

# India's COVID-19 Vaccine Policy

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## Summary

*India's COVID-19 vaccine policy has undergone numerous changes since its inception. It began with an ambitious vaccine diplomacy exercise, followed by a halt in exports amid a surge in infections within the country. With the collapse of the healthcare system and a domestic shortage of vaccines amid a devastating second wave that hit India in April and May 2021, India had to rely on help from abroad. Over the past year, the government has also changed its policy on procurement and distribution multiple times. This has had an impact on the ability to effectively vaccinate its citizens. While the government seems to have started on an unprepared note, in October 2021, the trends look positive with a steady increase in vaccination rates and the introduction of new vaccine players in the market. However, despite the ramp up, it is well behind its target of vaccinating all adult citizens by the end of 2021.*

*Going forward, India's vaccination programme faces some crucial obstacles – vaccine hesitancy, gender divide, urban-rural divide and digital divide. The success of the Indian government in meeting its targets will depend on the availability of doses as well as its ability to overcome the identified structural challenges.*

## Introduction

The COVID-19 pandemic has had a devastating effect on India's health and economy. With over 33 million cases of infection and over 400,000 deaths<sup>1</sup> reported so far, these numbers are widely believed to be undercounts.<sup>2</sup> As an impending threat of a third wave looms over India, vaccination has been touted as an effective way to slow the spread of the virus and revive the country's faltering health and economy.

Currently, India administers three vaccines to its citizens – Covishield by Serum Institute of India (SII, using the Oxford-AstraZeneca formula), Covaxin by Bharat Biotech and Russian made Sputnik V launched by Dr Reddy's Laboratories. Importantly, Covaxin was approved before the completion of Phase 3 trials, the results of which were released only in July 2021 almost six months after its approval. Apart from this, two other vaccines – Johnson and Johnson's single dose vaccine and Moderna's double dose vaccine – have recently been approved for emergency use.

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<sup>1</sup> Center for Systems Science and Engineering, Johns Hopkins University, n.d., CSSE, <https://github.com/CSSEGISandData/COVID-19>.

<sup>2</sup> Rukmini S, 'We Still Don't Know India's True COVID-19 Death Toll', *Foreign Policy*, 30 June 2021, <https://foreignpolicy.com/2021/06/30/india-coronavirus-pandemic-case-fatality-rate-data-undercounting-modi-varadhan-bjp/>. Accessed on 4 October 2021.

The Indian government set an ambitious target to vaccinate its adult population with both doses of COVID-19 vaccines by the end of 2021.<sup>3</sup> As of 11 October 2021, over 952 million doses have been administered with over 269 million people fully vaccinated.<sup>4</sup> Of the total doses, over 838 million doses are Covishield, about 110 million doses are Covaxin and the remaining one million are Sputnik V.<sup>5</sup> At the current rate of vaccination, India is well behind its target.

This paper discusses India's vaccine policy, which has changed several times over the past year. It traces the country's vaccine journey through themes of vaccine diplomacy, changes carried out during the second wave and the help sought by India from abroad. Finally, we discuss the challenges ahead for India's vaccination programme.

## Vaccine Diplomacy

In the third quarter of 2020, manufacturers around the world began rolling out vaccines that would afford protection against COVID-19. With an increased demand for these vaccines began a global scramble for them, as most countries lack the capacity to develop indigenous vaccines. Countries in the global north secured attractive deals providing them with millions of doses from multiple sources. Canada, for instance, secured enough doses to inoculate a population five times its size.<sup>6</sup> On the other hand, most developing countries could not afford the prices offered by the private manufacturers. For them, the Global Alliance for Vaccines and Immunizations (GAVI), along with the World Health Organization, established the COVAX facility<sup>7</sup> to provide equitable access to vaccines for 92 low and middle-income countries became an attractive option.

