

# **Rejuvenation of Healthcare System**

**Accessible. Affordable. Effective.**

Presentation for NITI Aayog  
April 25, 2016

# We made great strides, but...

**1.2 million** children under five died in 2015

**9.7 million** malaria infections per year

**2.5 million** new cases of Tuberculosis in 2015

OOP expenditure forces **63 million** below poverty line

**28%** of deaths due to preventable diseases

(communicable diseases and maternal, perinatal and nutritional)

**65%** of children between 1-2 years age are fully immunised



*Sources:*

1. *Estimates of National Vector Borne Disease Program, 2014*
2. *Balarajan, Y., Selvaraj, S. and Subramanian, S. (2011) healthcare and equity in India, The Lancet, 377, 505;*
3. *Global TB control, WHO 2015*
4. *World Bank Data, 2012*
5. *Unicef: Rapid Survey of children 2013-14*
6. *Draft National Health Policy, 2015*

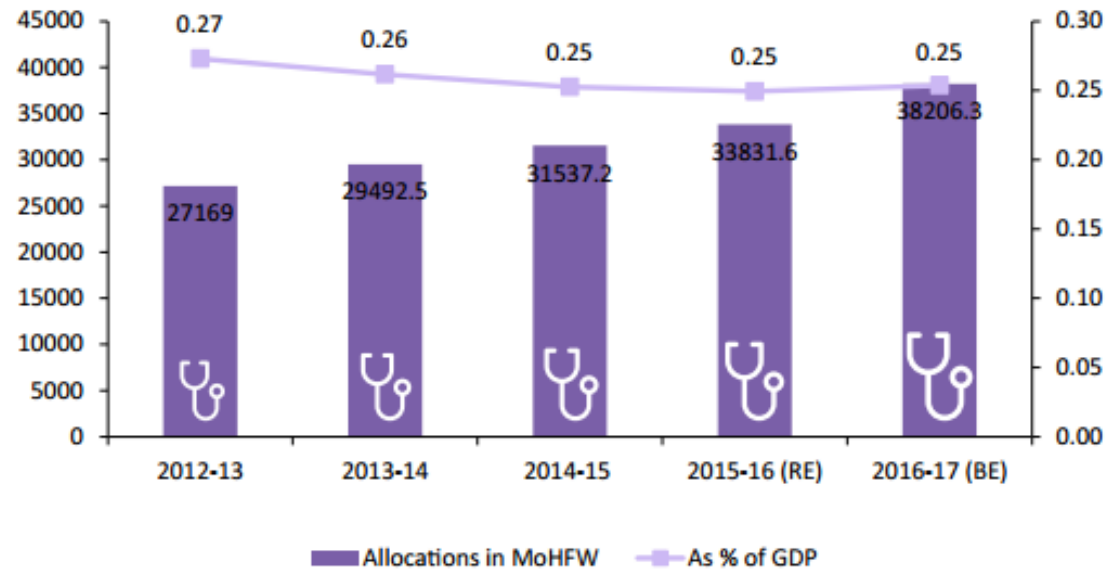
# Welcome new initiatives

- National Newborn Action Plan
- Mission Indradhanush (new vaccines)
- National Health Mission (Integrating NUHM)
- Swachh Bharat
- RSSY
- National eHealth Authority
- Draft National Health Policy, 2015

