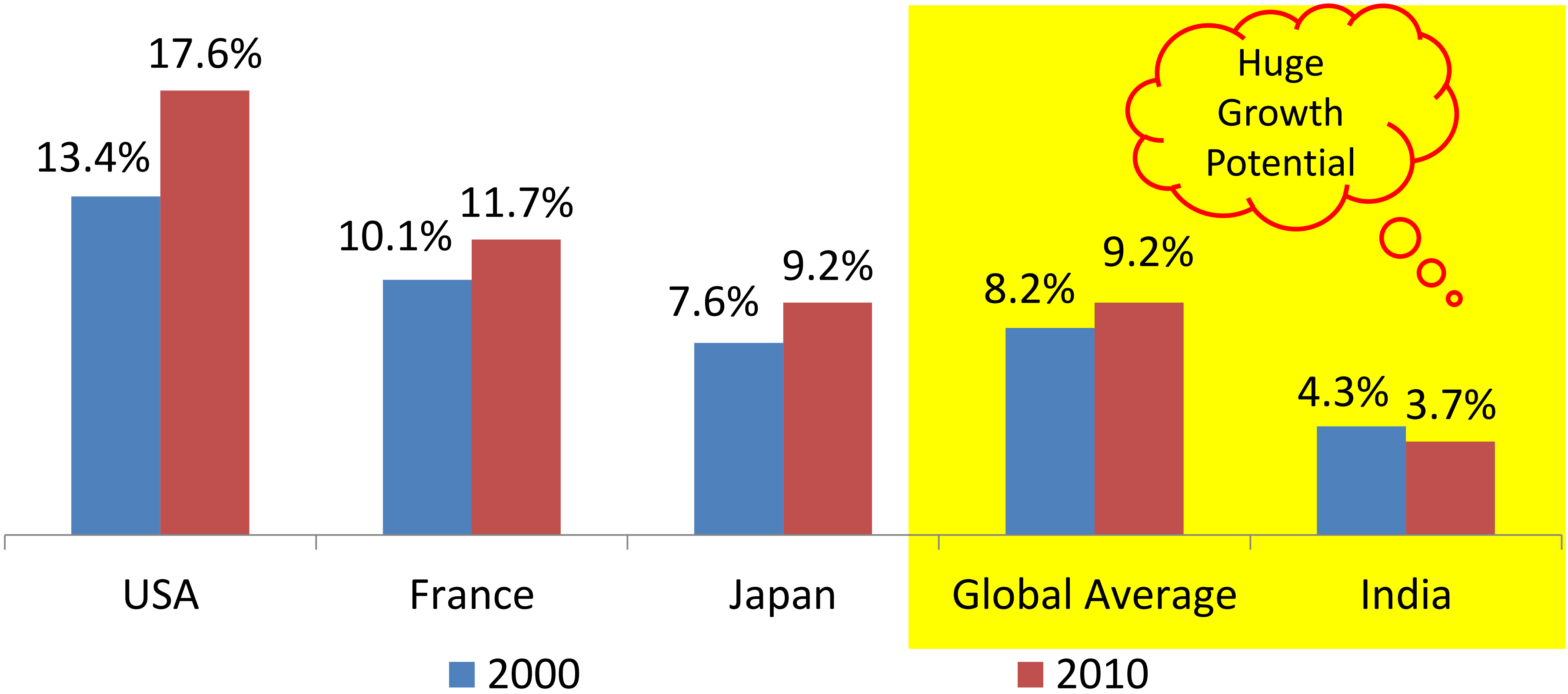


Only 25 % of population has drinking water on premises

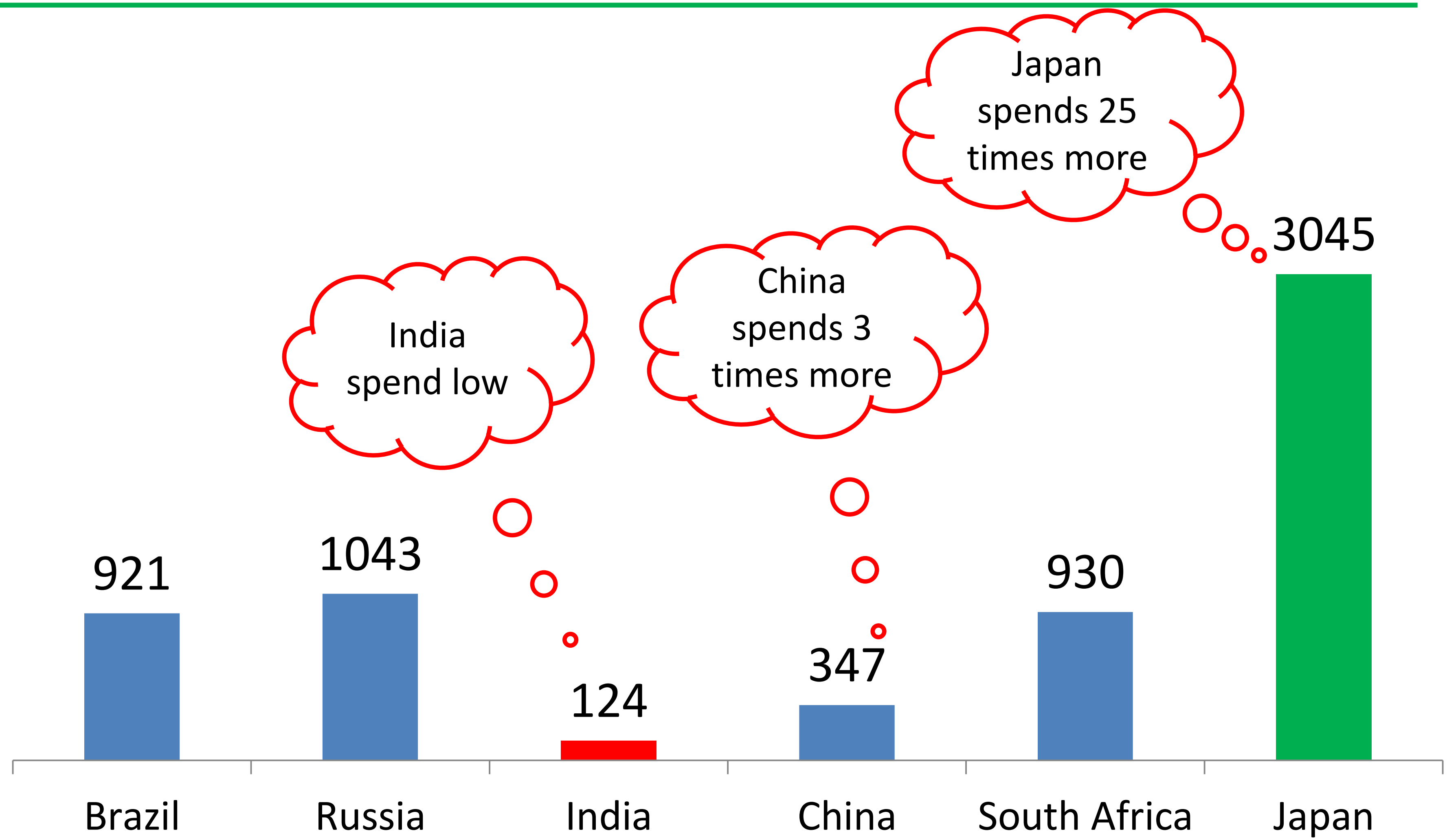
Total Healthcare Market Size



Healthcare as % of GDP



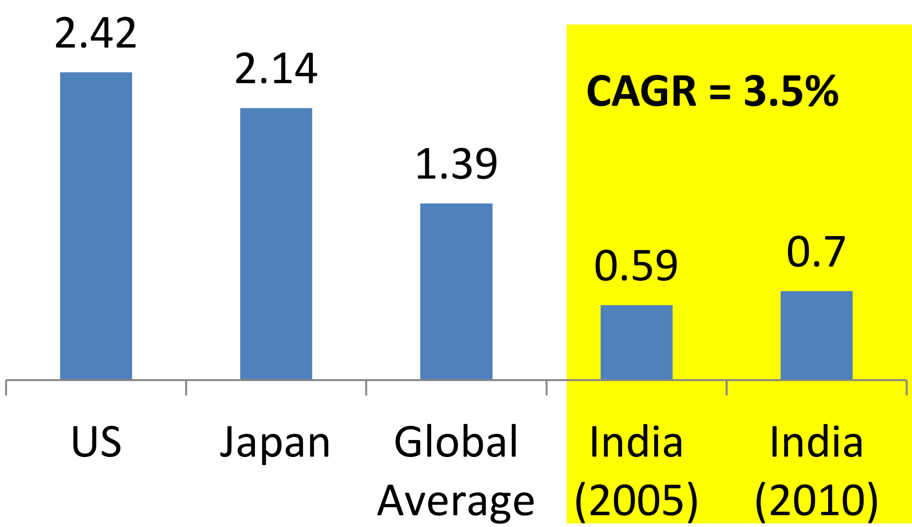
Expenditure on Healthcare Per Capita (PPP)