As part of the COVAX facility, the SII and the Bill & Melinda Gates Foundation collaborated to provide 200 million doses of vaccines to the identified low and middle-income countries. The partnership provided SII with the much-needed upfront capital to increase its manufacturing capacity to expand production for distribution globally, alongside any commitments that it had made to the Indian government.<sup>8</sup>

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<sup>3</sup> 'Covid: India will vaccinate everyone by Dec 2021, says Prakash Javadekar', *Business Standard*, 28 May 2021, [https://www.business-standard.com/article/current-affairs/covid-india-will-vaccinate-everyone-by-dec-2021-says-prakash-javadekar-121052800974\\_1.html](https://www.business-standard.com/article/current-affairs/covid-india-will-vaccinate-everyone-by-dec-2021-says-prakash-javadekar-121052800974_1.html). Accessed on 4 October 2021.

<sup>4</sup> NDTV, n.d., *Vaccination Tracker*, <https://www.ndtv.com/coronavirus/covid19-vaccination-tracker>. Accessed on 4 October 2021.

<sup>5</sup> Ministry of Health and Family Welfare, Government of India, n.d., *CO-WIN*, <https://dashboard.cowin.gov.in/>. Accessed on 11 October 2021.

<sup>6</sup> Tulip Mazumdar, 'India's Covid crisis hits Covax vaccine-sharing scheme', *BBC News*, 17 May 2021, <https://www.bbc.com/news/world-57135368>. Accessed on 4 October 2021.

<sup>7</sup> COVAX initiative is the global vaccination programme that aims to 'accelerate the development and manufacturing of COVID-19 vaccines and guarantee fair and equitable access for every country'. It aims to provide two billion doses of vaccines to identified developing countries by the end of 2021. See 'World Health Organization, 'COVID-19 Vaccines', *Who.Int*, 2021, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines#:~:text=COVAX%20aims%20to%20accelerate%20the,agent%20in%20the%20Americas>. Accessed on 4 October 2021.

<sup>8</sup> See GAVI, 'Up to 100 million COVID-19 vaccine doses to be made available for low- and middle-income countries as early as 2021', <https://www.gavi.org/news/media-room/100-million-covid-19-vaccine-doses-available-low-and-middle-income-countries-2021>. Accessed on 4 October 2021.

Apart from the contracts signed by SII with GAVI, the Indian government, given the country's large production capabilities in vaccines, decided to step up to the world stage in overcoming the COVID-19 challenge. On 19 January 2021, just three days after India launched its national vaccination programme aimed at healthcare and frontline workers,<sup>9</sup> External Affairs Minister S Jaishankar announced 'Vaccine *Maitri*' (Vaccine Friendship), an ambitious exercise to export vaccines to India's South Asian neighbours and some countries outside the region.

Bhutan was the first country to receive a vaccine shipment from India on 20 January 2021. Over the course of the following months, SII exported 66.4 million doses to 95 countries across Asia, Africa, South America and the Middle East. The various shipments included 19.9 million doses to GAVI, 35.8 million sold via commercial contracts and 10.7 million doses in the form of grants given by the Indian government to other countries.<sup>10</sup> Importantly, at the time, the 'Vaccine *Maitri*' umbrella included all types of exports – government and commercial.

In January 2021, the number of daily cases in India was less than 20,000, much less than the peak of around 90,000 daily cases during the first wave that began in October 2020. Based on this, the Indian government made declarations that India had won the battle against the pandemic<sup>11</sup> and, hence, was in a good position to export vaccines to other countries. Domestically, the Vaccine *Maitri* initiative favoured the Bharatiya Janata Party-led government's handling of the crisis with several television news channels describing Prime Minister Narendra Modi as a "Vaccine *Guru*". From a foreign policy perspective, as the world's largest vaccine supplier and producer of generic medicines, India's vaccine diplomacy was seen as a tool to earn goodwill with troubled neighbours and other key partners beyond its immediate neighbourhood. It was also seen as a way to counter China's own aggressive vaccine diplomacy.<sup>12</sup>

## Second Wave in India

The devastating second wave of COVID-19 infections that hit India in April and May 2021 showed that despite cries by the government about India being in a "post-COVID" phase, the pandemic was far from over. At one time, India reported more than 400,000 daily cases and 2000 deaths within 24 hours,<sup>13</sup> which are widely believed to be much lower than the

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<sup>9</sup> The early vaccination phase in India started in January with two vaccines – Covishield and Covaxin – and aimed to vaccinate healthcare workers and frontline workers. Thereafter, the second phase from 1 March 2021 began vaccination for citizens above the age of 60 and citizens above 45 with comorbidities and by March end, the third phase included everyone above the age of 45. At the time, the central government was wholly responsible for purchasing vaccines from manufacturers and distributing them through state governments.

