India COVID-19 Vaccination Financing Report

30 March 2021

The Indian COVID-19 Alliance (TICA)

IDFC Institute

About Us

IDFC Institute has been set up as a research-focused think/do tank to investigate the political, economic and spatial dimensions of India's ongoing transition from a low-income, state-led country to a prosperous market-based economy. We provide in-depth, actionable research and recommendations that are grounded in a contextual understanding of the political economy of execution. Our work rests on three pillars — 'State and the Citizen', 'Strengthening Institutions', and 'Urbanisation'. The State and the Citizen pillar covers the design and delivery of public goods, ranging from healthcare and infrastructure to a robust data protection regime. The Strengthening Institutions pillar focuses on improving the functioning and responsiveness of institutions. Finally, the Urbanisation pillar focuses on the historic transformation of India from a primarily rural to largely urban country. All our research, papers, databases, and recommendations are in the public domain and freely accessible through www.idfcinstitute.org.

Introduction to The Indian COVID-19 Alliance (TICA)

In March 2020, IDFC Institute set up a Track 2 Task Force leveraging its network of experts, including leading economists and public health experts, corporate leaders, technologists, communications experts, non-profits, logistics and supply firms, bureaucrats, lawyers and top police officials, to support the government on their COVID-19 response. Forming 20 sub-groups to organise targeted interventions, representatives from World Bank, Omidyar Network, Gates Foundation, Rockefeller Foundation, University of Chicago, New York University, Dalberg, McKinsey, BCG led a range of efforts backed by a team of 50-60 researchers at Stanford University, MIT and elsewhere. This includes running amongst the first and largest serological surveys in the country and following that up with two other surveys in Karnataka and Tamil Nadu, implementing a contract tracing solution in several cities and designing a communications toolkit for the state of Punjab to encourage early testing.

The results of our serological surveys in Mumbai were included in the World Health Organisation's Global Solidarity Trial; have been published in Lancet Global health and won the Emergent Ventures prize. The findings – showing well over 50 percent prevalence in Mumbai's slums by July 2020 – were widely covered in domestic and international media and helped shift the debate on prevalence and infection fatality rate. Other papers published include:

1. A white paper for the World Bank India office on the *Pradhan Mantri Garib Kalyan Yojana*, the Indian government's relief package of Rs 1.70 trillion, that examined issues of coverage, identification and implementation. The paper formed a key input into the Bank's $1 USD billion loan to India.
2. IDFC Institute Visiting Senior Fellow Dr Anup Malani, Dr Jonathon Gruber (MIT) and Dr Luis Bettencourt (U. Chicago) developed a model called 'adaptive control' that allowed states to make granular decisions about locking down and opening up, based on key indicators such as the **projected reproductive rate**. The team continues to work with the government of Bihar, to provide state and district level projections on case growth. This work was published as a medRxiv paper, an NBER paper, and won the Emergent Ventures prize.

As COVID-19 vaccine trials began to show promising results, the Rockefeller Foundation partnered with IDFC Institute to think through the vaccination rollout in India. The size and scale of vaccinating close to one billion people requires immensely complicated planning and coordination. To this effect, a smaller group of IDFC team members along with a few task force members came together to develop a robust vaccination strategy for the country by drawing on insights from experts in public health, cold chain, manufacturing, communication and philanthropy. This newly formed group is known as The Indian COVID-19 Alliance (TICA). TICA's intention is to provide non-partisan, high-quality research and data to support the central and state government's efforts in rolling out a COVID-19 Vaccine Deployment Strategy, which is suited to India's needs and contexts.

Financing the COVID-19 vaccination campaign

The Indian COVID Alliance's (TICA) financing track outlines the allocations of funds set aside by the Central Government to detail what percentage of the adult population in India can be successfully vaccinated. We estimate the Rs. 35,000 crores (USD 5 bn) allocated by the Central government in the Union Budget for 2021-22 could cover the vaccine costs for the entire adult population at current vaccine price. However, a significant portion of the costs of immunisation, mainly administrative resources, will be borne by states' budgets. However, they have a low capacity to absorb these costs.

The Union Finance Minister has announced a budget of Rs. 35,000 crores (USD 5bn) for the COVID-19 vaccination campaign for the April 2021- March 2022 budget exercise. As a benchmark, the resource requirement for the routine immunisation programme was estimated at Rs. 12,000 crores (USD 1.7bn) for 2021.

In addition, the Central Government has announced the costs of vaccinating healthcare and frontline workers (i.e. 30 million people) will be borne entirely by the Central Government. This phase (January to March 2021) is expected to cost Rs. 2,700 crores (USD 370mn).

