Rejuvenation of Healthcare System

Accessible. Affordable. Effective.
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:
5. Unicef: Rapid Survey of children 2013-14
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.

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 71st round (Jan to June 2014)
NFHS-3
Health in India- NSSO 71st 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

Source: World Bank Development Indicators, 2016
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: 28%
- OTHERS: 72%

Urban

- ON MEDICINES: 32%
- OTHERS: 68%

SOURCE:
*London School of Hygiene and Tropical Medicine; December 2015
**Health in India - NSS 71st round (Jan to June 2014)
***India Brand Equity Foundation (IBEF)
By 2030, NCDs will cause 67% of mortality

Total burden $3 trillion in 18 years

Robust Primary Care is the only solution
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.

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (in millions)</th>
<th>Health Workforce (in millions)</th>
<th>% of Health Workforce in total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>318.9</td>
<td>12.2</td>
<td>3.8</td>
</tr>
<tr>
<td>UK</td>
<td>64.1</td>
<td>1.6 (NHS)</td>
<td>2.4</td>
</tr>
<tr>
<td>India</td>
<td>1250</td>
<td>3.6 (2013)*</td>
<td>0.28</td>
</tr>
</tbody>
</table>

*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.

Source: World Bank; WHO
## Lessons Learnt: Cost-effectiveness in Healthcare

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

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients choice of FP</td>
<td>encourages competition</td>
</tr>
<tr>
<td>AADHAR based registration</td>
<td>electronic patient records – ongoing and onward care - biometric</td>
</tr>
<tr>
<td>Records linked to National eHealth Authority</td>
<td>National Health Register</td>
</tr>
<tr>
<td>Cash transfers to be made to FPs</td>
<td>as per patients choice (Rs. 500-700 per head)</td>
</tr>
<tr>
<td>Mobile out-patient system</td>
<td>A system of mobile out-patient also can be introduced</td>
</tr>
<tr>
<td>Mandatory referral for secondary care</td>
<td></td>
</tr>
<tr>
<td>Supply of generic drugs</td>
<td></td>
</tr>
</tbody>
</table>

1. Doctor – patient relationship
2. Registration and electronic records
3. Primary and preventive healthcare
4. Referrals and Linkages
5. Choice and competition
Primary and Preventive Health Care

Primary Health Center

- Free generic drug supply
- Diagnostic Centre
- Field visits and surveys
- Nutrition and sanitation
- Disease control programmes

ANMs and SHGs work with an FP for public health services
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary and Preventive Healthcare expenditure estimates (by 2022)</strong></td>
<td></td>
</tr>
<tr>
<td>Per capita expenditure proposed</td>
<td>Rs. 500 to 700</td>
</tr>
<tr>
<td>Population projected</td>
<td></td>
</tr>
<tr>
<td>Assuming coverage for 50% of population, eventually to 70%</td>
<td>140 cr</td>
</tr>
<tr>
<td></td>
<td>70 to 100 cr</td>
</tr>
<tr>
<td>Cost of outpatient care, immunization, family planning, simple diagnostics, maternal and child care</td>
<td>Rs. 35,000 to Rs. 70,000 cr</td>
</tr>
<tr>
<td>Cost of maintaining existing infrastructure and PHCs (auxiliary staff, administration, etc.)</td>
<td>Rs. 25,000 cr</td>
</tr>
<tr>
<td>Expected cost for outreach, cold chains, diagnostic centers, drug supply, electronic patient record, etc.</td>
<td>Rs. 25,000 cr</td>
</tr>
<tr>
<td><strong>Total projected public health expenditure on primary and preventive healthcare</strong></td>
<td>Rs. 85,000 cr to 1,20,000 cr</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration and expansion of RSSY</td>
<td></td>
</tr>
<tr>
<td>Secondary care by CHC and select private small nursing homes in the area</td>
<td></td>
</tr>
<tr>
<td>Risk-pooling and case based payments (bundled)</td>
<td></td>
</tr>
<tr>
<td>Admission on referral except in emergency</td>
<td></td>
</tr>
<tr>
<td>Clinical lab, X-ray and operation theatre are mandatory in each facility</td>
<td></td>
</tr>
<tr>
<td>Pooled facilities - clinical lab (sophisticated), blood bank, CT scan and ultrasound</td>
<td></td>
</tr>
<tr>
<td>Pooled specialized services like trauma, ophthalmology, ENT, dental etc.</td>
<td></td>
</tr>
</tbody>
</table>
Secondary Healthcare – Main Features

- Complete patient **choice** of provider
- Eventually, CHCs will also be paid through billing for services
- District call centres for appointments and queuing
- Tele-medicine
- Polyclinics attended by specialists from tertiary centres – hub-and-spoke model
- Cost of services and protocols - predefined
- Generic drug supply

Healthy competition between Community Health Centers (CHCs) and private nursing homes
## Secondary Healthcare Expenditure Estimates (by 2022)

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

* Provisional by 2022, World Population Prospects, The 2015 Revision by Department of Economic and Social Affairs, UN.
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)

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are <strong>550</strong> district hospitals with about <strong>300</strong> beds each and <strong>200</strong> government teaching hospitals with a <strong>1000</strong> beds each.</td>
<td>550 * 300 = 1.65 lakhs</td>
</tr>
<tr>
<td>Total number of beds at the district hospitals</td>
<td>550 * 300 = 1.65 lakhs</td>
</tr>
<tr>
<td>Expected cost per bed per year</td>
<td>Rs.20 lakhs</td>
</tr>
<tr>
<td>Total Cost</td>
<td>1.65 lakhs * 20 lakhs = Rs. 33,000 cr</td>
</tr>
<tr>
<td>Total number of beds at teaching hospitals</td>
<td>200 * 1000 = 2 lakh</td>
</tr>
<tr>
<td>Total cost</td>
<td>2 lakh * 30 lakhs = Rs. 60,000 cr</td>
</tr>
<tr>
<td><strong>Total Tertiary Care</strong></td>
<td>Rs. 60,000 + Rs. 33,000</td>
</tr>
<tr>
<td></td>
<td>= Rs. 93,000 cr</td>
</tr>
<tr>
<td>Total Healthcare Expenditure Estimates (by 2022)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Primary and Preventive</strong></td>
<td>Rs. 0.85 lakh cr to 1.20 lakh cr</td>
</tr>
<tr>
<td><strong>Secondary</strong></td>
<td>Rs. 0.40 lakh cr</td>
</tr>
<tr>
<td><strong>Tertiary</strong></td>
<td>Rs. 0.93 lakh cr</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>Rs. 2.18 to 2.53 lakh cr</td>
</tr>
<tr>
<td><strong>Assuming cost escalation of 50% by 2022</strong></td>
<td>Rs. 3.27 to 3.80 lakh cr</td>
</tr>
<tr>
<td><strong>Projected nominal GDP of India by 2022</strong></td>
<td>Rs. 240 lakh cr</td>
</tr>
<tr>
<td><strong>Health Expenditure as % of GDP by 2022</strong></td>
<td>1.6%</td>
</tr>
</tbody>
</table>

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

***