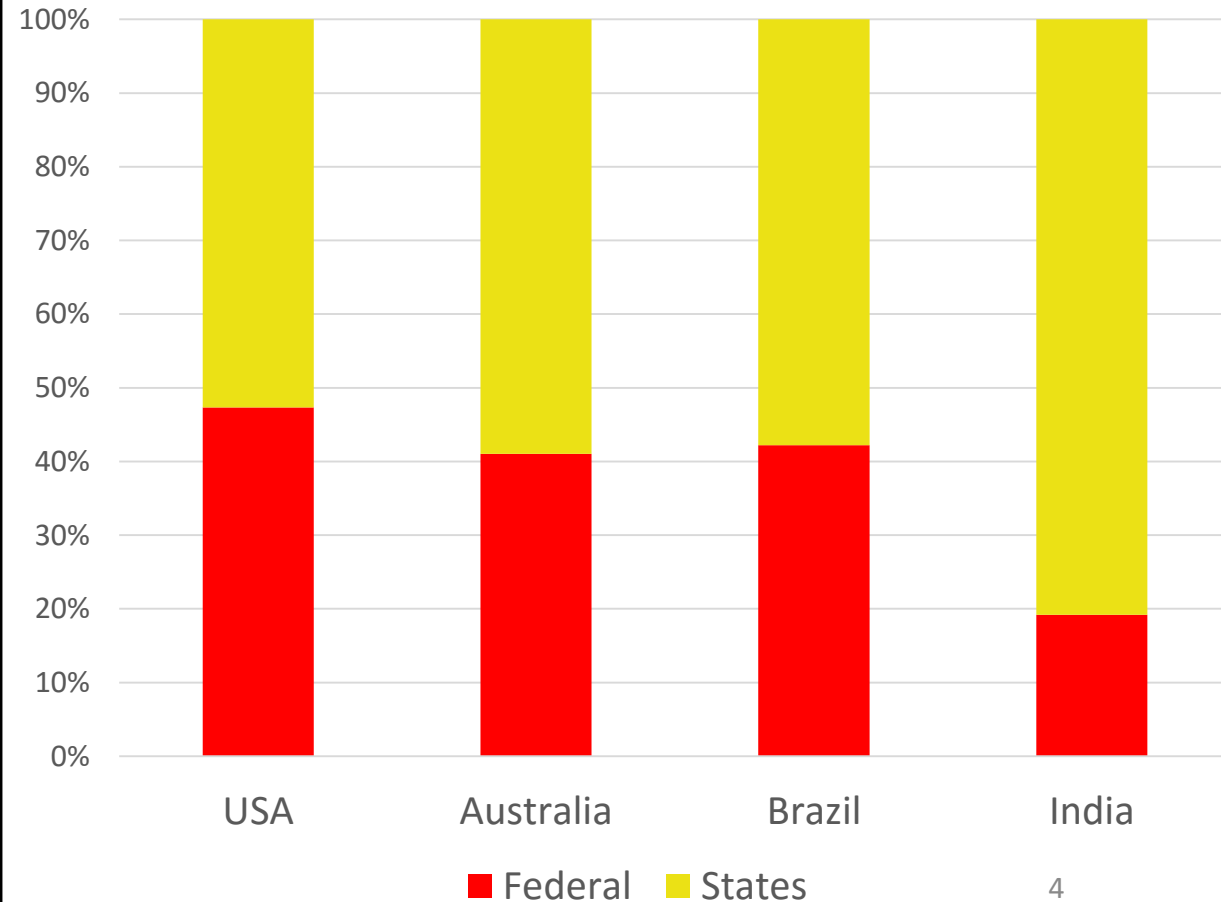
# Public Health Expenditure: Share of Union and States

