Joint COVID-19

Immunization Program Improvement Workshop

Lao PDR, Thailand, Cambodia

20 – 21 December 2023
Luang Prabang, Lao PDR

THE TASK FORCE FOR GLOBAL HEALTH

CDC Centers for Disease Control and Prevention

Acknowledgments:

The US Centers for Disease Control and Prevention and the Task Force for Global Health would like to thank the meeting participants from the Ministries of Health of the three countries, the representatives of WHO, UNICEF, ADB, World Bank, CHAI and other contributors who willingly shared and discussed their experiences and lessons from the COVID-19 vaccine introduction and integration with other immunization and primary health care services. We would also like to acknowledge the support provided by MMGH Consulting GmbH in co-facilitating the joint program improvement workshop, in compiling the lessons and in drafting this report.

Table of Contents

Acronyms 4

Background 5

List of Participants 5

Workshop Objectives 6

Day 1: Opening Remarks 8

Day 1: Setting the Stage 8

Setting the Stage: Lao PDR 8
Setting the Stage: Thailand 10
Setting the Stage: Cambodia 11

Day 1: Discussion following Country Presentations 12

Day 1: Vaccine Demand and Acceptance 14

Day 1: Monitoring & Evaluation/Data Management 16

Day 1: Preparedness and Resilience for Emerging Threats/Update from Influenza Learning Agenda 16

Preparedness and Resilience for Emerging Threats (PRET) 16
Findings from Influenza Learning Agenda 17

Day 2: Immunization Life Course Approach and Integration 19

Day 2: Integration Checklist Group Work 19

Lao PDR: 19
Thailand: 21
Cambodia: 21

Day 2: Integration Action Plan Group Work 21

Lao PDR: 21
Thailand: 22
Cambodia: 22
Conclusion and Next Steps 24

Annex 1: Reference Documents 25

Annex 2: Workshop Feedback 26

Acronyms

ADB	Asian Development Bank
AEFI	Adverse Events Following Immunization
CDC	Centers for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
cPIE	COVID-19 Vaccine Post-Introduction Evaluation
CONNECT	Community Network Engagement for Essential Health Care and COVID-19 Response
COVAX	COVID-19 Vaccines Global Access
DHIS2	District Health Information Software 2
DTP3	Diphtheria tetanus toxoid and pertussis vaccine
eIR	Electronic Immunization Registry
EPI	Essential Programme on Immunization
GAVI	Gavi, The Vaccine Alliance
HPV	Human Papilloma Virus
ILI	Influenza-Like Illness
IEC	Information, Education and Communication
Lao PDR	Lao People's Democratic Republic
LMICs	Low- and Middle-Income Countries
LMIS	Logistics Management Information System
MCH	Maternal and Child Health
MoH	MoH – Ministry of Health
MOPH	Ministry of Public Health
M&E	Monitoring & Evaluation
NCD	Non-Communicable Disease
NDVP	National Deployment and Vaccination Plan
NIP	National Immunization Program
PHC	Primary Health Care
PIRI	Periodic Intensitication of Routine Immunization
PRET	Preparedness and Resilience for Emerging Threats
SAGE	Strategic Advisory Group of Experts on Immunization
SARI	Severe Acute Respiratory Illness
SIA	Supplementary Immunization Activity
SOP	Standard Operating Procedures
TFGH	Task Force for Global Health
UNICEF	United Nations Children's Fund
VHV	Village Health Volunteer
WHO	World Health Organization

Background

The Centers for Disease Control and Prevention (CDC) and The Task Force for Global Health (TFGH), in collaboration with the Ministries of Health of Lao PDR, Cambodia, and Thailand, along with key partners including Mother and Child Health Center (Lao MoH), hosted a two-day workshop from December 20-21, 2023, focused on improving COVID-19 vaccination programs and enhancing global health security. The workshop brought together key stakeholders, including representatives from Laos-Cambodia-Thailand's Ministries of Health, CDC, World Health Organization, United Nations Children's Fund, National Immunization Technical Advisory Group (NITAG), the Task Force for Global Health, Clinton Health Access Initiative, Asian Development Bank, and World Bank.