<sup>10</sup> Ministry of External Affairs, Government of India, 2021, 'Vaccine Supply', <https://www.mea.gov.in/vaccine-supply.htm>.

<sup>11</sup> 'Prime Minister Narendra Modi had declared India's victory over Covid-19 in January', *Scroll*, 23 April 2021, <https://scroll.in/video/993076/watch-prime-minister-narendra-modi-had-declared-indias-victory-over-covid-19-in-january>. Accessed on 4 October 2021.

<sup>12</sup> Ramita Iyer and Karthik Nachiappan, 'India's Vaccine Diplomacy', Brief No. 820, Institute of South Asian Studies, 28 January 2021, <https://www.isas.nus.edu.sg/papers/indias-vaccine-diplomacy/>.

<sup>13</sup> Center for Systems Science and Engineering, Johns Hopkins University, n.d., CSSE, <https://github.com/CSSEGISandData/COVID-19>.

actual figures.<sup>14</sup> The lack of adequate hospital beds, shortage of oxygen and hoarding of key medicines revealed the deep cracks in the Indian healthcare system. Despite predictions of a second wave since late 2020 by several authorities, including the Indian Medical Association, the government did not take the necessary steps to upgrade the medical infrastructure in the country, including the vaccine distribution network. Questions were also raised on the government's decision to export vaccines before it had inoculated its own citizens.

In the weeks leading up to the second wave, two key events increased the speed in rise of infections. These were the *Kumbh Mela* – a Hindu festival held every 12 years in North India – and state elections across four states – Assam, Kerala, Tamil Nadu and West Bengal – where large crowds gathered without masks and did not follow social distancing norms.<sup>15</sup>

At this point, it became clear that the government's "victory lap" was more than mere rhetoric, as the country found itself unprepared to step up vaccination rapidly. With an explosion of infections and internal shortages in vaccine production and supply, in March 2021, the export of vaccines to other countries was put on hold.<sup>16</sup> Domestically, this move provided more vaccines for Indian citizens and bought the SII more time for production and distribution. However, the halt on exports also meant that countries who were relying on Indian vaccines experienced delays in their vaccination programmes due to delays in delivery by SII. It is also noteworthy that when India faced flak over exports,<sup>17</sup> the government distanced itself and explained that they were SII's contractual obligations. Overall, contrary to the goals of the Vaccine *Maitri* initiative, India's reputation as a reliable global supplier of vaccines took a hit.

By April 2021, it was clear that India's vaccine policy had not worked as planned. At the time, the *New York Times* vaccination tracker showed that India's vaccination rate was at a mere 1.2 per cent, placing it at 62<sup>nd</sup> position in the world.<sup>18</sup> For a country that produces the largest number of vaccines in the world, these figures were baffling. Thus, between 17 and 20 April 2021, the government introduced a series of changes in the vaccine policy. Previously, there was a complete block of imports as well as private purchase of vaccines.

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<sup>14</sup> Lazaro Gamio and James Glanz, 'Just How Big Could India's True Covid Toll Be?', *The New York Times*, 25 May 2021, <https://www.nytimes.com/interactive/2021/05/25/world/asia/india-covid-death-estimates.html>, Accessed on 4 October 2021.

<sup>15</sup> Diego Maiorano, 'India's State Election Results: Implications for the BJP', Insights No. 664, Institute of South Asian Studies, 14 May 2021, <https://www.isas.nus.edu.sg/papers/indias-state-election-results-implications-for-the-bjp/>.

<sup>16</sup> From April, India completely stopped its commercial exports and only made exports through grants and COVAX. This amounted to only 1.2 million doses, much lesser than the 64 million doses that were exported between January and March. See Ministry of External Affairs, Government of India, 2021, Vaccine Supply, <https://www.mea.gov.in/vaccine-supply.htm>.