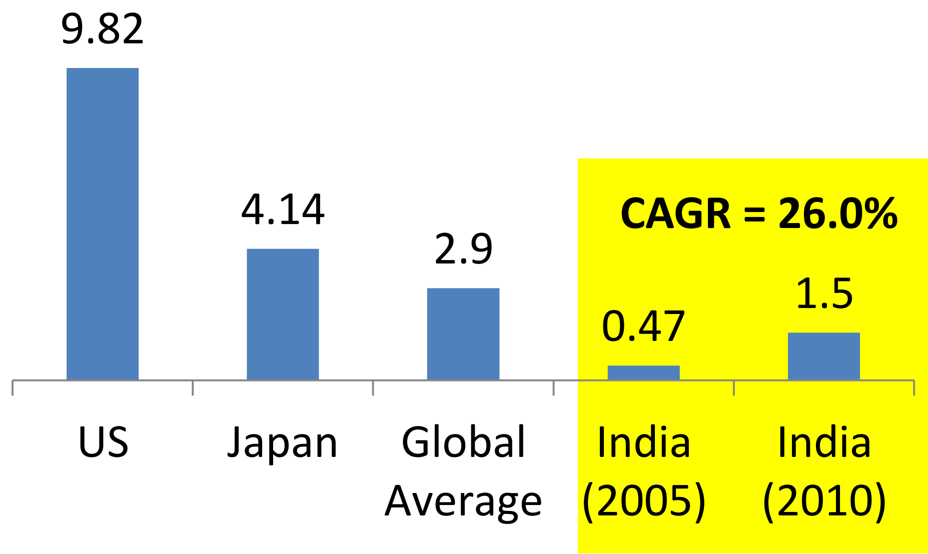
**figures in USD*

Health Infra - Well Below Global Average

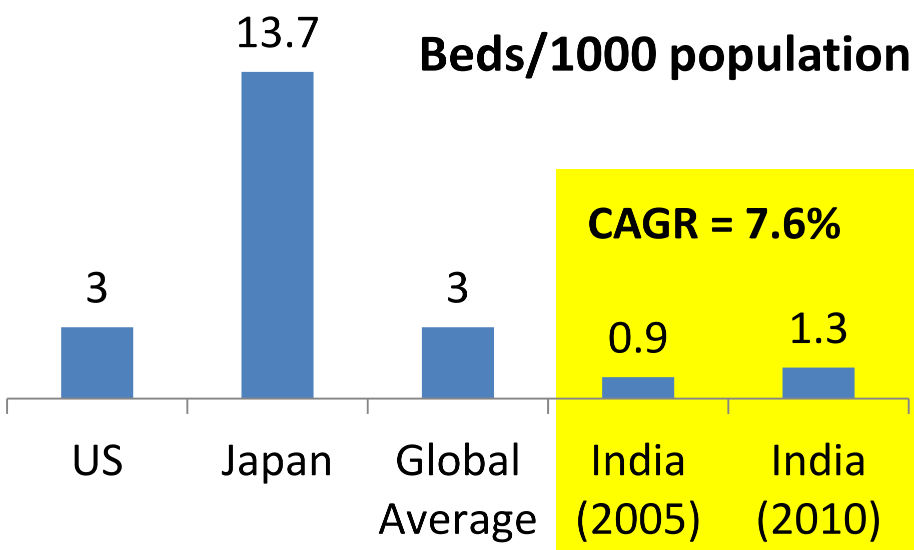
Physicians/1000 population



Nurses/1000 population

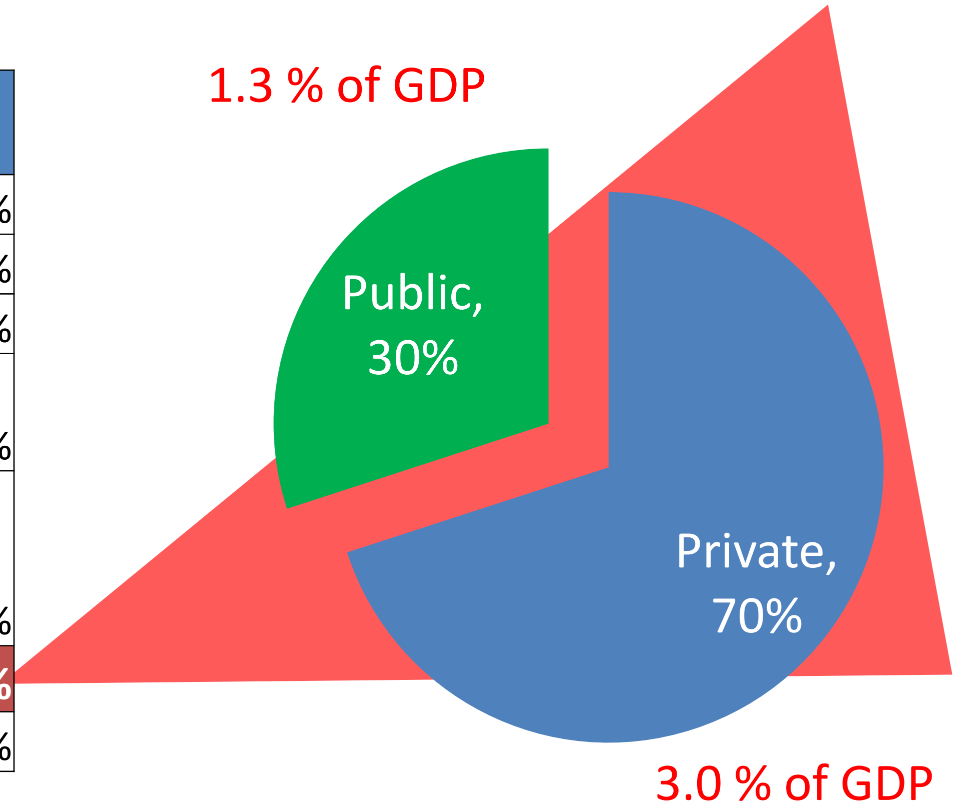


Beds/1000 population



Private Sector Dominant in Delivery

Region	Health Expenditure as % of GDP
America	14.40%
Europe	9.30%
Africa	6.50%
Western Pacific Region	6.50%
Eastern Mediterranean Region	4.70%
India	**4.30%**
South East Asia	3.80%



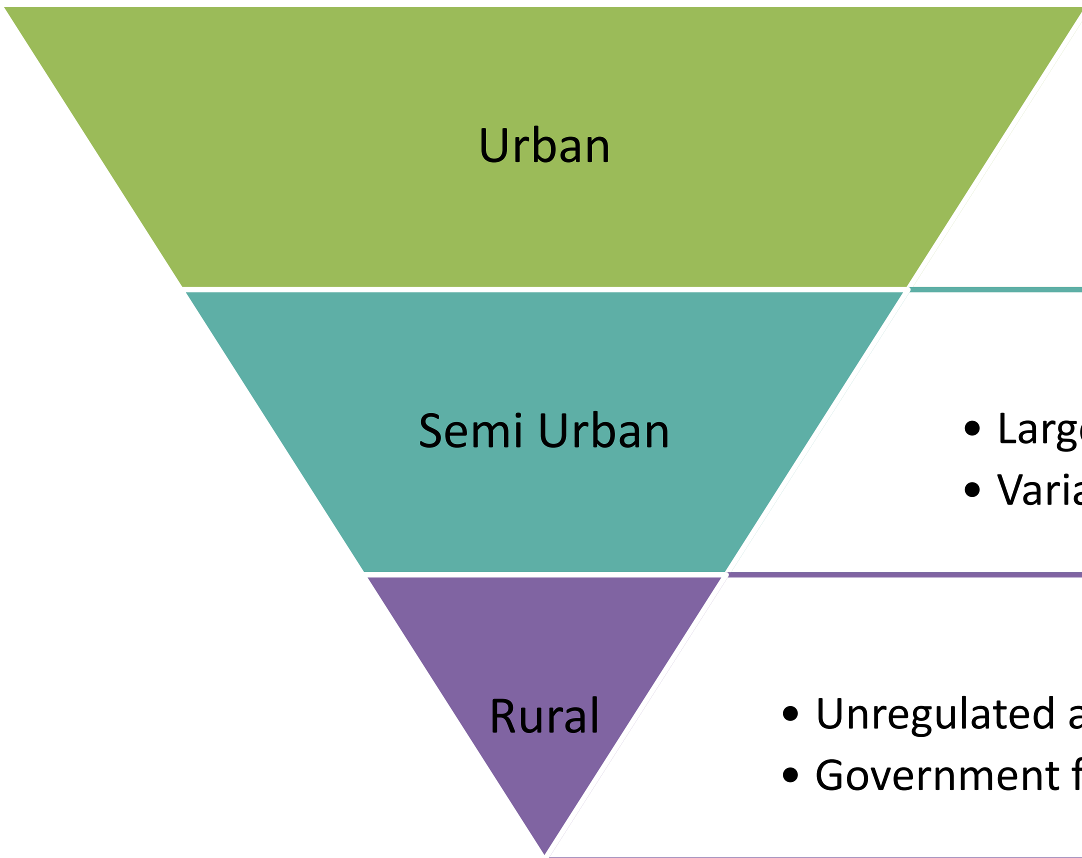
Delivery - Infrastructure Mismatch

32% of population

85% of resources

68% of population

15% of resources



Urban:
- Max concentration of high quality health facilities
- Corp. Hospitals

Semi Urban:
- Largely unorganized players
- Variable quality

Rural:
- Unregulated and uncertified
- Government facilities ill-equipped

Key Healthcare Growth Drivers - Demographic

Population growth

1.2 bn in 2012 → 1.4 bn in 2026

Geriatric population

Japan
32 mn in 2012

India 70 mn in 2012 → India 118 mn by 2020

Growing middle class & disposable incomes

300 mn in 2012 → 583 mn in 2025

Key Healthcare Growth Drivers - Economic

Rise in disposable income: ten-fold increase in middle class citizens between 2005-2025

