

IMMUNIZATION SUPPLY CHAIN OF INDIA

A case study on challenges for COVID-19 vaccination

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The COVID-19 pandemic has subjected many countries to economic and political turmoil which has mandated the world countries to eradicate the disease immediately. This needs an effective immunization supply chain which helps in timely delivery and administration of vaccines to a country's population.

But in many developing countries the immunization supply chain has many challenges which makes it difficult to carry out large scale vaccination. Hence, this study has focused on analyzing challenges in the immunization supply chain for one such developing country.

The immunization supply chain in general is comprised of various activities starting with planning, vaccine procurement, cold chain distribution and vaccine administration. All these activities will suffer challenges that must be well addressed for carrying out successful immunization. This is perhaps important especially when conducting COVID-19 vaccination where there could be challenges of higher intensity in all the activities.

In line with this statement, the study first analyzed the routine immunization supply chain of India and compared how it is different for the COVID-19 vaccination. This type of approach enabled an understanding of challenges in regular immunization followed by comparison with COVID-19 vaccination.

A case based research method was used to understand all the challenges in the COVID-

19 immunization supply chain of India. The main form of data collection was based on secondary data from journals, news papers and government reports of India's immunization program.

The study mainly has two types of conclusions. First comparing the routine immunization supply chain with COVID-19 immunization supply chain. The latter clearly shows many challenges with higher intensity such as a complicated supply chain system comprising of 29,000 cold chain points, disparity in cold chain points across states in India and improper planning of vaccine administration leading to vaccine wastages. Hence COVID-19 vaccination is a lot more challenging than the routine ones.

The second conclusion is that the challenges in India's COVID-19 immunization supply chain resemble challenges found in the immunization supply chain literature of developing countries. The only two activities that seem more advanced compared to other developing nations include vaccine procurement where India has achieved self sufficiency and IT systems that are integrated in all vaccine stores of India for better vaccine stock visibility.

The study demonstrates to the stakeholders how the important the immunization supply chain is and how the challenges can be mitigated for achieving higher immunization in the future. The findings are generalizable to any other developing countries.