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Sustaining Immunization Services During COVID-19

Immunization and Child Health

Disruption in immunization services, even for a brief period, result in increased number of susceptible individuals and an increased risk of outbreaks of Vaccine-Preventable Diseases (VPDs) (e.g. Measles, Polio, Diphtheria, Pertussis, Meningococcal disease, Influenza etc.), leading to excess morbidity and mortality. Due to the high risk associated with VPD outbreaks, WHO recommended that countries continue routine immunization services as well as vaccination campaigns wherever feasible. The Ministry of Health and Family Welfare (MoHFW) also issued a guidance keeping immunization services as an essential and priority intervention that needs to be resumed during the pandemic. The COVID-19 pandemic interrupted routine immunization services including postponement of polio vaccination campaign due to lockdown and other containment measures. The situation could have a negative impact on the progress made in immunization in India if there were no specific actions taken.



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Challenge

The COVID-19 lockdown affected routine immunization sessions, delivery of vaccines and movement of frontline health workers. The stigma associated with the visit of a health worker and fear of exposure to COVID-19 at the session sites inhibited caregivers to access the services.

Priority

The foremost priority was to resume routine immunization at the earliest by instilling trust among communities on the COVID-19 safety measures such as social distancing, handwashing, respiratory hygiene etc., thus preventing potential exposure of all stakeholders at the immunization site.

Response

To develop clear guidelines and provide adequate training to enable Frontline Workers (FLWs) to reach out to families as well as administer routine immunization while following COVID-19 protocols.

Action

By April 2020, the Government of India (GoI) with support from WHO, UNICEF and other partners had begun working on guidelines on immunization during COVID-19 pandemic¹. These guidelines laid out the immunization protocol and operational strategy to be followed in urban and rural centres based on containment and buffer zones and areas beyond buffer zone. Prior to the launch of these guidelines, MoHFW held a video conference on 24 April, during the World Immunization Week 2020, with all the states on provisions of the guidelines. States had started operationalizing these guidelines and restarted immunization activities soon after. On 27 May 2020, the guidelines were formally notified.

Simultaneously, training of Auxiliary Nurse Midwife (ANM) and Accredited Social Health Activist (ASHA) workers on COVID-19 modalities to be followed as prescribed by the guidelines was organized through online platforms. What was unimaginable earlier i.e., to deliver trainings to FLWs online, became a reality. **States adopted innovative methods like painting SMS message (Social distancing, Masks and Sanitize) on walls.** Not only were innovative communication campaigns needed to spread COVID-19 messages but also behaviour change communication interventions to dispel stigma around health workers. Behaviour change amongst people seeking vaccination was also needed. Over the years, immunization programmes have been urging people to come to immunization sessions at any time during the day, at their convenience. However, this scenario could not be encouraged during COVID-19 pandemic. A behaviour change messaging drive through inter-personal communication was undertaken to inform people to adhere to the COVID-19 norms and visit the immunization camps only during the time allotted to them.

These efforts resulted in the states preparing and resuming routine immunization services with detailed planning and implementation of the COVID-19 guidelines, instilled confidence in the communities regarding the safety measures being followed at the health facilities; and caregivers accessing immunization services.

¹ Immunization services during and post COVID-19 outbreak

<https://www.mohfw.gov.in/pdf/3/ImmunizationServicesduringCOVIDOutbreakSummary150520202.pdf>, accessed on December 10, 2020.

COVID-19 Vaccine Introduction: The Journey

From September 2020 onwards, UNICEF, along with partners, supported the MoHFW and the states on the development of strategy, planning, capacity building, updating monitoring tools and cold chain needs assessment for the introduction of COVID-19 vaccine(s). The immunization team at UNICEF, along with other partners, joined MoHFW to embark on a journey of COVID-19 vaccine introduction in a time filled with several unknowns.

Some of the Key Issues or Questions faced

- 1 How would the vaccine be administered? Would it be an injectable or drops?
- 2 How will the immunization programme be able to handle the administration of COVID-19 vaccine without impacting routine immunization?
- 3 Which population segments would be the recipients of this vaccine? Immunization programme expertise has been in working with newborn up till adolescents. Adults and senior citizens with comorbidities had never been targeted except for a campaign on Japanese Encephalitis in limited geographies.
- 4 What would be the number of doses and what will be the duration between the doses?
- 5 What would be the efficacy of the vaccine? What could be the probable adverse effects and what preparation is needed to manage any adverse event?
- 6 What would be the storage requirements for the vaccine? What would be the vial size? Which manufacturer's vaccine would be ready first and how many would be available for distribution?



