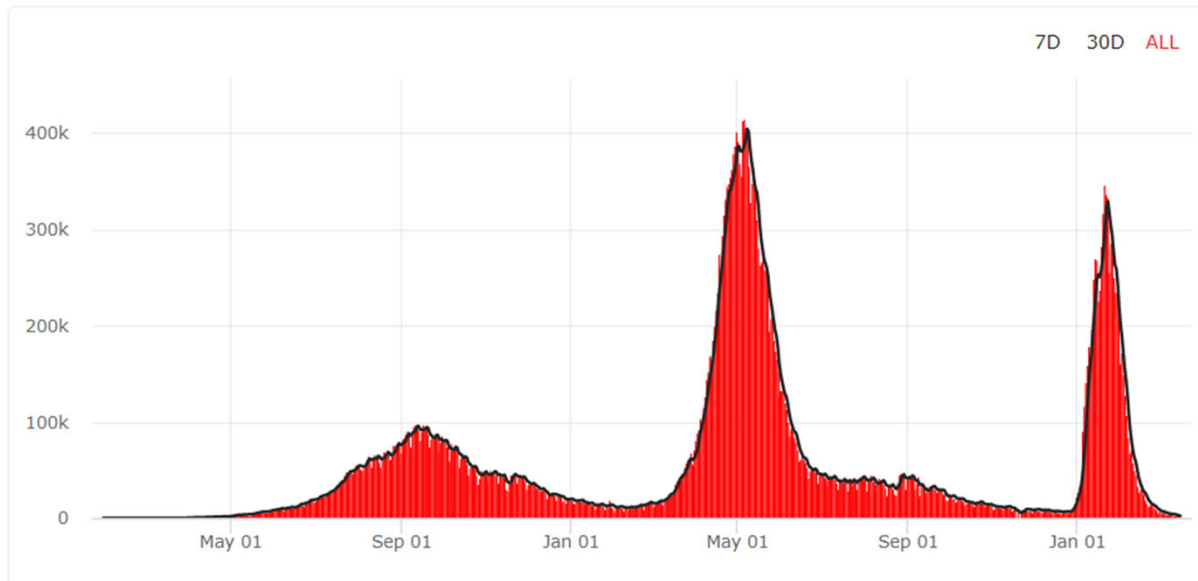


Opportunities as Vaccines producer

COVID TRACKER



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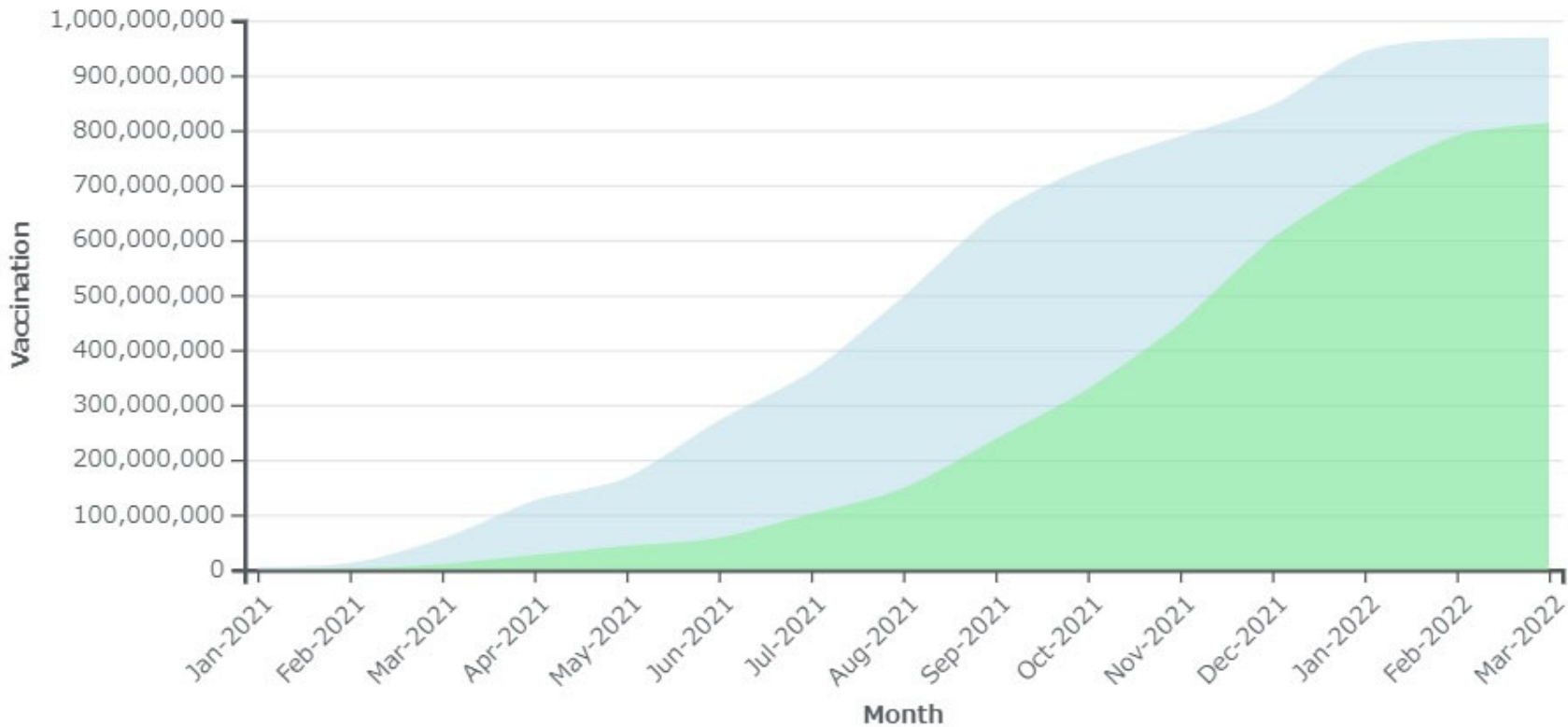
Vaccination progress