Increasing insurance penetration: from 16 % now to 50% by 2033

100% Foreign Direct Investment permitted in Healthcare

Govt. to double healthcare spend from 1.2% to 2.5% of GDP by FY2017

Key Healthcare Growth Drivers - Others

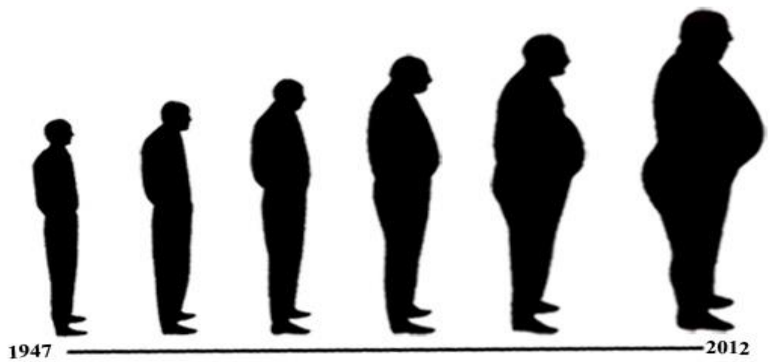
Growing Awareness

Good health a priority

Patients increasing preference for quality

Lifestyle

Expected increase in lifestyle-related diseases



New Approaches

PPP and other initiatives

Innovative business models

Penetration in relatively unexplored semi-urban and rural areas

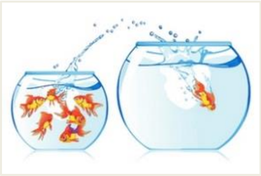
Japan vis-à-vis India – A Snapshot

	Japan	India
Economic Criterion	▪ 9.5% of GDP spend on healthcare ▪ 2.06 physicians per 1,000 pop. ▪ 13.7 beds per 1,000 pop.	▪ 4.3% of GDP spend on healthcare ▪ 0.7 physicians per 1,000 pop. ▪ 1.3 beds per 1,000 pop.
Demographic Details	▪ Infant mortality rate: 2.17/1000 live births ▪ Life expectancy: 84.19 yrs ▪ Pop. Growth Rate: - 0.1% ▪ % of pop. above 65 years: 24.8%	▪ Infant mortality rate: 44.6/1000 live births ▪ Life expectancy: 67.5 yrs ▪ Pop. Growth Rate: 1.51 % ▪ % of pop. above 65 years: 5.7%

Large unaddressed agenda

Indian Healthcare – A Perspective

Challenges & Opportunities



Some Innovations

The Fortis Healthcare Story

Health Challenges & Emerging Solutions

Access

- 70% of population access 15% resources
- 46% patients travel over 100 kms for care
- Only 50% beds functional and relevant
- Poor primary care

Affordability

- 16% of population have health insurance
- ~65% expenditure on healthcare out of pocket
- Healthcare major cause of debt amongst poor

Quality

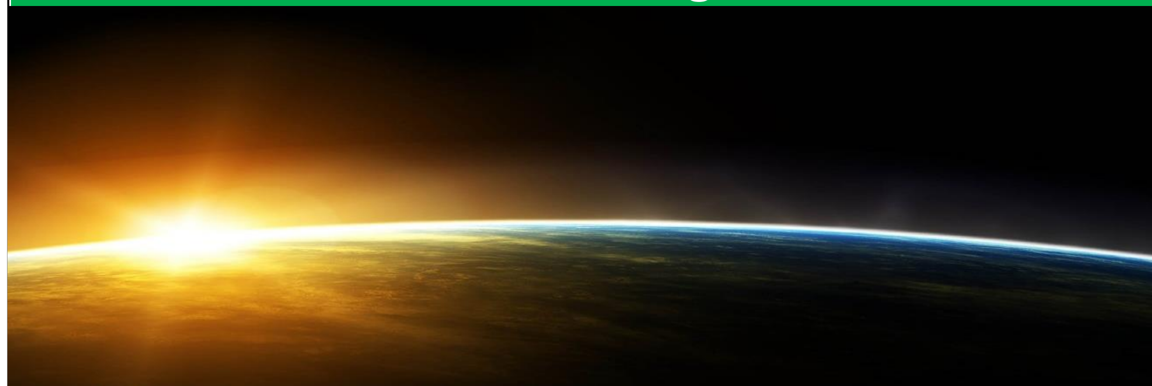
- Low focus on quality/accreditation
- Inadequate monitoring
- Limited good quality educational institutions

Health Challenges & Emerging Solutions

Dual Burden & Rising Expectations

- 62% of all deaths attributed to NCDs
- Communicable diseases
- Rising expectations
- Awareness fuelling demand for better quality

Silver Linings



- Universal Health Care Scheme
- National Rural Health Mission
- Urban Heath Mission
- National Health Insurance Program (RSBY)
- Growing use of technology
- Expanding infrastructure - large government and private investment

Opportunities - Private Care Preferred by Patients

Better infrastructure

Private care includes Hospitals, Clinics and Nursing Homes

More responsive

Better Quality

Corporate hospitals providing world class care

Concerns:

- Higher cost hence more expensive
- Over charging – more procedures
- Available only to a small, well-to-do, patient base

Opportunities Across the Value Chain

Different Delivery Models

Hospital chains

Eye

Dialysis

Single specialty

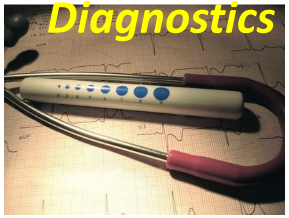
Dental

Public private partnership

Use of Technology

Electronic health records

Devices



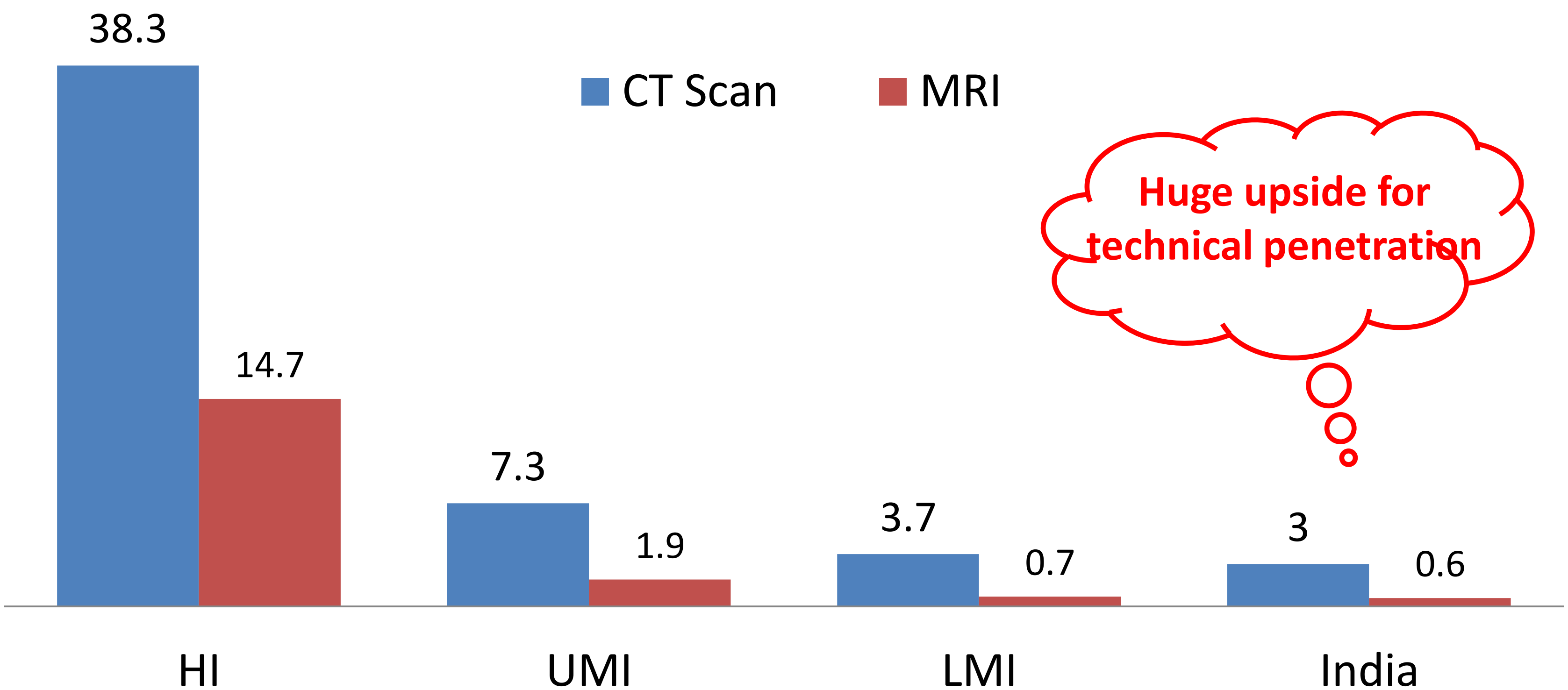
Process Upgrade

- Improving quality
- Improving productivity
- Improving efficiency
- Improving patient responsiveness