The National Expert Group on Vaccine Administration for COVID-19 (NEGVAC) was constituted, chaired by NITI Aayog and co-chaired by the Secretary of MoHFW. MoHFW, in collaboration with WHO, UNICEF and other partners, initiated the process of developing the operational guidelines for administering the COVID-19 vaccine. In the month of October 2020, a cold chain equipment procurement plan for vaccine introduction was finalised and approved by the MoHFW. There were several iterations and inputs that were considered including the global guidelines developed by WHO. All vaccine dependent and vaccine independent factors were considered during strategy formulation and eventually the strategy was kept broad enough to accommodate changes but also mindful of the specifics to train all cadres of healthcare and immunization workers. **Alongside the guideline, UNICEF and the National Cold Chain Vaccine Management Resource Centre (NCCVMRC) started working on identifying existing gaps, planning for contingencies, creating new infrastructure, cold chain management and building partnerships.** Roll out of the vaccination campaign started on 16 January 2021 to target around 300 million people within three groups - the healthcare workers, frontline workers, people above 60 years of age and people with comorbidities.

Cold Chain Strengthening

Cold chain forms the backbone of the immunization programme which enables the vaccines to be stored in the required temperature, from the time of manufacture till the last session site where vaccine is administered to the beneficiaries. It comprises electrical (walk-in-coolers, walk-in-freezers, ice lined refrigerators, deep freezers) and non-electrical (cold boxes and vaccine carriers) equipments.

Since the COVID-19 vaccine was not part of routine immunization, a landscaping exercise was conducted up to the sub-district level to map existing infrastructure including equipment, space availability and so on. UNICEF along with the National Cold Chain Resource Centre (NCCRC), Pune and NCCVMRC, Delhi were engaged in this exercise. **Scenario planning considered the following possibilities:**



Size of Vials: Three possible sizes of vials were planned. These ranged from vials occupying minimum space, medium size vials and the largest size vials under the immunization programme.



Availability of Space: Two factors had to be considered as far as space was concerned. COVID-19 vaccine would be a rolling stock, therefore, inadequate cold chain should not be a reason to turn down new stocks and space for existing stock of vaccines used for routine immunization should not be compromised.



Temperature Setting: Storage temperature of the vaccine candidates was an unknown. Based on market insights from supply division, it was expected that majority of vaccines under development will be either $\pm 2 - 8$ degree Celsius or -15 to -25 degree Celsius. Gap analysis was done in order to be able to accommodate both types of vaccines.



Bulk Storage of Vaccines in Cold Rooms: Few pre-requisites for installing a bulk cold room is appropriate site selection, some civil work and appropriate electrification. These procedures normally require many weeks including procedural approval and construction/site development. The equipment were to be shipped from many countries and considering the global demand, setting up timelines and tailoring it with vaccine supply (both doses and timing were unknown) was a challenging task. To ensure that adequate contingency measures are in place and cold chain is not becoming a limitation in introduction of vaccine, UNICEF, in collaboration with Bill & Melinda Gates Foundation (BMGF), reached out to several industries that used cold storage rooms or maintain cold chain for renting to assess the feasibility of stocking the vaccines in these facilities should they arrive earlier.

Following Cold Chain Equipments were Procured:

2,684 large and **300** small
Ice-lined Refrigerators

520 large and **100** small
Deep Freezers

101,099
Freeze Free Vaccine Carriers

40
Walk-in Coolers

20
Walk-in Freezers

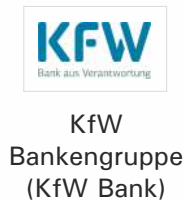
33,479
Cold Boxes

100,000
Vaccine Carriers

These were procured by the Government of India and UNICEF with funding support from KfW Bankengruppe (KfW Bank) and later by GAVI. By September 2020, manufacturers and suppliers had been identified, and procurement process had started by October 2020 to augment the cold chain capacity at the earliest in order to be ready to start vaccinations from as early as January 2021.

Communication, Advocacy and Capacity Building for COVID-19 Vaccine

Although the COVID-19 vaccine was one of the most awaited vaccines, there were several rumours and misinformation around it. Broadly, there were two camps – those who were vaccine eager and those who were vaccine hesitant. The absence of a history to the vaccine necessitated a completely different communication and advocacy strategy. As a result of the collaborative efforts led by the MoHFW, UNICEF, WHO, BMGF and the Immunization Technical Support Team (ITSU), India was able to develop a detailed communication strategy for COVID-19 vaccination with a holistic approach. Another important component of roll out of COVID-19 vaccine is capacity building of healthcare workers. Trainings were provided at the national and state level using online platforms. UNICEF state offices worked with their respective state governments to schedule further training programme that would cascade to the frontline workers.



Key Learnings

UNICEF adopted a collaborative approach in its response to the COVID-19 pandemic. Working closely in a seamless manner with the GoI, WHO, private sector, foundations and CSOs yielded quick and sustainable results. Full ownership by government both at national and state level along with seamless collaboration among partners was the key to address the pandemic. UNICEF was able to leverage its technical expertise and deliver on its core strength under the guidance of MoHFW.



Way Forward

UNICEF will continue its engagement at national and state level on strategy and tools, communication and demand generation for the COVID-19 vaccine; cold chain expansion; identification, training and supervision/mentoring of vaccinators. UNICEF will maintain its focus on strengthening routine immunization and sustain the gains made over years with a wider lens of equity and health system strengthening.

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