Table 1. Budget estimates of various vaccination scenarios

In rs crores	**Vaccines only**			**Vaccination campaign**		
Vaccine price/dose	**Priority groups vaccinated**	**50% adults vaccinated**	**All adults vaccinated**	**Priority groups vaccinated**	**50% adults vaccinated**	**All adults vaccinated**
Rs. 203	12,180	17,198	34,395	66,052	93,263	186,526
Rs. 100	6,000	8,472	16,944	32,538	45,942	91,885
Rs. 300	18,000	25,415	50,831	97,614	137,827	275,655

Source: Based on author's estimates

We estimated this budget is sufficient to cover the vaccine costs of the Indian adult population in the next 12 months provided the price of the vaccine remains at Rs. 203 per dose. We have not included the wastage rate in our estimates so the total cost is likely to be higher. Wastage rates vary from 10% to 50% in the routine immunization programme.

The allocated budget will be exceeded if we include the costs of running a vaccination campaign such as human resources, distribution system (cold chain, transport) or communication. In the Universal Immunization Programme (UIP), they represent 81.56% of the total costs with vaccine costs representing 18.44% of the total. It will be exceeded if the average price of the vaccine increases due to the evolution of the Indian vaccine portfolio as well as price evolution as the market stabilizes.

One essential budget item will be supported by state finances and might increase regional disparities: human resources to support the campaign**.** In its COVID-19 Vaccines Operational Guidelines, the MoHFW stated states were in charge of mobilizing human resources to support the vaccination campaign. Based on budgeting exercise from the UIP, shared personnel (those who spent a proportion of their time for immunization) was the largest cost component and contributed about 44% of the total cost. Considering the diversity in healthcare worker density and healthcare spending across states, this is likely to create significant disparity.

State budgets and their ability to finance the vaccines

While the Centre has allocated Rs. 35,000 crores (USD 5bn) in the next fiscal year to cover the cost of vaccinations, it hasn't clarified whether it intends to support the cost of vaccination for the priority population of 300 million, or for the entire population. It should be reasonable to expect that in the future, states may have to cover costs for vaccinating a certain proportion of their adult population. In this scenario, we calculate the burden that may fall on state governments.

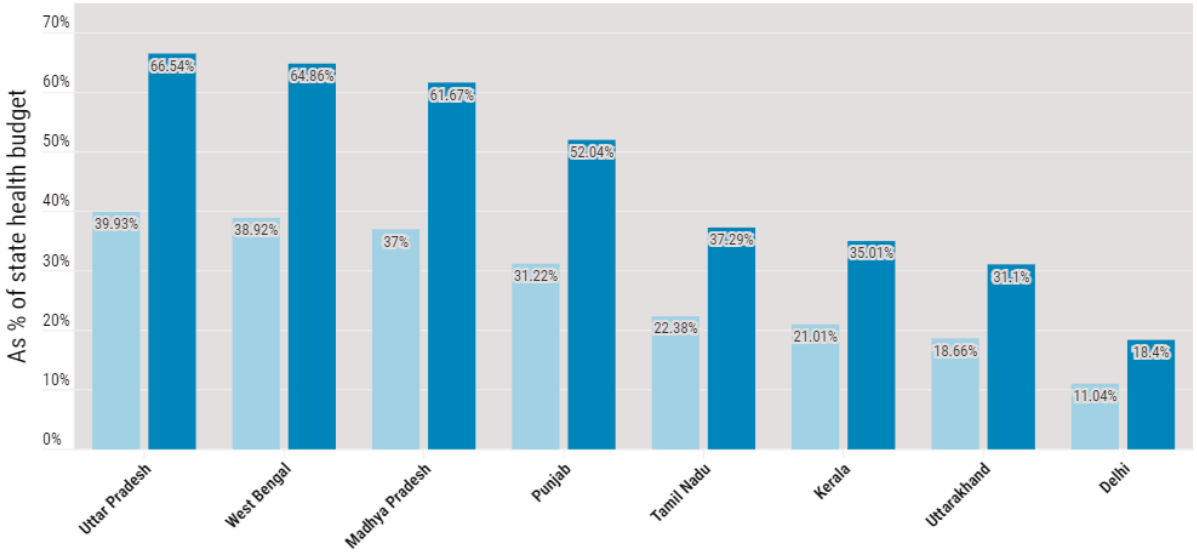
Assuming that states will have to cover vaccinations for a reasonable portion of their population, we provide a brief snapshot of the fiscal space that states have to cover these vaccinations costs in Figure 1. Major states, such as Kerala, Tamil Nadu, West Bengal and Punjab have announced they would offer vaccinations to their entire population free of charge. For simplicity, we have assumed the cost of vaccinating one person in a state at the current vaccine cost of Rs 203 (USD 2.8) per dose. But as pointed out earlier, vaccines constitute merely 18.44% of the total programme with the remaining campaign costs largely borne by the states, and thus the total costs would be much higher.

For states such as Madhya Pradesh, Uttar Pradesh or West Bengal, the cost of immunising (which is the price of vaccine plus the miscellaneous costs) approximately even 30 percent of

the population would amount to 61-64 percent of their total health budget for 2020-21, as charted in Figure 1 below.