Current Ratio of Union and States expenditures  
**1:4.**

Allocations in Ministry of Health & Family Welfare as percent of GDP



India's Union and State ratio should rise to  
**1:1**

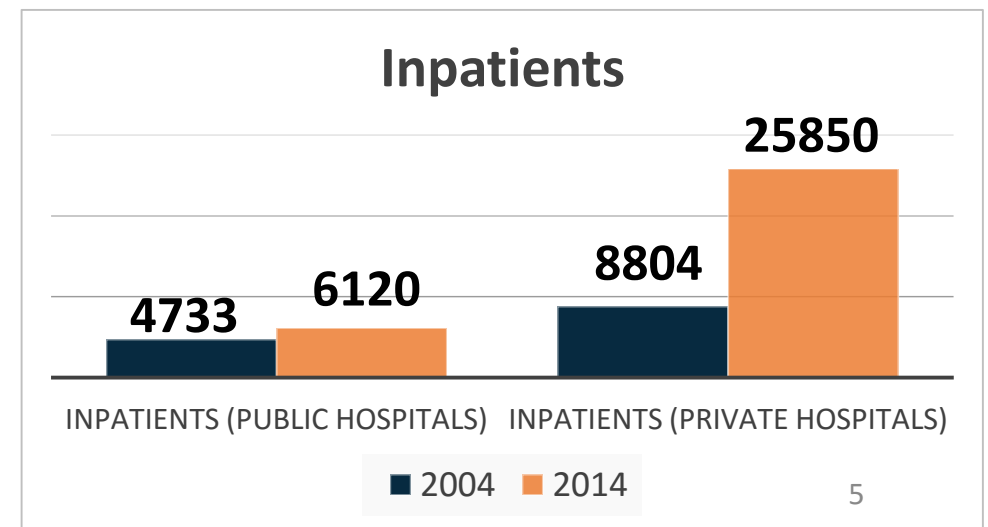
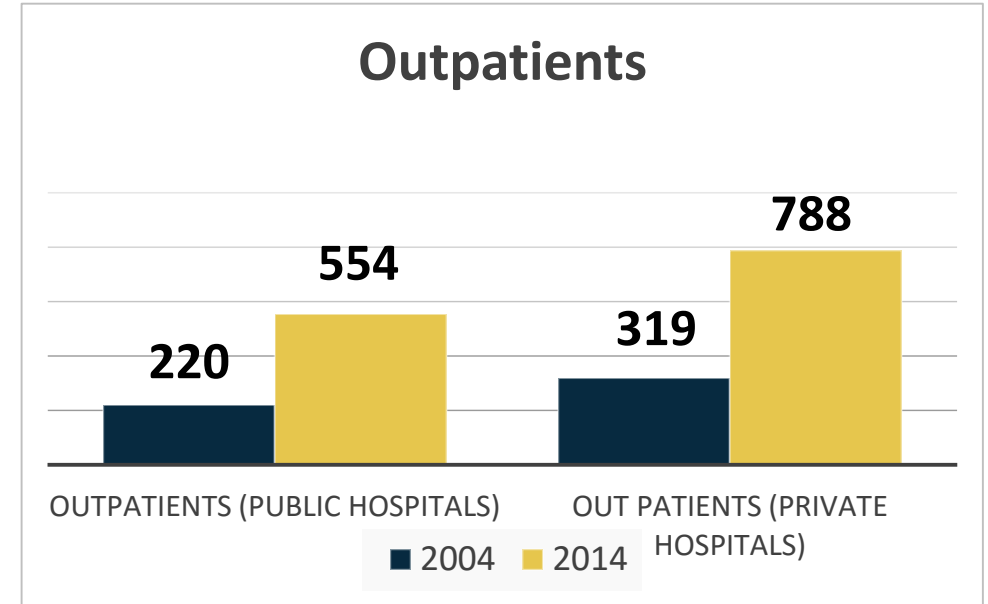


Source: Connecting the Dots – An Analysis of the Union Budget 2016-17, Center for Budget and Governance Accountability (CBGA)

# The Case for Rejuvenation

- Hospitalisation (per 1000 population): **35** in rural, **44** in urban
- **70%** of OOP is from **savings** and the rest from borrowing
- Hospitalized spend **48%** of total annual income on healthcare
- **63 million** are forced into poverty every year due to health care costs alone
- Indians lost almost **37 million years** of healthy life in 2013

## OOP expenditure is rising fast!



Health in India - NSS 71<sup>st</sup> round (Jan to June 2014)