FOS

Opportunities - Low Penetration of Medical Technology

No. of CT & MRI Scans per 1 million of population



HI: High Income | UMI: Upper Middle Income | LMI: Lower Middle Income

Opportunities - Medical Tourism
- Medical Value Travel (MVT)

India a good destination for both

Medical Tourism

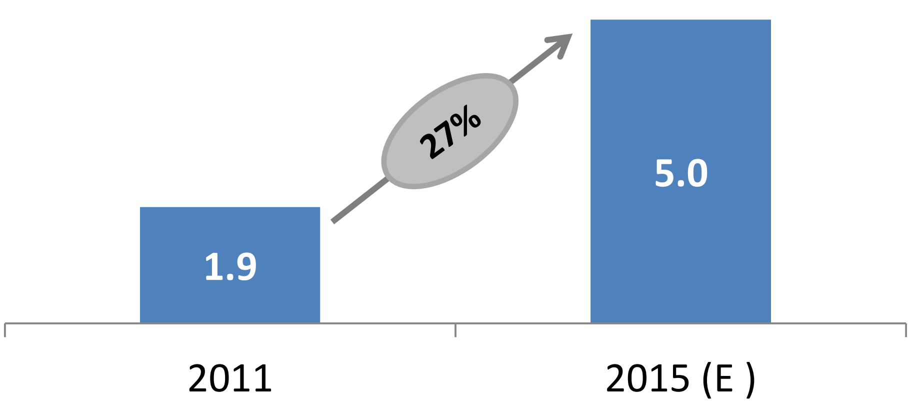
- For well being & Cosmetic procedures
- Traditional medical practices a big draw – yoga, ayurveda, allopathy, meditation, etc.

Medical Value Travel (MVT)

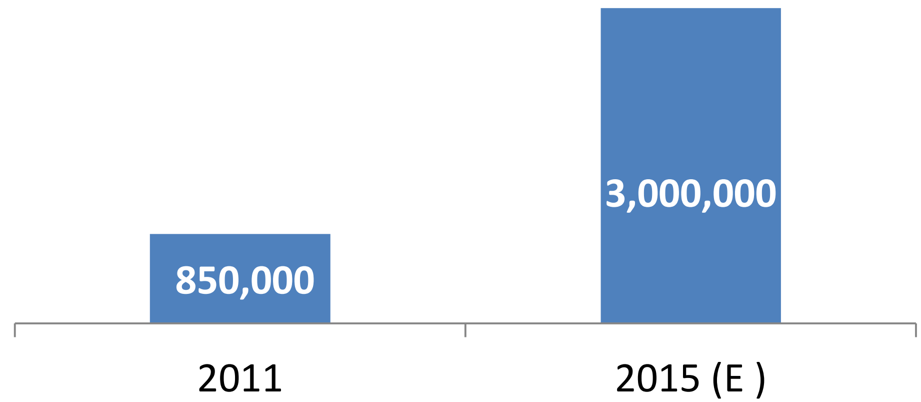
- People Travel to obtain value for medical reasons
- Led by quality, cost, competence, waiting period and responsiveness
- Price of heart Surgery in India ~$2500 against ~$100,000 in US
- Corporate hospitals driven

Medical Tourism/Value Travel - Rapidly Expanding Market

Market Size (in $ bn)



No. of Medical Travelers



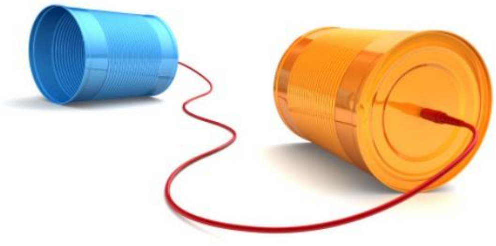
Country / Procedures	United States	India	Thailand	Singapore	Malaysia	Panama	South Korea	Taiwan
Coronary artery bypass surgery	$70,000-133,000	$7,000	$22,000	$16,300	$12,000	$10,500	$31,750	$27,500
Bypass surgery with heart valve replacement	$75,000-140,000	$9,500	$25,000	$22,000	$13,400	$13,500	$42,000	$30,000
Hip / Knee replacement	$33,000-57,000	$7,200	$12,700	$12,000	$7,500	$5,500	$10,600	$8,800

Medical Travel – Things India Needs To Do

Build Infrastructure – both medical and otherwise

Break the language barrier

Make medical visa processing faster and easier



Communicate capabilities and opportunities globally

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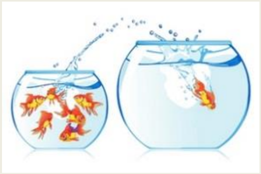
Challenges & Opportunities



Some Innovations

The Fortis Healthcare Story

Innovation – Technology Driven

Transperency in Hospital Operations

Analytics & Efficiency

- Process
- Devices

Scale & Reach

- Website/Mobile Applications for e-Records
- mHeath
- Telemedicine
- Wearble Devices

Rapidly changing the bedrock of Heathcare in the country

Process Innovation

Aravind Eye Care

- Founded in 1976 by Dr. Govindappa Venkataswamy
- 32 mn patients in 36 years
- 4 mn eye surgeries
- Integrated systems. For e.g. 2000 surgeries per surgeon per year - global average of 500
- Accredited to offer diplomas hence assuring continued quality

Model of Efficiency

Process & Cost Innovation

Narayana Hrudalaya

- Founded in 2000 by Dr. Devi Shetty
- Over 15,000 - patients from over 25 countries
- Focus on volumes:
  - 19 OHS & 25 catherization procedures daily, almost 8 times the average
  - 500 blood tests on a machine every day
- Basic open heart surgery at < $1750
- "Never turn away a patient for lack of funds"

High quality and volume at affordable prices

Devices

Swasthya Tablet (PHFI) – 98% job done at 5-10% cost

Addressing Cost & Reach

Devices

Low Cost Incubators for Infants

- Innovated by Dr. Sathya Jeganathan, it regulates the body temperature of infants
- Cost reduced from $2000 to $250

Tata Swach for Clean Water

- Developed by Tata Research Development and Design Centre (TRDDC)
- 3000 lts of safe drinking water in one cycle for $20 by killing 80% of bacteria
- Deployed in thousands post the 2004 Tsunami as part of relief activities

Future of Healthcare in India

India (can be) Like Japan

Intellectual firepower to improvise & master technology to make global products. Many research centres now in India, e.g. - GE, J&J, etc.

Receptive to technology. Eg. Mobile Phones (900 mn)

