An Analysis of India’s Health Infrastructure and Its State of Development

Info Sphere

A Centre for New Economics Studies Initiative

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Health has been a key issue which was addressed in the Union budget 2021-22.

The Central government estimates it expenditure to be 2.2 lakh crore from which 35 thousand crore will be allocated for COVID-19 vaccines. The rest can be either spent on public health insurances, social schemes and infrastructures.

To analyse where the government can possibly allocate the fund, it is imperative to understand the current condition and implications on healthcare development.

This Info Sphere Issue is an extended analysis from our previous work on the Health Insurance Market in India.

In this Issue, we cover some of the key concerns with regards to Healthcare Development and Infrastructure, featuring a discussion on:

1. Status of development of healthcare for infants, children and women
2. The adequacy of infrastructure in India
3. Healthcare expenditure
Female Healthcare in India

Pregnant women receiving prenatal care of at least four visits

Source: World Bank
Family Planning in India

Access to Family Planning Messages and Unmet Need for Family Planning

### Poor Households

<table>
<thead>
<tr>
<th>Year</th>
<th>Heard on Radio &amp; TV</th>
<th>Family Planning in Print</th>
<th>Unmet Need for Family Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>1.6</td>
<td>1.6</td>
<td>20%</td>
</tr>
<tr>
<td>2006</td>
<td>2.3</td>
<td>2.3</td>
<td>16%</td>
</tr>
<tr>
<td>2016</td>
<td>11.8</td>
<td>10.1</td>
<td>10%</td>
</tr>
</tbody>
</table>

### Richer Households

<table>
<thead>
<tr>
<th>Year</th>
<th>Heard on Radio &amp; TV</th>
<th>Family Planning in Print</th>
<th>Unmet Need for Family Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>56.4</td>
<td>56.3</td>
<td>12%</td>
</tr>
<tr>
<td>2006</td>
<td>65.7</td>
<td>40.6</td>
<td>3%</td>
</tr>
<tr>
<td>2016</td>
<td>67</td>
<td>23.6</td>
<td>11%</td>
</tr>
</tbody>
</table>

Source: World Bank
Problems in Accessing Healthcare (% of women)

2006

Poorer Women

- 24%
- 23%
- 21%
- 22%
- 10%

Richer Women

- 27%
- 20%
- 18%
- 16%
- 17%

2016

Poorer Women

- 24%
- 22%
- 21%
- 20%
- 10%

Richer Women

- 37%
- 19%
- 14%
- 15%
- 15%

Source: World Bank
Basic Sanitary Facilities Across Rural and Urban Areas and Income Distributions

Source: World Bank
Current Expenditure on Healthcare (% GDP)

Source: Budget 2021-22
Level of capital investments on health expressed as a percentage of GDP. Capital health investments include health infrastructure (buildings, machinery, IT) and stocks of vaccines for emergency or outbreaks.
Current Healthcare Expenditure (% of GDP) Across G20 Countries

Source: World Bank
Domestic public sources include domestic revenue as internal transfers and grants, transfers, subsidies to voluntary health insurance beneficiaries, non-profit institutions serving households (NPISH) or enterprise financing schemes as well as compulsory prepayment and social health insurance contributions. They do not include external resources spent by governments on health.

External sources compose of direct foreign transfers and foreign transfers distributed by government encompassing all financial inflows into the national health system from outside the country. External sources either flow through the government scheme or are channeled through non-governmental organizations or other schemes.

Domestic private sources include funds from households, corporations and non-profit organizations. Such expenditures can be either prepaid to voluntary health insurance or paid directly to healthcare providers.
Share of Current Health Expenditure Funded Through Different Channels in India

Source: World Bank
Health Infrastructure

Hospital Bed (per 1000 people) India

Hospital Beds (1000 people) comparison of G20 countries

Source: World Bank
The average number of physicians of G20 countries is 2.6 per 1000 people. India on an average has 0.6 physicians per 1000 people.

