




RIS
Research and Information System
for Developing Countries
विकासशील देशों की अनुसंधान एवं सूचना प्रणाली

GDC
GLOBAL DEVELOPMENT CENTRE



Coping with COVID: Experiences of Developing Countries in Vaccine Platforms and Rollout

Wednesday, 19 May 2021
3:00 pm to 4:30 pm IST

 WEBINAR

REPORT

Context

With the pandemic affecting nations across the globe, GDC is actively advocating the necessity of South-South Cooperation through India's experience of COVID-19 Vaccine Intelligence Network (Co-WIN) platform. Its intent is to support creation of digital public goods, knowledge transfer, sharing of technical know-how, sharing of best practices and skills, collaborative and coordinated interventions, and inspire partnerships to pool resources, leverage platforms and explore opportunities for sustainable solutions to improve health outcomes. GDC along with its institutional partners in African countries is mutually creating space for practical steps on how to scale up high-impact interventions, conduct immunisation and vaccination programmes through digital platforms, and ensure delivery of routine health services. GDC intends to leverage India's flagship CO-WIN platform for partner countries to complement each other through digital health platforms.

Co-WIN launched as a response to quick mass inoculation requirement is a repurposed version of India's successful universal immunization platform Electronic Vaccine Intelligence Network (e-VIN). The Co-WIN, a future proof application, provides end-to-end solution for vaccine management and distribution. Digital solutions like Co-WIN reinforces the propensity of support mechanism to the entire lifecycle of vaccine management, supply and distribution, delivery of services including post vaccination follow-up.

The most relevant approach GDC has adopted for knowledge sharing on Co-WIN initiative is based on results-oriented actions where the countries of the South build and promote cooperation and peer learning, thereby translating their commitment to solidarity into common positions in international affairs aiming for more inclusive global governance.

With the aim to increase coverage and vaccinate populations across least developed and developing countries, the most effective and authentic tool is the use of digital technology for

mass inoculation in fighting the pandemic. Digital tools used in Co-WIN are streamlining the processes ensuring both access to prompt vaccination opportunities and capture important health information of individuals.

Preamble and Introduction to the Event

The webinar organised on May 19, 2021 on Coping with COVID: Experiences of Developing Countries in Vaccine Platforms and Rollout, was steered by Professor Sachin Chaturvedi, Director General, RIS. With his plethora of experiences, he familiarised the participants the importance of South-South solidarity to carve out policy space to build strategic partnership. Ambassador Amar Sinha, Chairman, Advisory Committee – GDC provided leadership by prompting the narrative on building digital vaccination platform as a response towards people-centric inoculation drive, which is worthy for replication in the Global South. The plenary discussions were competently handled by Dr. Sandeep Bhalla, Associate Vice President-Projects, ECHO India.

The webinar gave the participants an opportunity to cognise the vaccination experiences shared by eminent invitees from National Health Authority of India and GDC partner countries from Africa like:

- (i) **Dr. Ram Sewak Sharma**, Chief Executive Officer, National Health Authority, Ministry of Health and Family Welfare, Government of India.
- (ii) **Dr. Sandeep Bhalla**, Associate Vice President-Projects, ECHO India.
- (iii) **Mr. Hassan Sibomana**, Director, Vaccination Unit, Rwanda Biomedical Centre (RBC), Rwanda
- (iv) **Dr. Abdullahi Bulama Garba**, Director (Planning, Research and Statistics), National Primary Health Care Development Agency (NPHCDA), Nigeria.
- (v) **Dr. Rose Jalang'o**, Strategic Information Management and Communications Officer, National Vaccines and Immunization Program (NVIP), Ministry of Health, Kenya.
- (vi) **Dr. Alfred Driwale**, Project Manager, Uganda National Expanded Programme on Immunisation (UNEPI), Ministry of Health, Government of Uganda.