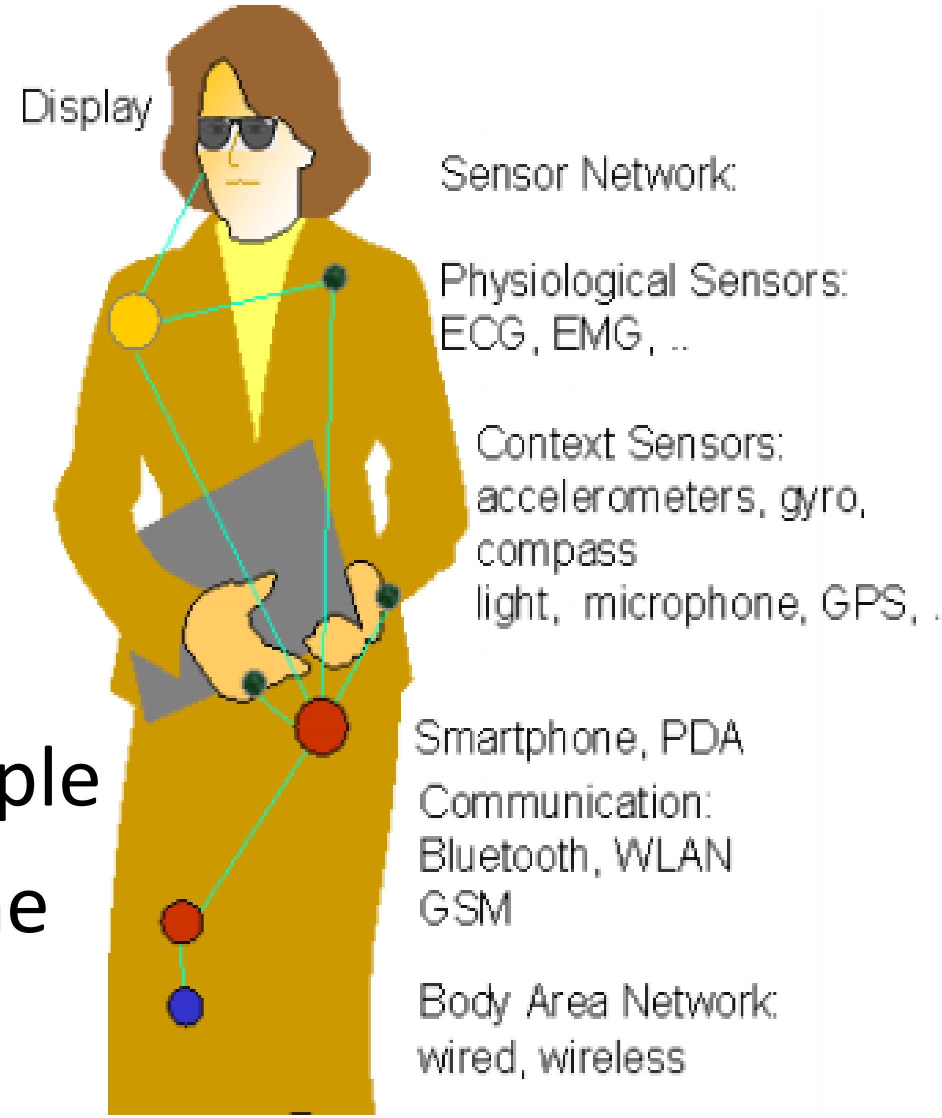
Huge numbers - opportunities of scale with attendant benefits. E.g.: Aadhar scheme

Future of Healthcare in India

- Mobile based
- Aadhar based

Applications for:

- Electronic Health Records of 1+ bn people
- mHealth/Telemedicine
- Wearable Devices



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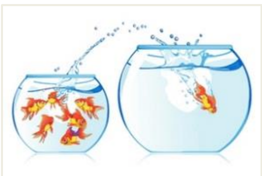
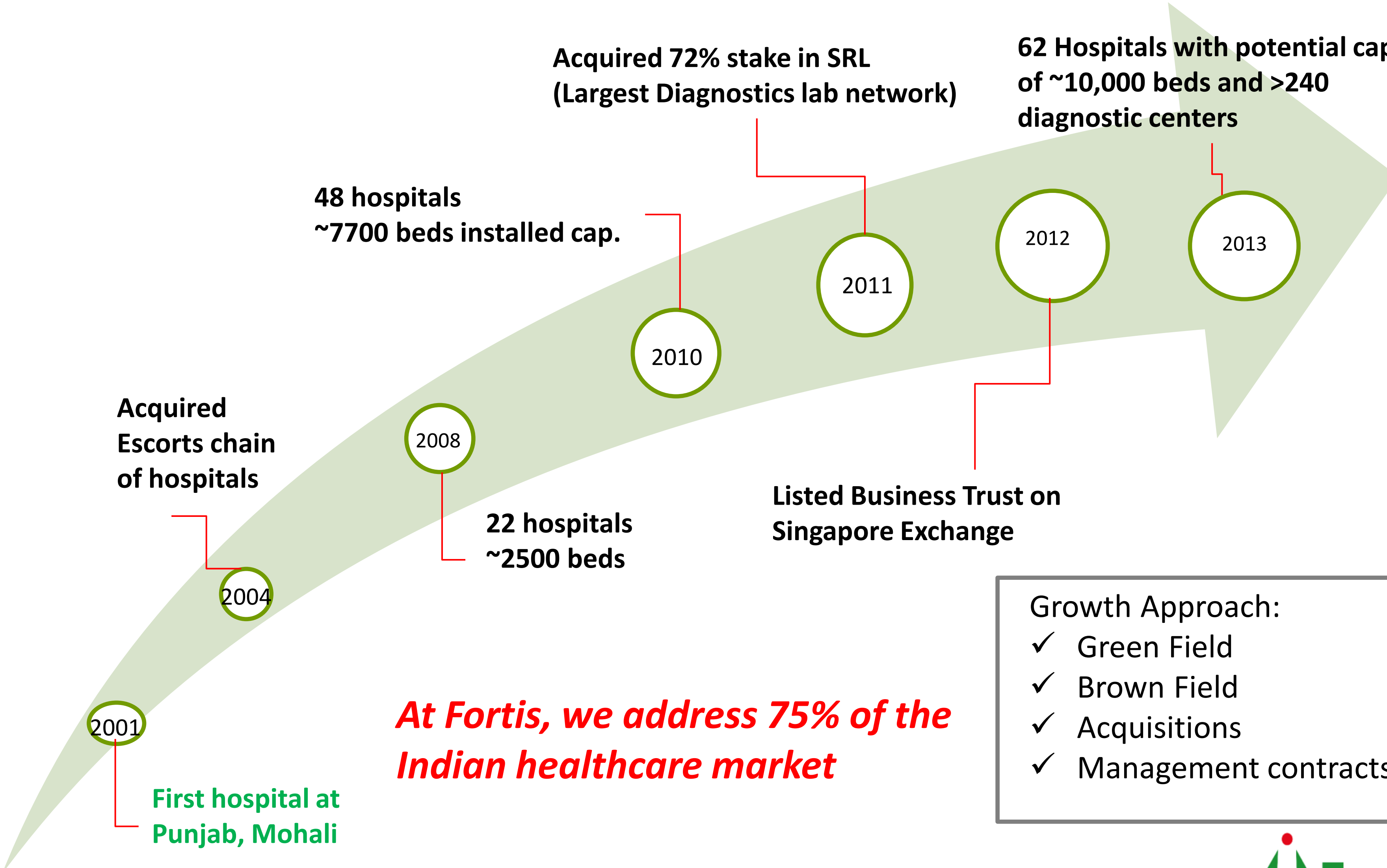


Some Innovations

The Fortis Healthcare Story

Fortis - Growth

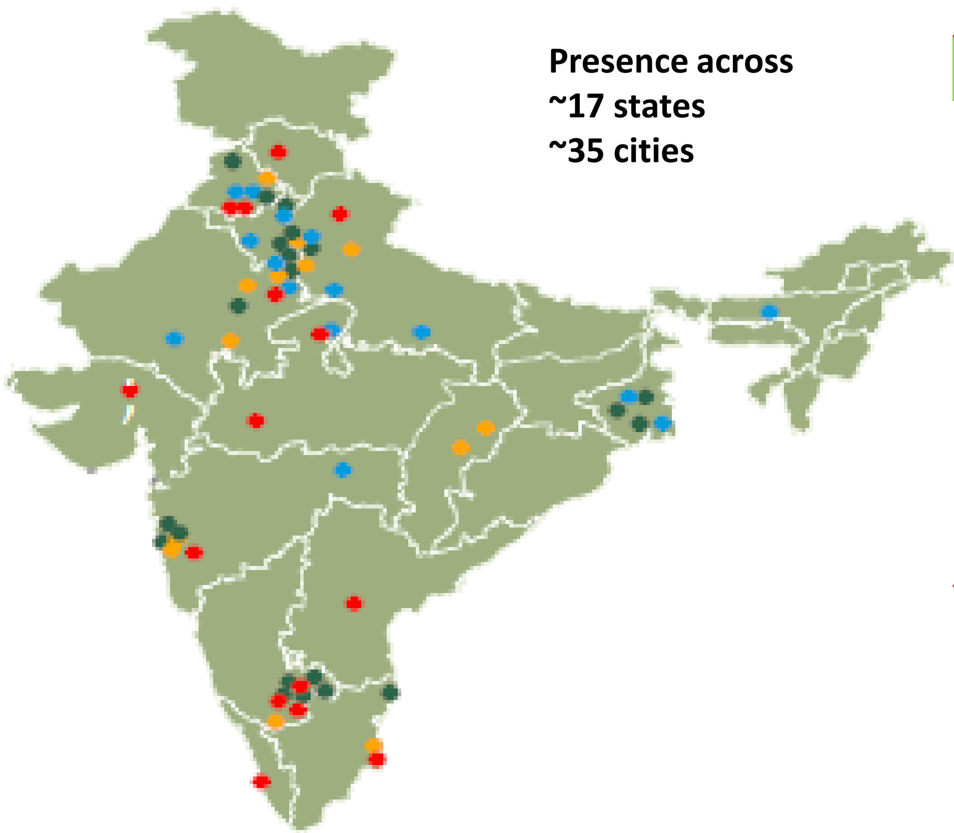


At Fortis, we address 75% of the Indian healthcare market

Growth Approach:
- ✓ Green Field
- ✓ Brown Field
- ✓ Acquisitions
- ✓ Management contracts

