

## Digital Health Solutions for COVID-19 Vaccinations in the Greater Mekong Subregion

28 September 2021

Webinar Report

Over 70 participants, including senior officials from the Ministry of Health, Ministry of Tourism, Ministry of information, Ministry of Immigration of GMS countries, development partners and technical agencies, actively participated in the webinar.

Ms. Azusa Sato, Social Sector Specialist from ADB SERD inaugurated the webinar and addressed that many Asian countries are counting on digital vaccine certificates to normalize travel and open up economy in the region. She highlighted the key purposes of applying digital vaccine certificate as continuity of health care including for booster doses, and proof of credential for tourism and labor migration. Ms. Sato also elaborated on the requirement of standardization and the availability of a unique platform, the Working Group on Health Corporation (GMS-WGHC), for future dialogues on regional harmonization of digital vaccine certificates.

### Country updates

Cambodia: Dr. Ly Vichea Ravouth, Director of Planning and Health Information, MoH informed on the COVID-19 situation and progress on vaccination as part of the national campaign. As of September 2021, 23.7 million vaccine doses have been administered in Cambodia. The speaker highlighted digital technology allows for real-time reporting, verification of vaccine status to the public and recording vaccination information to health workers. Cambodia currently applies both online and offline certification system and the existing digital database system can support over 300,000 records per day.

Lao PDR: Dr. Thepphouthone Sorsavanh, Head of Health Information Division MOH, updated that over 4 million doses of COVID-19 were delivered in Lao PDR and MOH planned to cover 50% of the population by the end of December 2021. He described the progress on the COVID Registry (CVR) to include cryptographic verifiable QR code on the Lao PDR vaccination card which verifies verify the authenticity of vaccine certificates for domestic and international travel.

People's Republic of China: Mr. Cao Lei from National Immunization Program, CDC updated regarding the Vaccine Administration Act and application of digital technologies for the COVID-19 vaccine system. PRC widely applied digital technologies for vaccine transportation, real-time temperature monitoring, setting digital appointments for vaccination and sharing digital information and recording systems. However, real-time data analysis, big data storage and processing and rapid changes in data requirement is still challenging for PRC.

Thailand: Dr. Parinda Wattanasri, Director of Travel Medicine Program, presented COVID-19 vaccination updates and 28.8 million doses of vaccine had been delivered in Thailand as of August 2021. The Thai government aims up to 70% of population vaccinated. The speaker also elaborated on key dimensions of the vaccine strategy and requirements to enter the country. She explained the new system, travel to Thailand without quarantine (Phuket Sandbox) by using vaccine certificate as a proof of travel document. Thailand also developed a comprehensive one stock digital application 'Mor Prom' to register individuals' information, follow up symptoms after vaccination, set appointment for the second dose and issue vaccination certificates.

Viet Nam: Mr. Pham Thanh Dat, Vice Director of IT/ Electronic Health Administration, MOH updated the COVID-19 situation and progress on vaccination. A total of 36.8 million doses of vaccines has been administered as of September 2021. The Viet Nam vaccine management

platform consists of 4 key components; mobile application for eHealth management, National Vaccine Management and certification of vaccine system, reporting service command center and health information portal for the public. Viet Nam is currently using electronic vaccine declaration form and supporting information systems such as online vaccine registration, chat-box for vaccine schedule reminder and telehealth for post vaccine reactions.

### **Challenges in the GMS**

Common challenges in the GMS countries to operationalize digital vaccine certificates are limitation of hardware support and human resources. Additional challenges include requirement of policy and regulation for digital vaccine certificates, difficulties in synchronizing local and international languages, inadequate knowledge on vaccination among private sectors and interoperability of data systems. Lao PDR has significant challenges in lacking unique individual ID of health post for vaccination.