NFHS-3

Health in India- NSSO 71<sup>st</sup> round

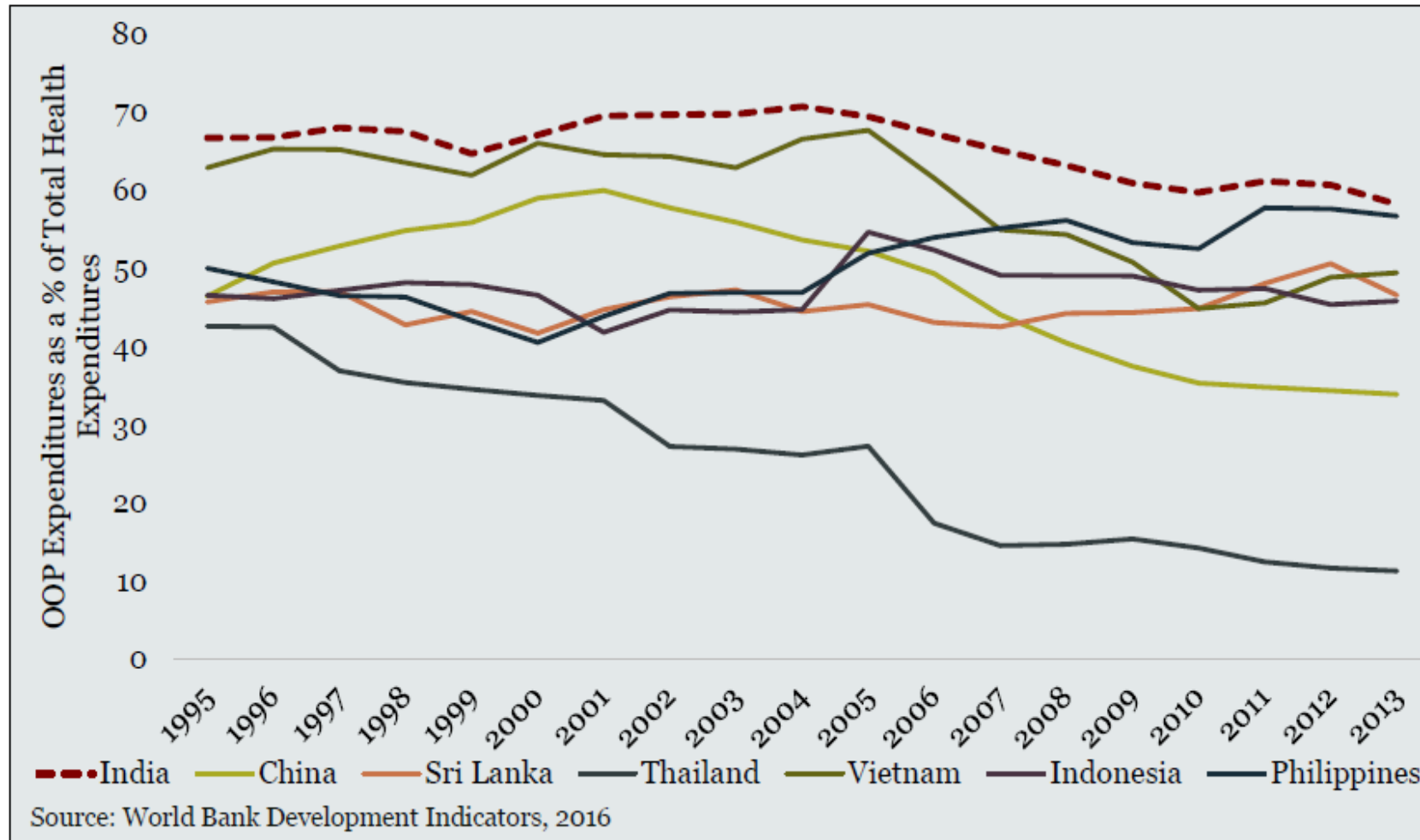
Draft National Health Policy, 2015

Assuring health coverage for all in India – Lancet , December 2015

Study on Global Burden of Disease (GBD), 2013

# The Case for Rejuvenation (contd.)

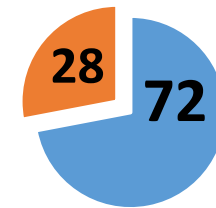
Financial Risk Protection: Out-of-pocket spending as a share of total health expenditure, India and regional comparator countries, 1995-2013



# Ensuring generic drugs' distribution

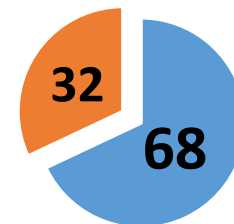
- Govt. spends a mere 0.1% of GDP on publicly funded drugs
- 70% of OOP outpatient expenditure was for purchasing drugs
- Generic drugs can reduce costs up to 75%

Share Of Non-hospitalized  
Expenditure On Medication  
**Rural**



■ ON MEDICINES ■ OTHERS

Share Of Non-hospitalized  
Expenditure On Medication  
**Urban**



■ ON MEDICINES ■ OTHERS

SOURCE:

\*London School of Hygiene and Tropical Medicine; December 2015

\*\* Health in India - NSS 71<sup>st</sup> round (Jan to June 2014)

\*\*\*India Brand Equity Foundation (IBEF)