(Due to certain unavoidable circumstances, Representative from Uganda, participated at a later stage)

They extended their support in taking the agenda forward.

Ideas Shared by CEO, National Health Authority, MoHFW, GoI

- India has created new technology driven initiatives on coping with COVID crisis for guaranteeing equitable distribution to facilitate access, equity, and inclusion within the framework of Co-WIN, a digital vaccine platform. The possible challenges and issues on the ground that Co-WIN has been trying to address comprises of vaccinating sizable diverse population while absorbing the plurality of culture, language and technical platforms and ensuring coordination among different agencies responsible for the whole supply chain management. Considering the circumstances and information asymmetries that have emerged during COVID-19, the Co-WIN platform with its online real time and transparent system, is the digital backbone in a sense. This is no longer an option but a necessity without which India could not have initiated the vaccination program at such a massive scale.
- The key aspects that are important to address public health issues and retaining the supply chain management in order, requires details of the status of vaccination completed. This also includes the demographic details of the population covered. The data driven policy adopted by Co-WIN has been adapted from *Aadhaar*, the Unique Digital Identity system of India. It

has been realised that in country with huge population size, policies cannot be anecdotal and should be essentially data driven based on scientific analytics. There is ample scope of mid-course corrections in the policy using the data thus generated through such platform.

- India has also partnered with private sector to scale up the vaccination reachability to the mass. Currently, these vaccines require emergency use authorization and are unavailable in public counters other than hospital facilities. The process of vaccination started with 2 million vaccinations per day during the onset in January and has gone up to 4.5 million vaccinations per day currently. Approximately 200 million vaccine doses have been administered so far through Co-WIN platform.
- The four components vis-à-vis modules of COWIN includes the following:
 - **Component 1: Hybrid Vaccination Platform - Digital cum Walk-in Registrations**
 - a) It is citizen centric relating to online/mobile based registration and appointment/scheduling. Under this component, an individual can register four members against one mobile number on the platform and identify the nearest vaccination centres and book an appointment. Citizens are provided with options to reschedule and change vaccination centres as and when needed.
 - b) Another important aspect of the registration process includes walk-in vaccination facility for people in rural areas. The details of the people accessing walk-in facilities for vaccination will get recorded by the facility and uploaded real time for certificate generation. Essentially the system is inclusive and also provides for an option for assisted registration through common service centres.
 - **Component 2:**

This relates to the availability of vaccines hospital/ facility. An individual cannot secure appointment until vaccines are available in that facility. The hospitals are responsible for publishing the availability of vaccines, whether priced or free onto the platform for public visibility. Therefore, in the second component, the vaccination centres are on boarded.
 - **Component 3:**

It contains the vaccine module used by the vaccinator. In this module, essentially when an individual is vaccinated, the data uploaded in real time comprises of the following information:

 - a) Name of the individual,
 - b) Vaccinating institution,
 - c) Name of person who vaccinated,
 - d) Type of vaccine used, and
 - e) Whether there is any adverse impact observed or not.

Such minimal data is uploaded real time on the platform.
 - **Component 4:**

One of the most important and distinguishing features of the fourth component is the certificate module. The individuals who have received their first vaccine can download the provisional vaccination certificate and post second dose the final digitally verifiable certificate is provided. This certificate can be scanned using the QR code, eliminating the possibility of any forgery as it gets verified from the source from where it is issued and is non-repudiable. This certificate is also compliant with the WHO policies and standards

of the Fast Healthcare Interoperability Resources (FHIR) providing the certificate an international validity for travelling.

- Co-WIN platform can provide segregated details of vaccinations conducted at state, districts and geographical administrative units. Therefore, this platform has huge options of scalability and speed. One of the core characteristics of this architecture is the scope of open APIs, scalable, through which any country/ authority can freely provide some value-added service to the people. Moreover, it has a guard against cyber-attacks as this platform has adopted the principle of a robust system of data encryption in which minimal data is collected and there is no requirement of submitting identity proof during online registration.
- The technology used in Co-WIN is an enabler over simplistic solution based medium, with the scope to reach out to the masses and facilitate inclusion in its real sense.