Source: World Bank
• CHWs can make a valuable contribution to community development and, more specifically, can improve access to and coverage of communities with basic health services.

• ASHA is a community health workers' initiative started under health system reform initiative, the National Rural Health Mission (NRHM) launched in 2005. ASHAs are valued for their contribution towards maternal health education and for their ability to provide basic biomedical care.

For more information: Community health workers in rural India: analysing the opportunities and challenges Accredited Social Health Activists (ASHAs) face in realising their multiple roles
The healthcare infrastructure has been developed as a three-tier system and is based on the following population norms:

<table>
<thead>
<tr>
<th>Centers</th>
<th>Population Norms</th>
<th>Avg. Rural Population Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-centres (SC)</td>
<td>3,000-5,000</td>
<td>5616</td>
</tr>
<tr>
<td>Primary Health Centers (PHC)</td>
<td>20,000-30,000</td>
<td>35567</td>
</tr>
<tr>
<td>Community Health Centers (CHC)</td>
<td>80,000-1,20,000</td>
<td>165702</td>
</tr>
</tbody>
</table>

Source: Rural Health Statistic 2018-19
Public Healthcare Centres

Number of Healthcare centres

Source: Rural Health Statistics
State-wise Rural Public Health Care Centres

Source: Rural Health Statistics
Doctors at Rural Public Healthcare Centres (PHS)

Numerator of Doctors

- Doctors at PHCs (Rural)
- Doctors at PHCs - In Position (Rural)

Source: Rural Health Statistics
Immunization in India

• Being only 35 years old, the India’s Universal Immunization Program (UIP) is one of the largest in the world.

• Despite this, it has been able to fully immunize only 65% of the children.

• The GOI launched Mission “Indradhanush” for the purpose of overcoming the shortcomings of the UIP and establish full coverage of immunizations in India.

• Immunizations for people at the lowest part of income distribution have significantly dropped to 10% receiving no vaccinations at all as opposed to 48% in 1993.

For more info: National Health Portal India, GOI

Source: World Bank
Children Treated for ARI, Diarrhea and Fever Across Income Distributions

Source: World Bank

- Treatment of acute respiratory infection (ARI) (% of children under 5 taken to a health provider)
- Treatment of diarrhea (ORS, RHS or increased fluids) (% of children under 5)
- Treatment of fever (% of children under 5 with fever)

<table>
<thead>
<tr>
<th></th>
<th>Lowest Quartile 2006</th>
<th>Highest Quartile 2006</th>
<th>Lowest Quartile 2016</th>
<th>Highest Quartile 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment of ARI (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of diarrhea (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of fever (%)</td>
<td></td>
<td></td>
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</tbody>
</table>
We regressed height weight for age of a child on wealth index of a household and find that a unit rise in wealth leads to 0.13 unit rise in height and weight of a child.

Source: NFHS Survey Data 2015
In development of public provisioning of healthcare, which can primarily categorised as rural poor, rural rich, urban poor and urban rich, India has a high ‘inequality of access’ for these groups.

There is also a inter and intra state-wide division (and inequal access), as most of the healthcare expenditure, policies and schemes are implemented locally and overseen by individual states. Uttar Pradesh and Maharashtra have the highest number of doctors present in Rural Public Health Centers.

The availability of hospital beds, physicians, nurses, midwives, community health workers in India is lower than the cumulative average of G20 countries. The Current Health Expenditure (as a percentage of GDP) of India and Turkey is the lower than what it was in 2000. All other G20 countries have show increase in current health expenditure. In 2017, India had zero capital investments made in health care sector.

Finally, we see an increase in privatization of health care services, as the share of private health expenditure in current health expenditure is the highest (in comparison to most other countries).
For any inputs, comments or clarifications please contact The Centre for New Economics Studies at cnes@jgu.edu.in.

Thank you!