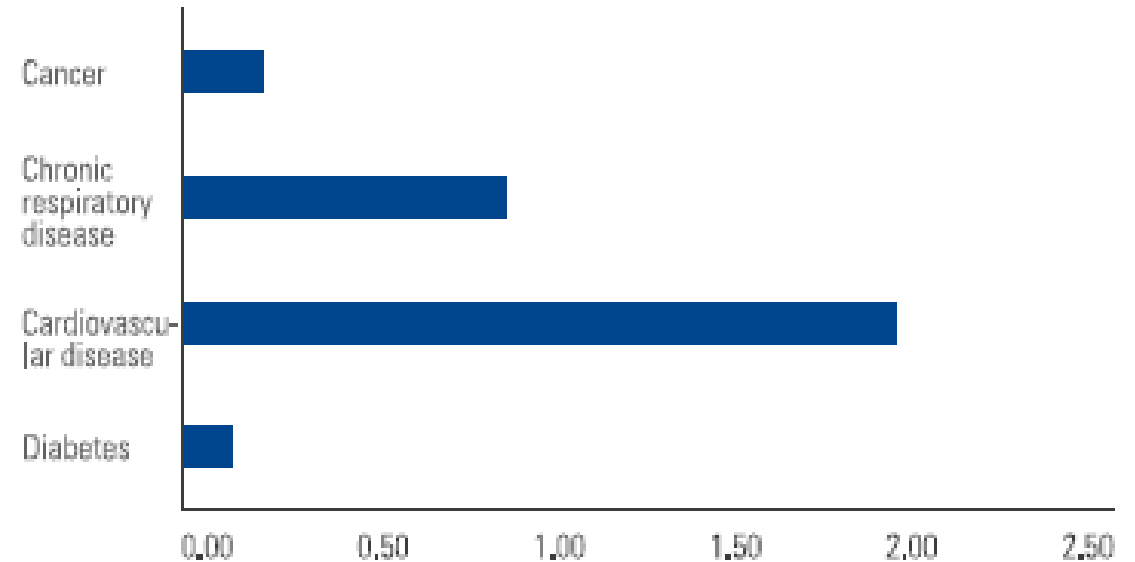
# Rising NCDs & economic burden

By 2030, NCDs will cause 67% of mortality

Total burden \$ 3 trillion in 18 years

Robust Primary Care is the only solution

**Economic burden due to NCDs in India, 2012-30 (in trillion of 2010 USD)**



**Note:** The estimates are based on EPIC model

**Source:** Economics of Non-Communicable Diseases in India, World Economic Forum, November 2014, p22



# Health sector can create jobs!

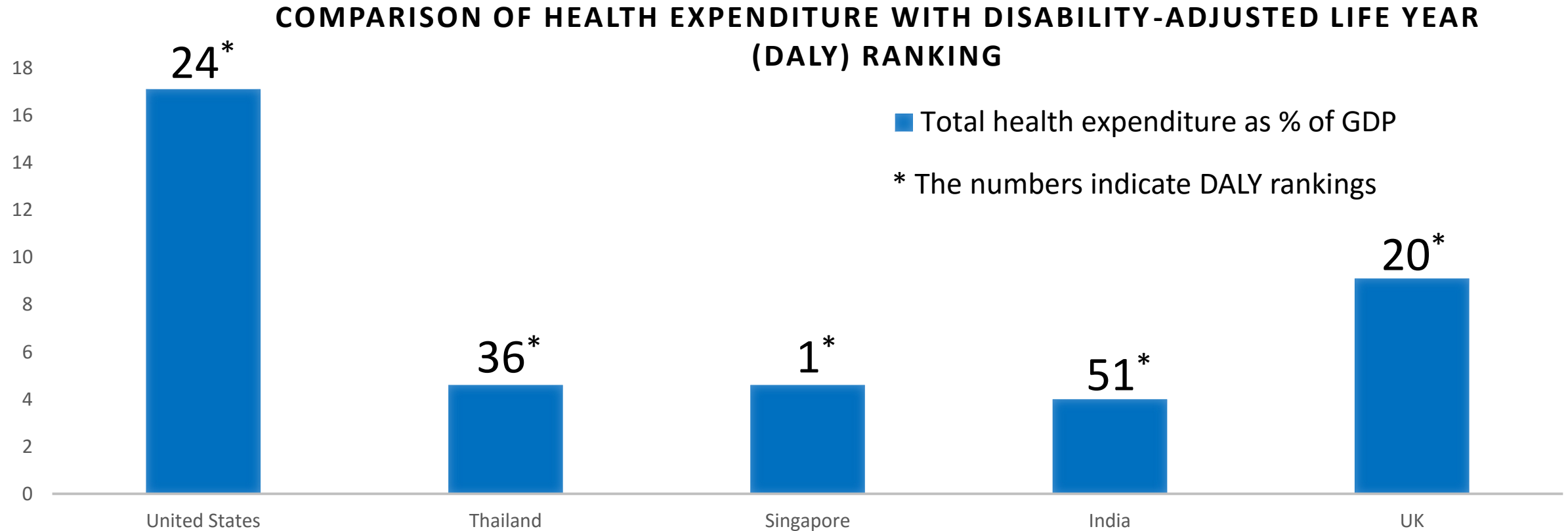
- India has a very low health workforce to population ratio
- Even a conservative number of 20 million shows a wide gap given the existing workforce of **3.6 millions**
- A robust healthcare system can generate **10 million** jobs over a decade.