Figure 1: Snapshot of *States' health budgets in 2020-21 and the cost of vaccinating 30 percent of the adult population*

Health Finances - I | Flourish



Source: RBI State Finances Report 2020, Year of Budget data: 2020-21

Public Health is a state subject, and states need to increase their health budgets. After discounting routine expenses on their main revenue expenditure such as on salaries and wages, the vaccination cost borne by states proves to be significant. States such as Punjab and West Bengal spend only 3.8 percent and 4.9 percent of their total expenditure on health. There are also disparities in state funding on health as seen in Figure 2 with regards to per capita spending. While the average per capita spending on health is approximately Rs 2700 (USD ~37) , the range varies from Rs 8950 (USD ~124) for Goa to a minuscule Rs 820 (USD ~11) for the state of Bihar.

A potential way to reduce the costs of the vaccination programme for the government, is to not impose a uniform price control. It would be prudent to allow the private sector to vaccinate and charge a different price for individuals who can afford to pay for the vaccines. While States

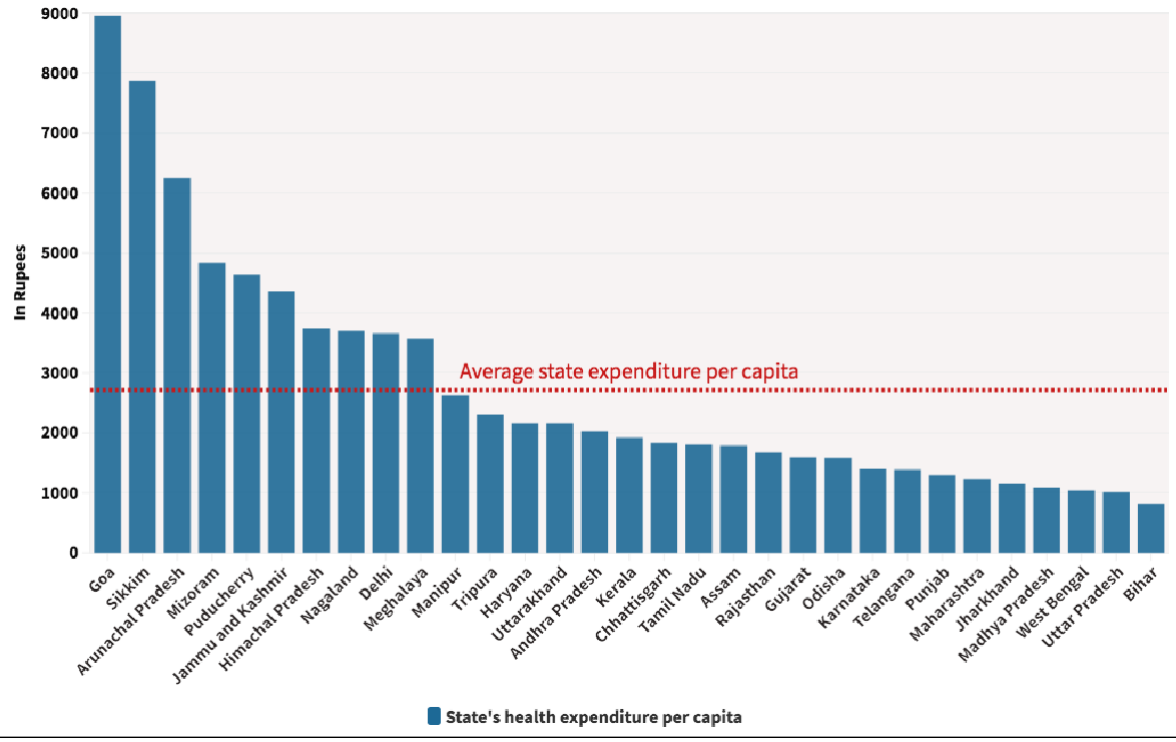
can consider imposing an additional cess on alcohol or tobacco and ringfence the revenues raised towards the vaccination programme, these are short term fixes.

This is a good opportunity for states to fix the longer term issue of reducing dependence on the Centre for their revenues and look to effectively raise and manage resources on their own. This would be extremely crucial if vaccines have to be administered perennially to the population in the subsequent years. While the 15th Finance Commission has set aside 10% of the Grants-in-Aid as an unconditional transfer for the health sector, the Centre is likely to reduce the revenue it needs to share with states over the next five years while stipulating more conditions.

The pandemic should be a wake-up call for states to increase their health budget expenditure in the medium term and address the longer term issues of how to increase revenues that they raise on their own thereby reducing dependence on the Centre.

Figure 2: States per capita spending on health in 2020-21

Health Finances - II | Flourish



Source: RBI State Finances Report 2020, Year of data: 2020-21