### **Remarks from tourism group**

Stephan Schipani, Principal Tourism Industry Specialist, of ADB Southeast Asia Urban Development and Water Division, gave perspectives from the Tourism Working Group. He showed that 41% of travelers surveyed predicted internal travel within six weeks of restrictions lifting, and 91% surveyed said they would be comfortable using a digital health passport for future travel. Speaker updated that the use of applications of digital technologies related to travel has been increased significantly (Mobile application on trip alerts 45%, contactless mobile payment 44% and issuing mobile boarding pass 43%). He pointed out the crucial requirement of application feasibility for successful implementation of digital vaccine certificate systems.

### **Global standard setting for digital health**

Professor Smisha Agarwal from Johns Hopkins Bloomberg School of Public Health addressed the values of taking a digital approach to healthcare in Asia and the digital response to the COVID-19 pandemic. She highlighted the risks, ethical and privacy considerations for application of digital technology on vaccination. The speaker also considered the importance of aligning interest and connecting multiple stakeholders to support standard-based digital health infrastructure. Additional enablers are strengthening collaboration and harnessing open resources to promote digital technology.

### **Regional certification systems**

Anit Mukherjee, Policy fellow at the Center for Global Department, elaborated on key issues for digitization, certification and standardization. He described the core principles of digital vaccine certificates and explained digital COVID certificate policy frameworks and systems developed in EU and India. Anit addressed that it was just the beginning and there is much work to be done at country, regional and global levels to harmonize standards, protocols and trust frameworks for the application of digital vaccine certificates.

### **Challenges of digital privacy**

Niall Dennehy, Co-Founder of AID Tech in Ireland, Singapore, UK, USA, introduced the concept of blockchain as a database system connecting a ledger, cryptography and peer-to-peer networking. The definition of blockchain can mean different things to technologists, Fin-tech people and legal people. Niall addressed the importance of decentralized IDs (DIDs), verifiable credentials, and self-sovereignty in vaccine delivery within the blockchain system, which serves

to aid health workers and users to issue and verify the vaccine certificate. A user case was shown to display the flow of blockchain enabled systems.

## **Discussion**

Participants discussed how the vaccine certification system could be used smoothly at international points of entry, not only airports, but also at border crossings. Thailand explained the feasibility of the Phuket sandbox model, with the scenario of using dual systems both online and offline vaccine certificates, to verify travel across borders.

Technical experts also suggested that vulnerable migrant population often lack vaccinations and they should be prioritized for inclusion in the vaccine certificate system. Participants also discussed how the vaccine certificate can be applicable for migrants who lack IDs and documentation. IOM and panelists explained even vaccine certification may be applicable as an ID for migrants as an initial step.

Attendees suggested further dialogues for pre-approval/verification of vaccine certificate before arrival and further dialogue with ASEAN to support the recognition of vaccine certificates between the ASEAN and GMS countries. Participants also suggested additional regional platforms will be required to support the recognition of vaccine certificates in the region.

## **Concluding thoughts**

- COVID-19 vaccination has enabled countries to leapfrog into a promising electronic vaccination record solution.
- Equity, accessibility, privacy protection, data confidentiality, flexibility and sustainability will be required to harmonize design principles of the regional vaccine certificate system.
- Stakeholders recognize that developing testing infrastructure and trust frameworks is equally important to facilitate mobility across the region
- Building a successful ecosystem relies on aligning interests and connecting multiple stakeholders and policy makers.
- Assess risks, harms, benefit of all data collected. Lawful, legitimate collection of personal data by minimizing data collection to most relevant to protect privacy of individuals.
- Consider interoperability and Decentralized IDs (DIDs) between Vaccination Information systems to facilitate regional collaboration

## **Ways forward**

Issuing a digitally enabled vaccine certificate is the first step. Countries should plan for credentialling and management over the long term. ADB will be continuing technical support to the WGHC for further discussion on collaboration of digital vaccine technology and investing in the regional migrant health project to further implement the ideas discussed in the webinar.

## **Annexes:**

- [Concept note and agenda](#)
- [Presentations](#)
- [List of participants](#)