<sup>17</sup> Among other things, in April 2021, the SII received a legal notice from AstraZeneca over delays in vaccine supply. See Sohini Das, 'AstraZeneca has sent us legal notice for vaccine supply delay: Poonawalla', *Business Times*, 7 April 2021, [https://www.business-standard.com/article/current-affairs/astrazeneca-has-sent-us-legal-notice-for-vaccine-supply-delay-poonawalla-121040700101\\_1.html](https://www.business-standard.com/article/current-affairs/astrazeneca-has-sent-us-legal-notice-for-vaccine-supply-delay-poonawalla-121040700101_1.html). Accessed on 4 October 2021.

<sup>18</sup> Josh Holder, 'Tracking Coronavirus Vaccinations Around the World', *The New York Times*, n.d., <https://www.nytimes.com/interactive/2021/world/covid-vaccinations-tracker.html>. Accessed on 4 October 2021.

The central government bought the vaccines in whole and distributed them through state governments. Further, for harvesting of data, it developed an information technology system called CoWIN. However, the new policy allowed the import of vaccines as well as procurement by entities other than the central government. Vaccine manufacturers in India were obligated to supply 50 per cent of their production to the central government while the remaining 50 per cent were for sale to state governments and private companies. Further, different price caps were introduced for centre, state and private procurement (at ₹150 [S\$2.74], ₹300 [S\$5.48] and ₹600 [S\$10.96] respectively).

While there were some arguments in favour of the move, such as diversification of options in the market and the development of a vaccine polyculture over time,<sup>19</sup> there were several concerns. In May 2021, the Supreme Court questioned the government over its new policy stating that it was against Article 21 of the Indian Constitution. It noted that having states to “negotiate supply schedules, delivery points and other logistical arrangements with the manufacturers... will produce chaos and uncertainty.” Importantly, the court observed that it would disproportionately affect socio-economically backward communities.<sup>20</sup>

Amid the second wave, on 1 May 2021, the central government also began a paid vaccination programme for adults between the ages of 18 and 44 years. A month later, on 7 June 2021, reversing the government’s policy once again, in his televised address to the country, Prime Minister Modi announced free vaccines for all adults in government hospitals. He also said that the government would revert to its initial system of centralised procurement of vaccines, with 25 per cent of procurement allowed for the private sector.<sup>21</sup> At the time, opposition leaders claimed that the ‘U-turn’ in the government’s policy was a result of criticism by the Supreme Court and pressure from political rivals.<sup>22</sup> Certainly, the lack of clear vaccination policy, including logistical arrangement for distribution, resulted in delays, which were further exacerbated by the lack of health personnel, truck drivers and other professionals who were unable to work because of being infected themselves or were taking care of sick family members.

## Help From Abroad

Until April 2021, the Indian government had maintained that it had the required capacity to not only produce all the necessary doses of vaccines for its own citizens but also to export to other countries. However, with the second wave of surge in infections, the government began accepting help from other countries in the form of oxygen and other medical equipment. As mentioned above, India currently imports Russia’s Sputnik V; the Hyderabad-based Dr Reddy’s Laboratories entered into an agreement with Russia’s sovereign wealth

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<sup>19</sup> Amit Varma, ‘Episode 223: The Economics and Politics of Vaccines’, *The Seen and The Unseen*, 2 May 2021, <https://seenunseen.in/episodes/2021/5/2/episode-223-the-economics-and-politics-of-vaccines/>.

<sup>20</sup> Distribution of Essential Supplies and Services During Pandemic, 2021 SCC OnLine SC 355.

<sup>21</sup> Odisha TV, ‘PM Modi Address To Nation | June 7’, *YouTube video*, 7 June 2021, <https://www.youtube.com/watch?v=7idTcV0s5s0>.

<sup>22</sup> ‘Supreme Court criticism, pressure forced vaccine policy U-turn: Opposition leaders’, *The Hindu*, 7 June 2021, <https://www.thehindu.com/news/national/supreme-court-criticism-pressure-forced-vaccine-policy-u-turn-opposition-leaders/article34756230.ece>. Accessed on 4 October 2021.

fund. In a recent positive (if not late) move, the government has also exempted customs duty on the import of COVID-19 vaccines from 1 October to 31 December.<sup>23</sup>