Since early 2021, the CDC has been working in collaboration with foreign Ministries of Health and partner organizations to develop national capacities for the planning, implementation, and evaluation of COVID-19 vaccination programs. Program evaluations, including COVID-19 Post-Introduction Evaluations (cPIEs), have been crucial in identifying best practices, documenting lessons learned, and improving program performance.

List of Participants

- Ministry of Health (MOH) Laos: National Immunization Program (NIP)-Mother and Child Health Center (MCHC), Department of Hygiene and Health Promotion (DHHP), Department of Planning and Finance (DPF), Cabinet and Project Steering Committee, National Immunization Technical Advisory Group (NITAG), National Center for Laboratory and Epidemiology (NCLE), Core Unit Office (MOH-USCDC CoAg)
- Ministry of Foreign Affair (MOFA), Lao PDR
- Ministry of Health (MOH), Cambodia
- Ministry of Public Health (MOPH) Thailand: University, Hospital, Department of DiseaseControl and Division of Epidemiology
- The United States Centers for Disease Control and Prevention (USCDC), Lao PDR
- The United States Centers for Disease Control and Prevention (USCDC), Thailand
- Taskforce for Global Health (TFGH)
- MMGH Consulting GmbH (MMGH)
- Clinton Health Access Initiatives (CHAI), Lao PDR
- Clinton Health Access Initiatives (CHAI), Cambodia
- World Health Organization (WHO), Lao PDR
- World Health Organization (WHO), Cambodia
- The United Nations Children's Fund (UNICEF), Lao PDR
- The United Nations Children's Fund (UNICEF), Cambodia
- World Bank

Workshop Objectives

1. To exchange country experiences with COVID-19 vaccination program implementation and discuss challenges and recommendations identified through program evaluation activities.
2. To review progress toward implementation of evaluation recommendations and explore further strategies to foster COVID-19 vaccine program improvement and increase coverage, specifically booster doses, among target groups.
3. To discuss integration of COVID-19 vaccination with other immunization (specifically seasonal influenza) or primary health care (PHC) platforms including planning and coordination, vaccine demand, vaccine safety, health workforce development, and immunization information systems leading to development of plans for additional interventions.

Please refer to presentation slides for additional information on each topic.

Day 1

Day 1: Opening Remarks

Opening remarks were given by Michelle Outlaw (Charge d 'Affairs, US Embassy, Lao PDR), Dr. Chanthanom Manithip (Permanent Secretary of Cabinet, Ministry of Health, Lao PDR), and Dr. William Davis (Influenza Program Director, US CDC-Thailand). All three units have provided support for COVID-19 vaccination programs and evaluations, and all echoed the importance of COVID-19 and influenza vaccination efforts. The workshop was described as an opportunity to review progress made in response to COVID-19 vaccine post-introduction evaluation (cPIE) recommendations, to continue inter-agency collaborations in pandemic preparedness, to assess integration strategies for COVID-19 and influenza vaccines, and to reflect on COVID-19 response efforts as a way to strengthen other health services.

Day 1: Setting the Stage

The first day of the workshop was geared towards providing an overview of the situation of COVID-19 and other - specifically influenza - vaccination efforts in the three countries. Each country provided an in-depth overview of the present situation.

Setting the Stage: Lao PDR

COVID-19 update: The first case of COVID-19 was recorded in March 2020, and a major outbreak happened in April 2020. As of December 2023, more than 218,000 cases and more than 600 deaths have been reported. Lockdowns had been imposed in 2020 and 2021. More than 13 million vaccine doses were administered, and coverage reached 86% for one dose, 78% for the primary series, and 34% for booster doses. Coverage among the elderly (65+ years) reached 76%, with 28% for first boosters, and 7% for second boosters; however, 7 districts had not reached 50% coverage among the elderly. Two thirds (66%) of the total number of doses received have been successfully used.