The Fortis Footprint

Hospital Business

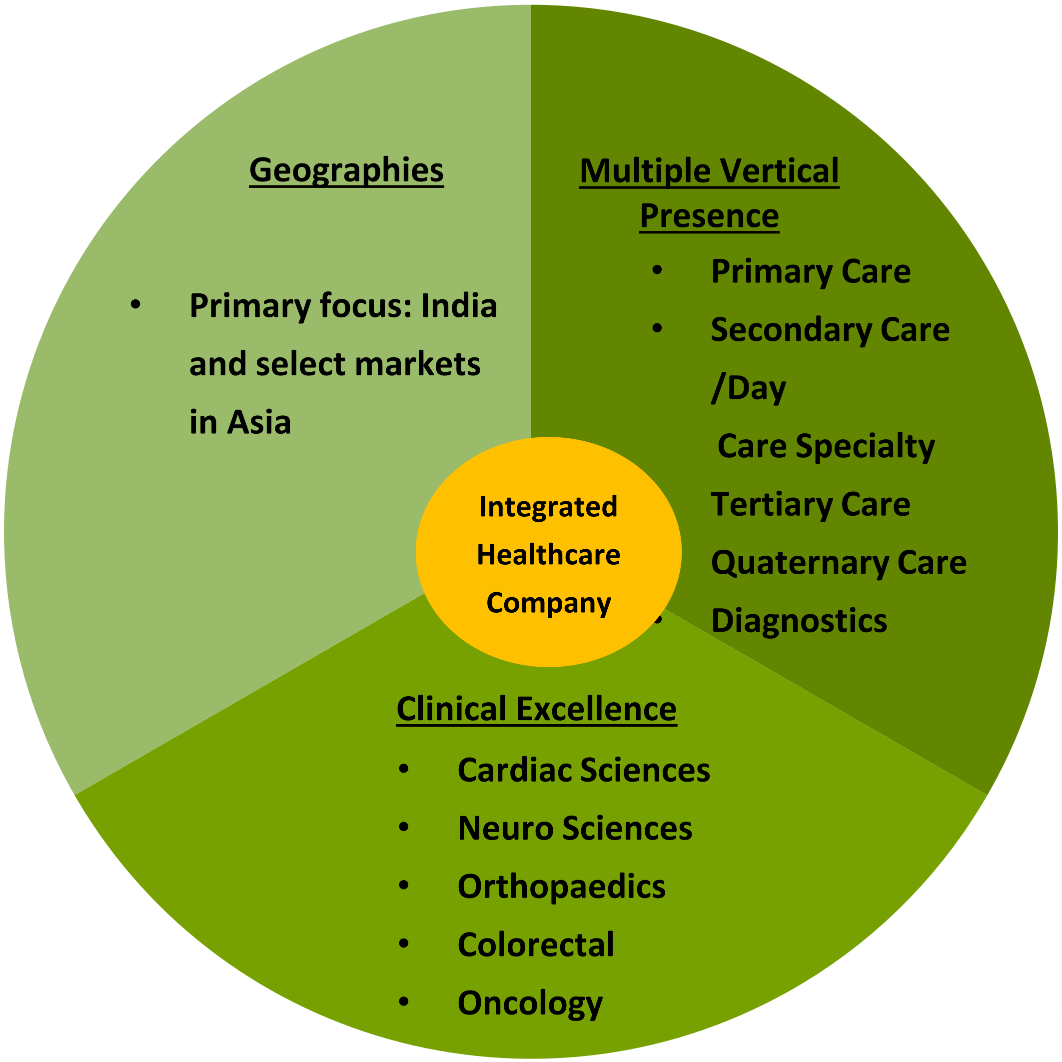


Presence across
~17 states
~35 cities

Diagnostic Business

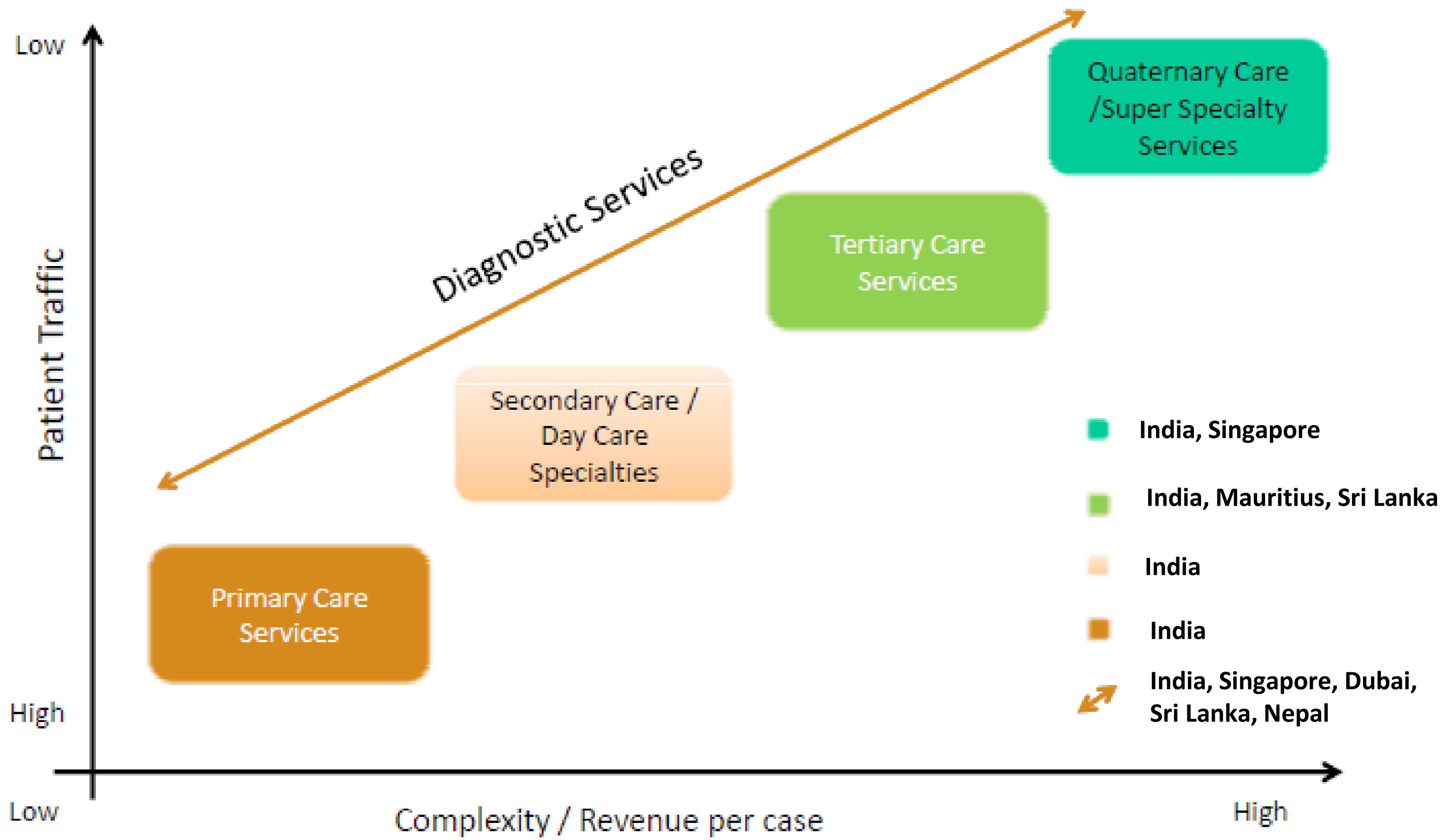
	India	International	Total
Reference Labs	6	2	8
Pathology & Radiology Labs	228	-	228
Wellness Centres	21	-	21
Collection Centres	1231	37	1268

The Fortis Business Model



- 62 Healthcare Facilities
- ~ 4,100 Operational Beds
- ~ 10,000 total potential bed capacity
- ~ 600 Primary Care centers
- >240 Diagnostics Laboratories