Ideas Shared by Partner Countries of Africa

- Rwanda has been vaccinating children and pregnant women for more than 40 years and other adults with Hepatitis B vaccine and now COVID-19 vaccine. With the previous experiences, prompt mass communication and favourable awareness of people, there is less vaccine hesitancy among people in Rwanda. Immediately after receiving the COVID vaccines, the country, has vaccinated 5% of its population within a short span of time. The challenge Rwanda is facing relates to meeting the demand of the population and access to vaccines. The country envisions that cooperation from different development partners, stakeholders including support from private sector can assist the country to vaccinate the uncovered population steadily.
- Kenya's experience in immunization programmes for children, pregnant and post-partum women ways back to more than three decades. But adult vaccination is a new area of intervention for the country with inadequate vaccine manufacturing capacities at present. The immediate emerging challenge for the country is limited local expertise when it comes to setting up of vaccine manufacturing plants. The country plans to vaccinate at least 60 percent of its population immediately and envisages future collaborations to accelerate the production of vaccines within the country to meet its local demands. The country has devised an online platform CHANJO Kenya to vaccinate the adult population. It provides an end-to-end visibility of individual information. The system has been launched successfully across the country, though there are few sectors and infrastructure related challenges especially in some of the rural areas. Kenya expressed interest in collaborating with different countries which have successfully rolled out vaccination platforms especially in terms of securing vaccination passport for international travel.
- In terms of COVID vaccine management, Nigeria has focussed on the planning, coordination and service delivery along with data management, logistics and communication. The country has also identified few challenges in terms of vaccine roll out. To address some of the challenges, Nigeria has deployed a dashboard to track the status of readiness at the national and state levels in terms of identification of storage facilities and service delivery centres, training of staff, community mobilisation and other necessary activities to ensure smooth and efficient vaccine management. It has also introduced an indigenous local innovative technique for the vaccination programme called TEACH strategy.
 - 'T' stands for Traditional Vaccination Campaign Approach which includes the traditional macro planning, an aspect to conventional immunisation.

- ‘E’ stands for Electronic Self-Registration to enable eligible candidates to register themselves on the electronic platform.
- ‘A’ stands for Assisted Electronic Registration for those who could not do that.
- ‘C’ stands for Concomitant Vaccination alongside electronic registration.
- ‘H’ stands for House-to-House Electronic registration to ensure that all the recipient of any vaccine is captured, and the vaccine recipients’ records are updated and well maintained.
- The participating countries shared their concern over lack of vaccine supply more than vaccine platform.
- Each country's own module of digital platform is functioning, some adapted from their own mass immunization system for vaccinating children, yet the inoculation platform is different in terms of adults being dealt, instead of children.

Key Recommendations

- It has been realised that the pandemic has instilled the need for considering healthcare as an investment and not as expenditure.
- It was appreciated that the inoculation drive across the globe demands a lot of collaborations among developing countries.
- This challenging time has opened the window of opportunity to support each other, collaborate and learn the lessons mutually from the experiences of each country. This will propel to promptly adopt by adapting innovations which every country has done and create a scale in the vaccination drive.
- Representative from Nigeria referred that their country is utilizing solar direct drive refrigerator for vaccine storage.
- Digital platforms that are functioning in rolling out of COVID vaccines in African countries & India are being utilized to monitor impact of these vaccines and building resilience in citizens. This experience calls for knowledge sharing and partnership.
- Application Programming Interface (API) associated with Co-WIN, offers room for engagement with Global South in spirit of open innovation.
- Digital platforms are offering real time gap in demand versus supply of COVID vaccines. This gap offers clue for ramping up co-production of these vaccines in African countries. India can lend assistance for such a spin-off partnership from digital platforms driven data.