Influenza update: The country faces long influenza seasons with two disease waves. The MoH places a strong focus on influenza. The National Center for Laboratory and Epidemiology has been conducting influenza surveillance since 2010 with integrated ILI / SARI and COVID-19 surveillance performed since 2021. Seasonal influenza vaccination was initiated among priority populations in 2012. However, there is still low awareness and demand for influenza vaccines in the general population and specifically in health workers. Access to the vaccine is limited and coverage remains low, due to insufficient funding, inadequate coordination and collaboration among different stakeholders, as well as insufficient laboratory capacity.

cPIE: A mini cPIE (Interaction Review) was conducted in December 2021, and a full cPIE in September 2022.

Strengths identified: The cPIE showed that a number of relevant Task Forces had been established, funding was made available from the government and from donors, and a National Deployment and Vaccination Plan (NDVP) was rapidly developed. Regulatory procedures were considered strong, and there was regular coordination between national and sub-national levels. Standard Operating Procedures (SOPs) and microplans were established, and sufficient vaccination materials were made available for all health facility levels. On-the-job training and supportive supervision were provided for health workers on COVID-19 vaccination, and an electronic reporting system for COVID-19 vaccination was set up. Community engagement was conducted to address demand issues and rumors, and Village Health Volunteers (VHVs) and local authorities were involved in demand generation.

Challenges identified: Several different vaccines had been in use, some with short shelf-life. There were some inconsistencies in microplans, as well as challenges with the distribution and transport of vaccines. Health worker education was considered partly insufficient, and outreach not always conducted as planned. Routine immunization (DTP3 coverage) had suffered during the pandemic.

Follow-up on cPIE challenges and recommendations: Periodic intensifications of routine immunization (PIRI) were done in 2023 to catch up on routine coverage. Supportive supervision and on-the-job training were provided for conducting the PIRI. A measles-rubella supplementary immunization activity (SIA) is planned for 2024. An assessment was done in 2022 on ways to integrate COVID-19 vaccination with an ongoing HPV school vaccination campaign; this integration is expected to be taken forward in 2024. COVID-19 service delivery was fully integrated with routine outreach services and partly integrated with other PHC services, with an enhanced role of VHVs in vaccination. Coordination improved in releasing the necessary funds to provincial, district, and health center levels. In the area of vaccine management, five cold chain hubs were established, cold chain storage was augmented, training for the use of the electronic mSupply tool was strengthened, a stock management dashboard was implemented and SOPs for improved waste management were developed. CONNECT, the Community Network Engagement for Essential Health Care and COVID-19 Response, supported by WHO, was rolled out to 175 villages across 24 districts. In the area of monitoring and evaluation, an Electronic Immunization Registry (eIR) was developed, and supportive supervision and on-the-job training were conducted to improve data entry and data use for decision-making. A national Adverse Events Following Immunization (AEFI) compensation policy was implemented, and AEFI subcommittees were trained on causality assessment. Additional risk communication approaches in high-risk villages are planned for 2024.

Lessons learned and ongoing challenges: Positive aspects of the COVID-19 vaccination response were regular coordination at the national and subnational levels, and the availability of reliable data on vaccine doses administered. Challenges were seen in insufficient real-time data on vaccine supply at the district and health facility levels, and in the delivery of integrated outreach services of COVID-19 vaccines, routine immunization and influenza vaccine programs, HPV vaccines, and nutrition services. Uptake of booster doses has slowed, due to lower risk perception and prevailing concerns about vaccine safety, resulting in a large number of vaccines nearing their expiration dates. Financial resources remain constrained.

Integration: Strategies for the integration of influenza and COVID-19 vaccination were put forward in 2023, with both vaccines included in national policies, and coordinated service delivery at health facilities. COVID-19 surveillance will be further integrated with existing surveillance for all respiratory diseases.

CHAI: An assessment of the integration of COVID-19 with routine immunization services was done in 99 health centers in 5 provinces in 2022. At that time, 65% of health centers provided simultaneous integrated services, with 31% providing these at different times on the same day. Predictors for successful integration of services were sufficient manpower, equipment, and a higher frequency of outreach sessions. There was a further need for costed microplans for integrated service delivery, on-the-job training, supportive supervision and monitoring, and for the reallocation of resources and equipment for outreach services.

Discussion:

Integration challenges are partly due to the different target age groups of routine immunization and COVID-19 vaccination.