Country	Population (in millions)	Health Workforce (in millions)	% of Health Workforce in total population
USA	318.9	12.2	3.8
UK	64.1	1.6 (NHS)	2.4
India	1250	3.6 (2013)*	0.28

\*Human Resource and Skill Requirements in the Healthcare Sector- NSDC,KPMG, 2015

\*\*Workforce demand projections of India across various roles in healthcare

# Lessons Learnt: Spending does not improve health automatically!



Out of the 54 countries with GDP greater than \$ 300 bn, **Pakistan, South Africa and Nigeria** ranked below India

# Lessons Learnt: Cost-effectiveness in Healthcare

Health Domains	Public Funded	Private Funded	Cost-effective option
Public and Preventive Health	Strong Positive Externalities	No Markets	Public
Primary Care	Positive Externalities No choice - No Accountability	Disincentive for preventive part	Capitation Fee and Choice
Secondary Care	Inefficiency	Overtreatment	Choice and Competition
Tertiary Care	Centres of Excellence	Overtreatment	Public and NGOs

# Lessons Learnt: Inclusion of the middle-class

- Since **over 70%** of the total healthcare expenditure is incurred in the private sector and that most rich and upper middle-class don't depend on public healthcare facilities:

The purpose will be served if the healthcare model reaches **the poor and lower middle-class** population.

Nevertheless, it is not wise to limit it to a certain section of population

The **voice and demand of middle class** ensures **accountability and quality** in healthcare services.

# Existing Primary Care System

## Strengths:

- Physical infrastructure
- Immunization
- Cold chain
- Reproductive healthcare
- Experienced ANMs
- Emergencies

## Weaknesses:

- Lack of public trust
- Beds are unutilized
- Absenteeism and shortage of personnel
- Minimal OP Services
- No proper drug supplies
- Lack of robust data collection mechanisms

## The Result:

- Pushing patients towards quacks or expensive health facilities
- Overcrowding of tertiary hospitals

# Primary and Preventive Healthcare – Main Features



**The Family Physician**

A system of family physicians (FPs) – **first point of contact**

FP is contracted by a Regional Health Trust (RHT)

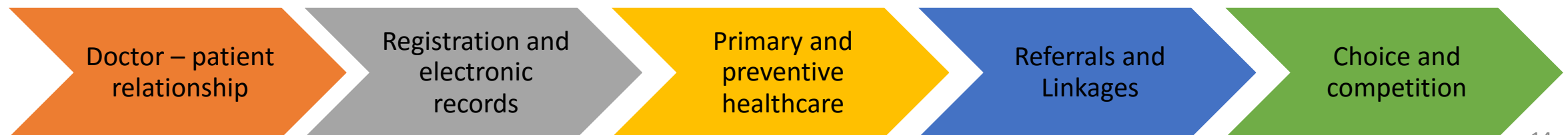
Qualified doctor certified in family healthcare (3-6 months certification course)

3 to 4 additional staff including nurse, assistant, data analyst, etc.

Basic diagnostic facilities such as blood and urine tests

Reside in the community/area of practice (5 to 10 km)

Every doctor would register about 5000 patients



# Primary and Preventive Healthcare – Main Features

Patients has the **choice** of FP – encourages **competition**

AADHAR based registration - electronic patient records – ongoing and onward care - biometric

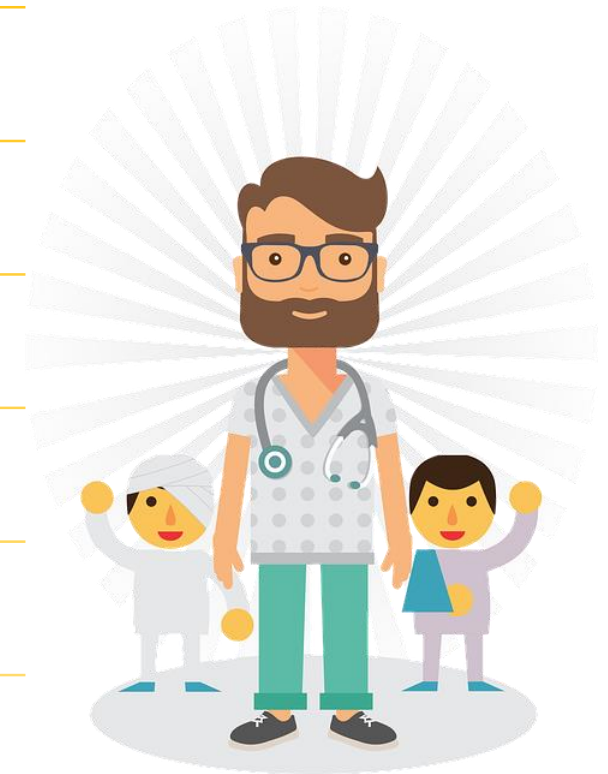
Records linked to National eHealth Authority – National Health Register