In April and May 2021, the term ‘vaccine tourism’ or ‘vaccine holidays’ also began gaining popularity as Indians began to travel to Russia to get the Sputnik vaccine. The tour package also promised 20 days of sightseeing between two jabs.<sup>24</sup> It is speculated that these trips could have contributed to Russia’s current wave of Delta variant dominated infections.<sup>25</sup> This also resulted in a delay in Sputnik’s inclusion in India’s national vaccination programme.<sup>26</sup>

There is also the issue of compulsory licensing and patent waivers. In October 2020, India and South Africa first submitted a proposal suggesting a temporary suspension of certain rules laid down in the 1995 agreement on Trade Related Aspects of Intellectual Property Rights.<sup>27</sup> The waiver is set to be an important tool to address the availability of COVID-19 vaccines globally. While there has been very slow progress, limited support from countries like the United States has given more hope to the cause.

However, the issue is more complicated. In a statement in May 2021, the government clarified that “compulsory licensing is not a very attractive option since it is not a ‘formula’ that matters, but active partnership, training of human resources, sources of raw materials and highest levels of bio-safety labs which is required”.<sup>28</sup> Furthermore, while indigenous production of these vaccines will help boost the domestic production and supply of vaccines in India, their highly demanding cold storage requirements are likely to pose logistical difficulties in transporting vaccines to the most remote areas of the country.

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<sup>23</sup> Press Trust of India, ‘No Import Duty on Covid Vaccine till December 31, Exemption in Force From Tomorrow’, *News18*, 30 September 2021, <https://www.news18.com/news/india/no-import-duty-on-covid-vaccine-till-december-31-exemption-in-force-from-tomorrow-4267055.html>. Accessed on 4 October 2021.

<sup>24</sup> Divya A, ‘Explained: What is vaccine tourism; can Indians go abroad to get Covid-19 shots?’, *The Indian Express*, 1 June 2021, <https://indianexpress.com/article/explained/explained-what-is-vaccine-tourism-can-indians-go-abroad-for-covid-shots-7324690/>. Accessed on 4 October 2021.

<sup>25</sup> Kunal Gaurav, ‘Moscow to revaccinate as Russia records highest daily Covid deaths since outbreak’, *Hindustan Times*, 1 July 2021, <https://www.hindustantimes.com/world-news/moscow-to-revaccinate-as-russia-records-highest-daily-covid-deaths-since-outbreak-101625133846564.html>. Accessed on 4 October 2021.

<sup>26</sup> Abantika Ghosh, ‘Slow-growing second dose virus delays Sputnik V’s entry into India’s govt vaccination drive’, *The Print*, 1 September 2021, <https://theprint.in/health/slow-growing-second-dose-virus-delays-sputnik-vs-entry-into-indias-govt-vaccination-drive/725582/>. Accessed on 4 October 2021.

<sup>27</sup> TRIPS agreement is the legal instrument that harmonises intellectual property (IP) protection by imposing obligations of member countries to ensure protection and enforcement of IP rights in their territory. See Peter Van den Bossche and Werner Zdouc, *The Law and Policy of the World Trade Organization*, (Cambridge University Press, 2013, p. 952).

<sup>28</sup> ‘Compulsory license not attractive: Government’, *The Times of India*, 28 May 2021, <https://timesofindia.indiatimes.com/business/india-business/compulsory-licence-not-attractive-government/articleshow/83024491.cms>. Accessed on 4 October 2021.

## Challenges Ahead

As India ramps up its vaccination programme, the government will have to overcome several challenges to meet its target of vaccinating all adults in the country by the end of the year.

A major challenge is that of vaccine hesitancy. While the uptake of vaccines in India has been higher than most low and middle-income countries due to its large homegrown vaccine production capabilities, the rate of acceptance remains a concern. The data on this, however, is quite varying. A recent study that used the Facebook COVID-19 Symptom Survey<sup>29</sup> to study vaccine hesitancy across different states in the country showed that over 29 per cent of participants showed hesitancy. The highest number was recorded in Tamil Nadu (40 per cent) while the lowest was in Uttarakhand (15 per cent).<sup>30</sup> Another study offering an exploratory analysis of vaccine hesitancy found that 60 per cent of the population showed some level of hesitancy in taking the vaccine.<sup>31</sup> A more recent estimation revealed that about 10 per cent of people in rural and remote areas might be vaccine hesitant.<sup>32</sup>