Presence Across the Delivery Value Chain



Snapshot: The Fortis Advantage

Experience across the value chain

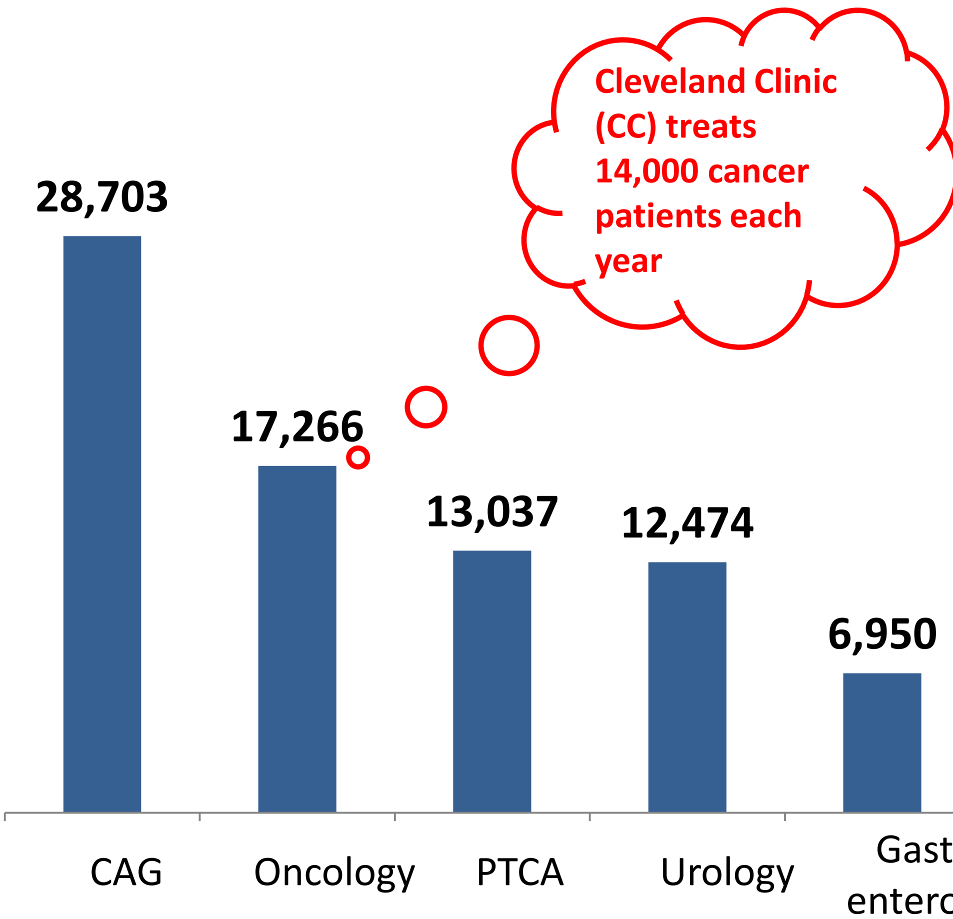
Unrivalled footprint across India & Asia

Standardization across locations

World class facilities with full time doctors instead of consultants

Annual Procedures Volume Done at Fortis

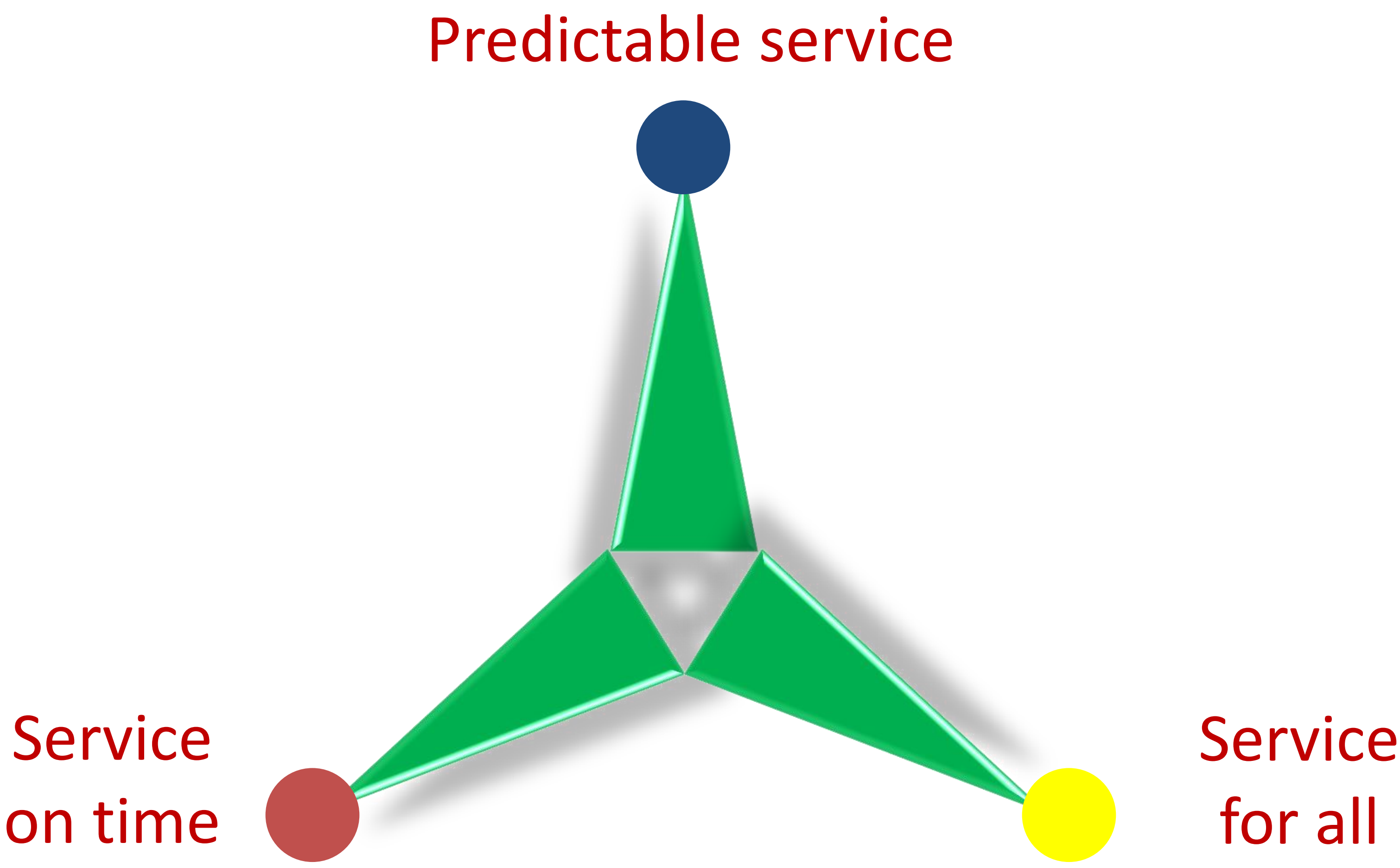
At Fortis, we touch more than two million lives every year[1].....



Procedure Volumes FY 2012-13[2]

1. Includes number of patients including IPD & OPD
2. Source : Fortis Network Procedure Volume Data

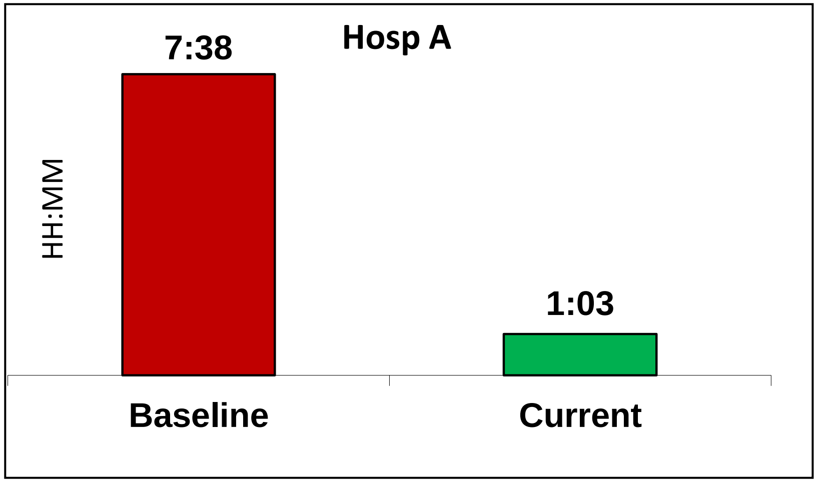
Fortis Operating System (FOS)



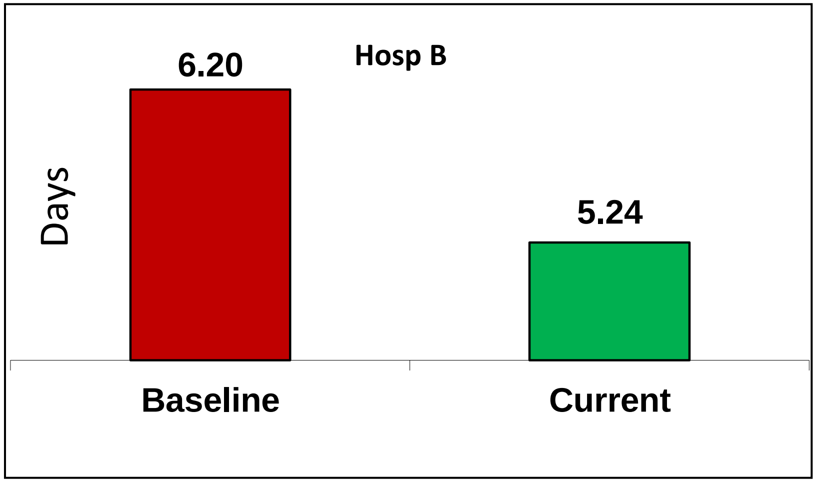
"Beyond satisfaction – an endeavor towards Patient *Delight*"