Electronic registration system: The DHIS2 tracker established for registration in the health center or vaccination rooms was used for tracking of vaccine recipients. WHO and UNICEF supported a successful trial in one province in June 2023 with training and provision of tablets. Scale-up of the system to all provinces was done with the aim of initiating active monitoring in February 2024 for children up to 24 months of age, followed later by adolescents and pregnant women.

Low booster doses uptake: There is very low demand for COVID-19 booster doses even in health workers, and integration into routine immunization may be of benefit here. Not all vaccines are presently available for boosters with a batch of Pfizer vaccines bound to expire in 2024. More community engagement will be necessary, including the registration of families for booster vaccination.

Setting the Stage: Thailand

COVID-19 update: COVID-19 vaccination started in in February 2021. By December 2023, 145 million doses had been administered. There is an established dashboard, now updated weekly for COVID-19 and influenza vaccination.

Influenza update: Influenza vaccination among health workers and poultry cullers started in 2004 and was expanded to the elderly and those with chronic diseases in 2008, and further expanded to include other priority groups (pregnant women, obese persons, persons with disabilities, and children) in 2009 and 2010. A single shot campaign for influenza is done between May and August, and year-round vaccination is available for pregnant women. Influenza vaccines are free of charge for high-risk groups, and vaccination is available in both the public and the private sector. There is limited vaccine availability (5 million doses are procured annually for 12 million population in the high-risk groups). Influenza vaccine effectiveness monitoring is ongoing. Surveillance covers both influenza and COVID-19.

cPIE: A cPIE was conducted in April / May 2022.

Strengths identified: Appropriate national policies and new legal frameworks were established for COVID-19, and the National Regulatory Agency facilitated expedited approval of vaccines. There was close coordination between government sectors, with good community engagement, and use of the national data systems. A mix and match strategy was employed for second doses and boosters, based on a study done in 2021. Vaccines were procured by the government with donations from NGOs and the private sector, and vaccines were provided at no cost. There was early involvement of civil society in the planning of vaccine rollout. A universal registration system and mobile application were used for appointment planning. The vaccination strategy used multiple vaccination sites (e.g., mobile units, department store, temples) and was supported by outreach groups. A standardized waste management system was used. Provinces and districts shared information and human resources as needed. Media with multiple tools in local languages were used, and respected leaders engaged in disseminating information and combating fake news and misinformation. AEFI teams were enhanced, and a compensation mechanism was set up. Twelve regional expert panels (1 per region) were established with a designated national expert committee reviewing each AEFI case. There was timely use of electronic data for program monitoring, using established reporting mechanisms, and using data on both registered and non-registered population groups with daily data review and feedback. An electronic dashboard was created for monitoring COVID-19 surveillance and vaccine uptake, which was made available to governors.

Challenges identified: Initially, regulatory guidelines were not clear, and the Procurement Act did not support vaccines. Staff shortages were identified at busy vaccination sites, and the process for compensating health workers was challenging. At the provincial level, the early stages of the pandemic proved challenging as provinces had to source financing on their own, and there was a lack of SOPs for appropriate vaccine storage in some locations. The provision of multiple types of vaccines complicated resource management and service delivery. Misperceptions and rumors towards COVID-19 vaccines remained. At the national level, challenges were identified in adapting to frequently changing priorities and allocation strategies. Local and national databases were not always interconnected. The non-Thai population was unregistered in the electronic databases, leading to difficulties in estimating vaccine coverage for the entire population residing in Thailand.

Follow-up on cPIE recommendations: A committee was established to focus only on vaccine procurement. Local leaders (including VHVs, government officials, religious leaders, and community leaders) were leveraged to support community engagement and building trust in vaccines. To accommodate shifting vaccine demand across sites, coordination between districts and provinces allowed for the sharing or borrowing of excess vaccines. A virtual training platform was developed for health workers.