Some reasons for skepticism and the lower than expected take up rates include difficulty in accessing vaccines due to shortages or lockdowns, delays from waiting for others to get it first and widespread rumours that jabs affect fertility, disrupt menstruation abilities and even result in death.<sup>33</sup> Apart from this, the approval of Covaxin before the completion of Phase 3 trials may have also increased hesitancy among people. The government, however, maintains that hesitancy in India is coming down as vaccination has been made free and the vaccines are “proving their safety profile”.<sup>34</sup> Moving forward, the government will have to increase public trust in vaccines through a target-based approach to overcome misinformation; it should include increasing accessibility to credible scientific information, promoting pro-vaccine campaigns through social media, improving the availability of vaccines and promoting women leaders, especially among frontline workers.<sup>35</sup>

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<sup>29</sup> University of Maryland Social Data Science Center and Facebook, *The Global COVID-19 Trends and Impact Survey Open Data API*, 8 August 2021, <https://gisumd.github.io/COVID-19-API-Documentation/> Accessed on 11 October 2021.

<sup>30</sup> Soumi Roy Chowdhury, Abhinav Motheram, and Santanu Pramanik, ‘Covid-19 Vaccine Hesitancy: Trends Across States, Over Time’, *Ideas For India*, 14 April 2021, <https://www.ideasforindia.in/topics/governance/covid-19-vaccine-hesitancy-trends-across-states-over-time.html>. Accessed on 11 October 2021.

<sup>31</sup> Sandip Agarwal and Maharnab Naha, ‘COVID-19 Vaccine Hesitancy in India: An Exploratory Analysis’, *MedRxiv*, 22 September 2021, <https://www.medrxiv.org/content/10.1101/2021.09.15.21263646v1.full>.

<sup>32</sup> Sumi Sukanya Dutta, ‘Vaccine Hesitancy Still A Problem In Remote Areas’, *The New Indian Express*, 9 October 2021, <https://www.newindianexpress.com/nation/2021/oct/09/vaccine-hesitancy-still-a-problem-in-remote-areas-2369513.html>. Accessed on 11 October 2021.

<sup>33</sup> Associated Press, ‘Vaccine hesitancy puts India’s gains against coronavirus at risk’, *Livemint*, 21 June 2021, <https://www.livemint.com/news/india/vaccine-hesitancy-puts-india-s-gains-against-coronavirus-at-risk-11624252466615.html>. Accessed on 11 October 2021.

<sup>34</sup> Dutta, ‘Vaccine Hesitancy Still A Problem In Remote Areas’.

<sup>35</sup> Kumar Das and Bijeta Mohanty, ‘The growing concerns around vaccine hesitancy in India’, International Growth Centre, 30 August 2021, <https://www.theigc.org/blog/the-growing-concerns-around-vaccine-hesitancy-in-india/>.

Demographic divides also pose a significant challenge. Largely, the data on COVID-19 vaccinations in India are reflective of historical vaccination trends in the country, where marginalised communities have significantly lower vaccine uptake.

With respect to gender, as per the government's CoWIN database, only 925 women are currently receiving the jab for every 1,000 men. Having said that, the gender gap has reduced compared to the past few months – in June 2021, 870 women were receiving the jab for every 1,000 men.<sup>36</sup> However, the current figures in October 2021 are still lower than India's already skewed sex ratio and are, therefore, worrisome. Experts argue that vaccination-related gender disparity should not be viewed in isolation; historical trends around women's health in India reveal that it is not given much priority within families and restricted freedom of movement for women has a negative impact on their access to health services.<sup>37</sup> In addition, rumours regarding vaccines affecting menstruation cycles and causing infertility may have also skewed the data in favour of men. As for other marginalised communities like transgender people and non-binary people, among others, their umbrella grouping into a singular category of 'other' has made it difficult to accurately track the prevalent rate of vaccination.