FOS – Efficiency Impact

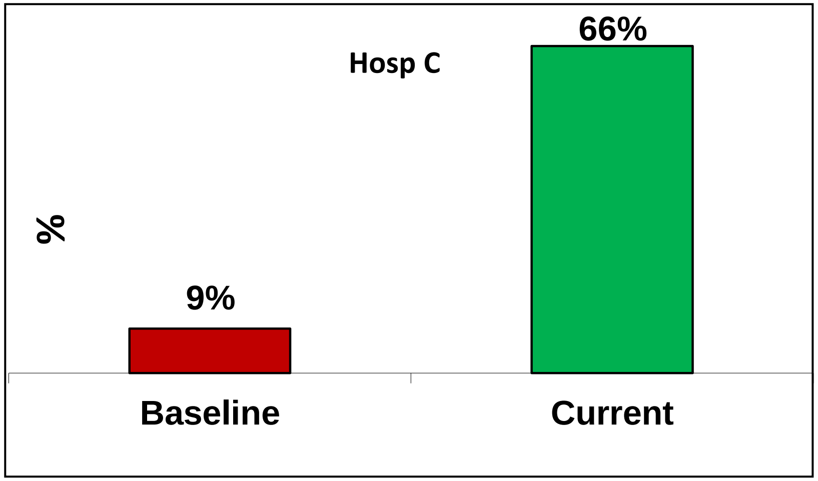
Lab: Turn around Time for results*



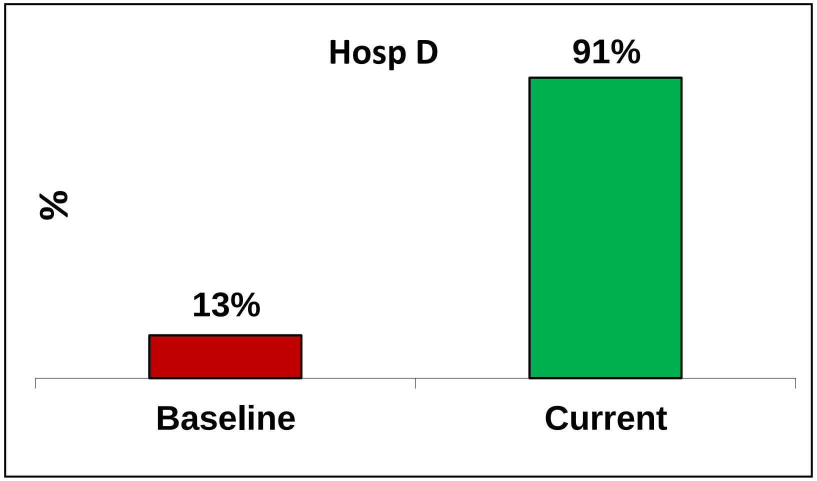
ALOS



% Discharges before 11:00 AM



Radiology: % of USG reports within 15 min**



*All machine based test – CHEM; HEM; COAG;SER; UA – this is around 78% of the total test done in a Lab

**Time taken after the investigation is complete (OPD patients)

Innovation at Fortis - Focus

Making optimal use of high investment resources

Technological integration and embracing innovation

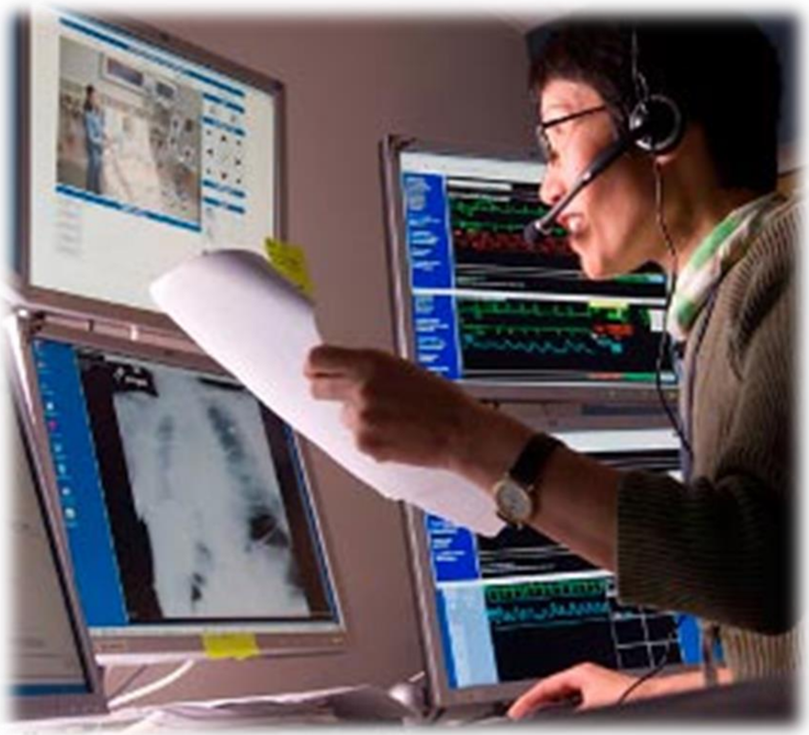
Providing world class delivery entailing finest skill and compassionate care to a large populace

Maximizing doctor productivity

Standardization of clinical protocol

Fortis Medical Innovations

CritiNext



- 24x7 critical care support & vital parameter monitoring across hospitals
- ICU beds across 5 cities connected
- > 30 lives saved
- 25,000 Critical Care consultations done so far
- 1,50,000 Smart Alerts sent
- 250 nurses & 30 doctors trained in new EMR system

A new edge to Indian critical care services

Fortis Medical Innovations

ICIP

- 105 beds, across 7 ICUs, first of its kind in India
- All vital parameters available real time online on different modalities
- Patient's condition can be monitored remotely:
  - On the PC in office
  - On a wireless tablet during rounds
  - On the patient monitor at the bedside
  - On a home computer

Model of Technical Intergration

FMRI Gurgaon: A Next Generation Hospital

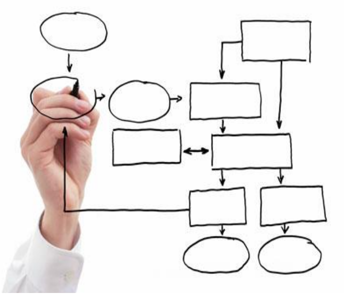
A Slew of "Firsts"

- Alternative therapies
- Wellness, Yoga
- Art therapy
- Spa, Gym, Pool
- Fortiplex: movie theater
- Food court & cafes
- International Check-in counter
- Potential bed capacity 1000

Fortis - Areas for Potential Association

Technology & Equipment Provision

Allowing Fortis to keep ahead of the curve



Process Innovations

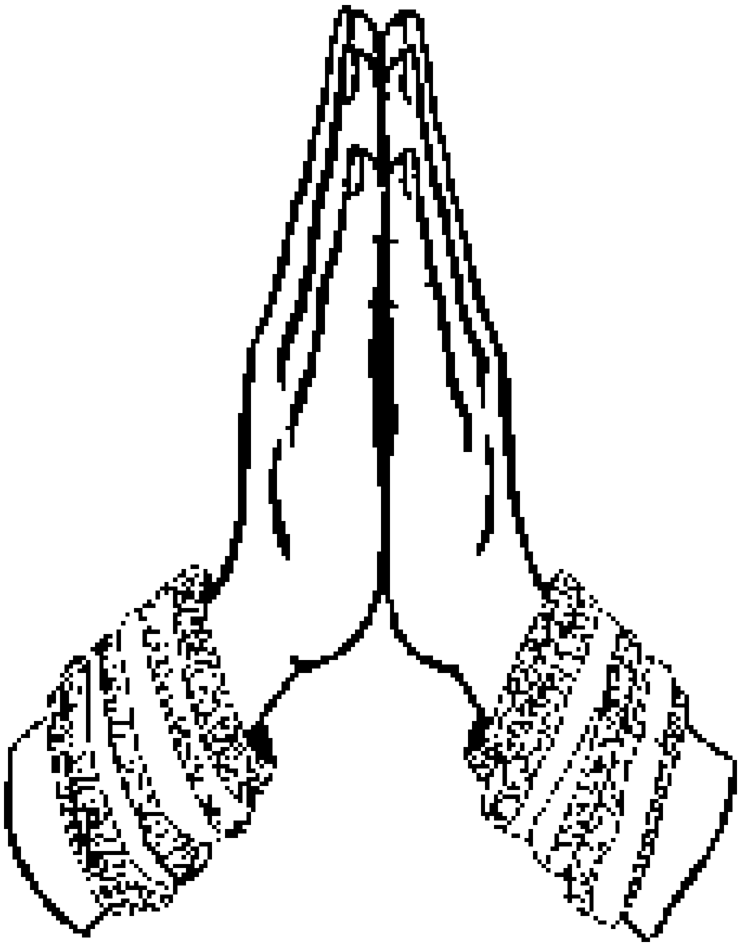
Helping Fortis increase efficiency and customer satisfaction

Services

E.g.: Nighthawk in imaging services

Medical Value Travel/Medical Tourism

One stop destination with world class facilities



Namaste!

Thank You!