Cash transfers to be made to the FPs as per patients choice (Rs. 500-700 per head)

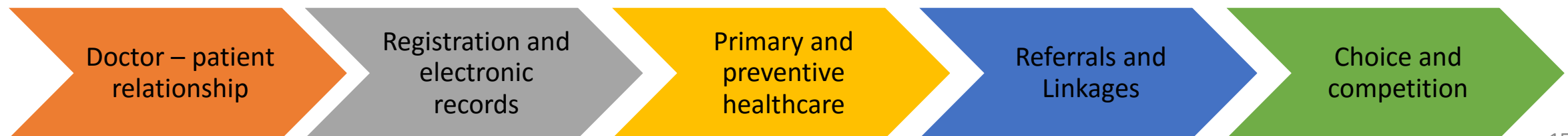
A system of mobile out-patient also can be introduced

Mandatory referral for secondary care

Supply of generic drugs



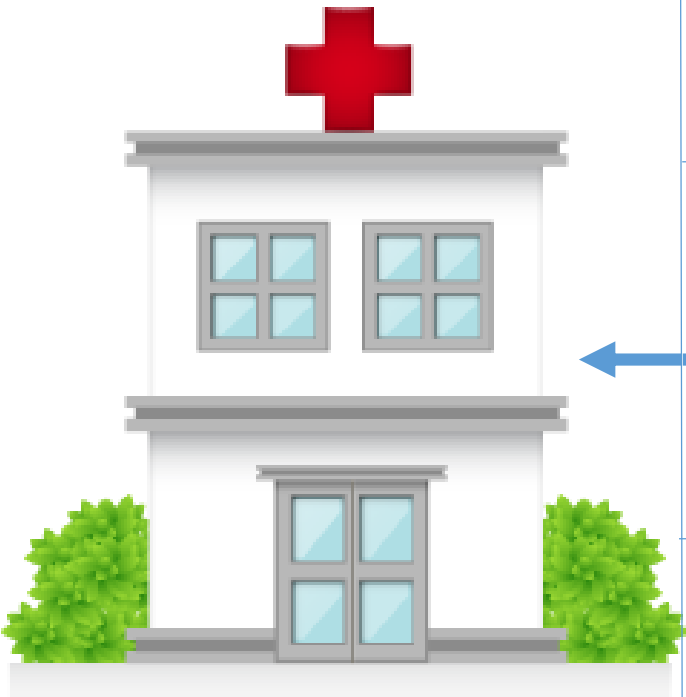
**The Family Physician**



Primary and Preventive Health Care

Primary Health Center

Family Physician



Free generic drug supply

Diagnostic Centre

Field visits and surveys

Nutrition and sanitation

Disease control programmes

Registration

Electronic records

Basic diagnostics

Referrals

Free generic drug supply



ANMs and SHGs work with an FP for public health services



## Primary and Preventive Healthcare expenditure estimates (by 2022)

Per capita expenditure proposed	Rs. 500 to 700
Population projected	140 cr
Assuming coverage for 50% of population, eventually to 70%	70 to 100 cr
Cost of outpatient care, immunization, family planning, simple diagnostics, maternal and child care	Rs. 35,000 to Rs. 70,000 cr
Cost of maintaining existing infrastructure and PHCs (auxiliary staff , administration, etc.)	Rs. 25,000 cr
Expected cost for outreach, cold chains, diagnostic centers, drug supply, electronic patient record, etc.	Rs. 25,000 cr
<b>Total projected public health expenditure on primary and preventive healthcare</b>	<b>Rs. 85,000 cr to 1,20,000 cr</b>

# Existing Secondary Care – CHCs

## Strengths:

- Physical Infrastructure
- Well spread out

## Weaknesses:

- Lack of public trust
- Non-functional
- Absenteeism or shortage of personnel
- Minimal OP Services
- No proper drug supplies
- Lack of equipment

## The Result:

- Non utilization
- Huge OOP burden
- Dependence on private provider
- Over-treatment

# Secondary Healthcare – Main Features

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Integration and expansion of RSSY

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Secondary care by CHC and select private small nursing homes in the area

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Risk-pooling and case based payments (bundled)

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Admission on referral except in emergency

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Clinical lab, X-ray and operation theatre are mandatory in each facility

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Pooled facilities - clinical lab (sophisticated), blood bank, CT scan and ultrasound

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Pooled specialized services like trauma, ophthalmology, ENT, dental etc.