Generally, the vaccine uptake in the country has been far from uniform. Districts with higher proportions of socio-economically marginalised communities like Scheduled Castes (SCs) have displayed lower rates of vaccination as compared to districts with a lower proportion of the SCs.<sup>38</sup> To tackle this disparity, it is important to encourage active participation of such communities in public awareness campaigns and government initiatives. Importantly, the success of such inclusion has been visible in the Northeast, where with over 90 per cent Schedule Tribe population; there has been exceptional vaccine uptake.<sup>39</sup>

There are also wide disparities between states and within states. Generally speaking, the western part of the country has vaccinated much more than the eastern part (which include some of the poorest areas), but there are huge intra-state variations. Kolkata district, for instance, fully vaccinated about three quarters of the population, whereas the figure for West Bengal is lower than 20 per cent. Similarly, less than three per cent of the population of Kanpur district in Uttar Pradesh has been fully vaccinated, as against a state record of nine per cent.<sup>40</sup> Largely, the number of vaccinations in urban areas has been far higher than in rural areas. This may be attributed to vaccine hesitancy as well as a difficulty in making vaccines accessible to remote and rural parts of the country. However, with over 65.5 per cent of the total Indian population residing in rural areas (according to the World Bank's estimates), their inoculation will be key to preventing a deadly third wave. Thus, going

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<sup>36</sup> Ministry of Health and Family Welfare, Government of India, n.d., *CO-WIN*, <https://dashboard.cowin.gov.in/>. Accessed on 11 October 2021.

<sup>37</sup> Shorbori Purkayastha, 'Gender, Rural-Urban & Digital Divides in India's COVID Vaccination', *The Quint*, 10 June 2021, <https://www.thequint.com/podcast/gender-rural-urban-and-digital-divides-in-indias-covid-vaccination>. Accessed on 8 October 2021.

<sup>38</sup> Liji Thomas, 'Factors predicting vaccine hesitancy in India', *News Medical Life Sciences*, 26 September 2021, <https://www.news-medical.net/news/20210926/Factors-predicting-vaccine-hesitancy-in-India.aspx>.

<sup>39</sup> Ibid.

<sup>40</sup> Abhishek Jha, 'District-wise estimates of Covid-19 vaccination coverage in India', *Hindustan Times*, 8 September 2021, <https://www.hindustantimes.com/india-news/districtwise-estimates-of-covid-19-vaccination-coverage-in-india-101631036575437.html>. Accessed on 4 October 2021.



forward, the government will have to ramp up logistic arrangements for smooth delivery of vaccines to even the remotest parts of the country. This will be especially crucial for recently approved vaccines like Moderna, which have advanced cold storage requirements.

Digital divide or the technology gap is another major obstacle in the ramping up of vaccinations. While the process of booking a vaccine appointment has now been simplified by introducing the option of offline registrations, in the initial phases, a significant proportion of the population found it difficult to register for vaccination due to the lack of access and knowledge of the required technology. Apart from this, in rural areas, families tend to have a shared phone where preference in usage is given to elders and male users in the household. The fifth National Family Health Survey released in late 2020 showed that more than 60 per cent of women across 12 states had never used the internet. Thus, given lower internet penetration in rural areas compounded by the low usage of technology and mobile phones by women, the data is further skewed in favour of urban populations and men.

Evidently, the issues of vaccine hesitancy, digital, gender and urban-rural divides are deeply interconnected and are an extension of the existing socio-economic inequalities in the country. Overcoming these challenges will therefore require comprehensive measures that address the issue at the structural level.

## Conclusion

India's daily case count has been dropping steadily since the second wave started receding in June 2021. Currently, in October 2021, less than 40,000 cases new daily cases have been reported in the past month. Of these, most are from the Southern state of Kerala (where monitoring is more accurate than in most other states). However, doctors warn that a third wave is inevitable since most states in the country have reopened and there is a threat of new variants.

While the number of vaccinations per day has been significantly ramped up over the past few months, experts are worried about the impediments affecting the uptake of vaccination. To meet its vaccination targets, India needs to give more than 10 million doses a day.<sup>41</sup> Whether this is achieved will greatly depend on factors like availability of doses and addressing the challenges of vaccine hesitancy among people and structural inequalities like gender, urban-rural and digital divides.

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<sup>41</sup> BBC, 'Covid vaccine: India gives 20 million jabs to mark PM Modi's birthday', *BBC News*, 17 September 2021, <https://www.bbc.com/news/world-asia-india-56345591>. Accessed 4 October 2021.