- Fully vaccinated 59.6%
- At least one dose 70.7% (Mar.17, MoHFW)

【Situation in Japan】

- 1st dose 102.01 million (80.5%)
 - 2nd dose 100.45 million (79.3%)
 - 3rd dose 40.45 million (31.9%)
- (PMO, Mar.16)

Monthly graph of cumulative doses administered across the country



Legend

- Partially vaccinated (1st dose)
- Fully vaccinated (2nd dose)

(Data: MoHFW)

• 1st dose
967.39 million

• 2nd dose
815.26 million

• Precaution dose
21.36 million

Total 1.804 billion
(as of Mar.15)

Vaccines approved for use in India

Name	Formulation	Producer	Features	Production Capacity
Covishield	Oxford /Astrazeneca	Serum Institute of India(SII)	<ul style="list-style-type: none"> •Accounts for 90% of the doses(1.6 billion shots) •World biggest vaccine producer, shipping to 170 countries 	•310 million/month→to expand up to 450 million in 2 months
Covaxin	Bharat Biotech	Bharat Biotech	<ul style="list-style-type: none"> •270 million shots •145 patents and prodicung hepatitis B, ratavirus and typhoid vaccines 	•50~60 million/month
Sputnik V	Russia Gamaleya National Center	Hetero Biopharma, Gland Pharma, Wockhardt, SII, etc.	<ul style="list-style-type: none"> •1.2 million shots •more than 950 million doses production planned •For private market 	
Sputnik Light	Russia Gamaleya National Center	The same as above	•Feb 2022 emergency use permission	
Spikevax	Moderna	Sipra (import permission)		
Covovax	Novavax	SII	<ul style="list-style-type: none"> •Started supplying to WHO-led COVAX initiative •150 million/month (planned) •Committed to supply up to 1 billion doses 	•Exported to Netherlands, Indonesia and NZ
Ad26.COVS.2.S	Johnson & Jhonson	Biological E		
ZycoV-D	Zydus Cadila	Cadila Healthcare, Shilpa Medicare	•For government use	
Corbevax	Biological E + Dynavax and Baylor College of Medicine (US)	Biological E		

(Data: various reports and press releases, as of the end of Feb.)

Destination-wise vaccines export

country	Quantity(thousand)
Bangladesh	22,592.8
Myanmar	21,200.0
Nepal	9,499.0
Brazil	4,000.0
Morocco	7,000.0
Nigeria	9,766.0
Ethiopia	2,184.0
Sudan	1,836.0
U.K.	5,000.0
Iran	1,125.0
Saudi Arabia	4,500.0
Afghanistan	1,468.0
Indonesia	9,008.0
Australia	6,353.3
Netherlands	32,223.5
others	29,448.4
Total	167,204.0

(Data:MEA, as of Mar.22)

Grant	14,267.0
Commercial	111,388.5
COVAX	41,548.5

Timeline of Vaccination drive

- Jan 2021
 - Flagged-off vaccination/export
 - Opened COWIN portal
- Apr
 - Export suspended
- Sep
 - 20 million doses /day mark
- Oct
 - Achieved 1 billion doses
 - Export restarted
- Dec
 - GOI allowed exporting 70 million doses of vaccines (Covovax) to Netherlands, NZ and Australia
- Jan 2022
 - started vaccination for 15~18 age group
- Mar
 - started vaccination for 12~14 age group



Opportunities

- India is world biggest vaccine producer, with 50~60% global share ---not only for COVID-19, but tetanus, hepatitis B, measles, rubella, Zika, Chikungunya, etc.
- Lower cost in research and production
- Incoming FDI
- Exporting to the developing countries (esp. Africa)
- Patent rights waiver

Challenges

- Shortage of ingredients--- antigen, preservatives, stabilizers, surfactants, diluent, adjuvant, etc.
- Government orders are not on time / not foreseeable
- Lack of effective policies to support industry
- Low domestic demand for private market