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# Secondary Healthcare – Main Features

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Complete patient **choice** of provider

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Eventually, CHCs will also be paid through billing for services

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District call centres for appointments and queuing

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Tele-medicine

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Polyclinics attended by specialists from tertiary centres – hub-and-spoke model

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Cost of services and protocols - predefined

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Generic drug supply

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Healthy competition between Community Health Centers (CHCs) and private nursing homes

# Secondary Healthcare Expenditure Estimates (by 2022)

Population projected	1.4 billion*
Assuming number of beds (public hospitals, accredited small nursing homes, etc.)	5,00,000
Assuming per bed cost per annum (including interventions, diagnostics and drugs)	Rs. 8,00,000
Total projected public health expenditure on secondary care	Rs. 8,00,000 * 5,00,000 = <b>Rs. 40,000 cr</b>

# Tertiary Care - District and Teaching Hospitals

## Strengths:

- Functional
- Large OP services demand
- Large IP services demand
- Basic Infrastructure
- Personnel available
- Centres of Excellence in Independent model

## Weaknesses:

- Under-funded
- Under-equipped
- Poor Maintenance
- Lack of Independence

## The Result:

- Overcrowding
- Reliance on expensive private sector

# Tertiary Healthcare – Main Features

- Only on referral except emergency cases
- Privately Funded Initiatives- Build, equip, maintain and lease it to the government
- Increase infrastructure and equipment
- Education and Research
- Independent Consultants
- Private care blocks – Incentives to personnel



# Support Institutions

- Regional Health Trust (RHT) – CHC level
- District Health Board (DHB) – Monitoring  
District Hospitals
- State Health Board – Chaired by CM
- National Health Board – Chaired by PM
- Drug Supply Agency – pooled drug  
procurement and supply

Accountability and grievance  
redressal mechanisms

- National e-Health Authority
- District Ombudsman



# Tertiary Healthcare expenditure estimates (by 2022)

There are **550** district hospitals with about **300** beds each and **200** government teaching hospitals with a **1000** beds each.

Total number of beds at the district hospitals	$550 * 300 = 1.65 \text{ lakhs}$
Expected cost per bed per year	Rs.20 lakhs
Total Cost	$1.65 \text{ lakhs} * 20 \text{ lakhs} = \text{Rs. } 33,000 \text{ cr}$
Total number of beds at teaching hospitals	$200 * 1000 = 2 \text{ lakh}$
Total cost	$2 \text{ lakh} * 30 \text{ lakhs} = \text{Rs. } 60000 \text{ cr}$
<b>Total Tertiary Care</b>	$\text{Rs. } 60,000 + \text{Rs. } 33,000$ <b>= Rs. 93,000 cr</b>

## Total Healthcare Expenditure Estimates (by 2022)

Primary and Preventive	Rs. 0.85 lakh cr to 1.20 lakh cr
Secondary	Rs. 0.40 lakh cr
Tertiary	Rs. 0.93 lakh cr
Total	<b>Rs. 2.18 to 2.53 lakh cr</b>
Assuming cost escalation of 50% by 2022	<b>Rs. 3.27 to 3.80 lakh cr</b>
Projected nominal GDP of India by 2022	Rs. 240 lakh cr
<b>Health Expenditure as % of GDP by 2022</b>	<b>1.6%</b>

This is projected gross expenditure on all public healthcare – it includes all the current expenditure with an estimated cost escalation of 50%

# Merits of this approach

- Building on existing strengths
- Moderate cost – total healthcare cost **under 2% of GDP**  
(including current programmes)

Captures popular imagination :

- FP of choice
- Continuity of care
- Choice in Secondary care
- Quality care in tertiary facilities
- Competition

# Merits of this approach (Contd.)

- Eventually, cost recovery from those who can pay
- Accountability
- Flexibility to individual States
- Integrating all existing risk-pooling mechanisms (RSSY)
- No legislation required
- Real time health data
- Generating more skilled jobs using the existing skill development framework (PMKVY)
- Integration of existing schemes (Jan Aushadi Scheme, National Health Mission)
- Can be rolled out in a phased manner

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