Lessons learned and ongoing challenges: Multisectoral partnerships and communication were important to increase acceptance, including the availability of electronic vaccination records. COVID-19 vaccination was set up independently

from routine immunization, but influenza program management, the established cold chain, and available epidemiological data helped to reach the priority groups. Additional procurement regulations for health emergency situations will need to be established. Not all immunization data entry forms are standardized, which impacts the availability of real-time data. Data flow from vaccination, infection, and AEFI databases needs to be assessed.

Integration: The country is planning to continue to implement COVID-19 vaccination under its Universal Health Scheme. COVID-19 and influenza vaccination could entail annual booster doses of both vaccines on a voluntary basis, with outreach to the unvaccinated. Integrated surveillance is presently conducted in 15 sentinel sites, including ILI/SARI surveillance and laboratory testing for influenza, SARS-CoV-2, RSV, and 19 other viruses and 3 bacteria using multiplex RT-PCR.

Setting the Stage: Cambodia

COVID-19 update: The first detection of a COVID-19 case was in January 2020, with sporadic community transmission for the first year and widespread transmission happening in February 2021, with vaccination starting in the same month. Borders were closed to neighboring countries and opened again in November 2021. As of December 2023, there had been over 138,000 cases and over 3,000 deaths. There is ongoing collaboration with neighboring countries at border crossings on COVID-19 control. In December 2023, COVID-19 vaccination coverage for primary series was 92%, for 1st booster 67%, 2nd booster 34%, 3rd booster 13%, and 4th booster 4%. The dropout rate between primary series and booster dose was around 25 %. A “blossom strategy” for vaccination was followed, starting in the densely populated capital Phnom Penh (where 90% coverage was reached in August 2021) and at high intensity transmission sites such as airports, and thereafter moving to cover the more remote provinces, without major problems.

Influenza update: Influenza usually peaks during the first quarter of the year. Influenza surveillance is done in 9 SARI sites and 17 ILI sites. There were 6 cases of avian influenza A(H5N1) in 2023.

Routine Immunization update: The country is maintaining high coverage of routine immunization, done at fixed sites with monthly outreach. The National Immunization Program (NIP) works on enhancing community awareness on vaccination, continues to encourage the involvement of local governors and partners, and is integrating routine outreach vaccination with PHC services. A zero-dose reduction strategy is being followed with quarterly vaccination for high-risk groups and catch-up vaccination in communities with low coverage. A nationwide Measles SIA is planned for 2024.

cPIE: A cPIE was conducted under the auspices of the government ad hoc COVID-19 committee, closely following the WHO cPIE guidance and using the standard questionnaires.

Strengths identified: There was strong government leadership and commitment and good cooperation between many ministries, the private sector and development partners. In the regulatory area, WHO emergency use listing of vaccines was followed with requests for National Regulatory Agency approval. An NDVP was developed and an interministerial committee for procurement and an MoH task force were set up to allow for quick decision-making at the highest governmental levels. There was early planning for vaccine deployment based on the NDVP and existing Essential Programme on Immunization (EPI) standards. Vaccines were procured from COVAX in addition to receiving donations. An electronic system was set up for client preregistration. The country mobilized additional human resources including the military and youth and community volunteers. Subnational training committees conducted virtual training sessions and supervisory visits. About two thirds of the financing (64%) came from the national budget, the rest from donations. The cold chain was strengthened, adding new refrigerated trucks, and new incinerators for waste management. There was high government commitment for building demand for vaccination through mass media, Information, Education and Communication (IEC) materials, and by directly counteracting misinformation and rumors. The “KhmerVac” electronic registration system was established, and digital vaccination cards were issued. Electronic databases were used for daily reporting. Multisource surveillance is done jointly by the NIP and the Communicable Disease Control

Department. The government wants to leverage the momentum of COVID-19 to advance life course vaccination and reorient PHC by strengthening all health system building blocks.

Challenges identified: COVID-19 vaccine uptake was diminishing in 2023.

Lessons learned (UNICEF): Success factors of the COVID-19 response were the whole government approach, good stewardship by the highest levels (Prime Minister's office), a resilient and sustainable health security system, sufficient supply and resources (with substantial government funding), and good community commitment and engagement.

Follow-up on cPIE recommendations: A respiratory pathogen pandemic preparedness and response plan was developed in a multisectoral workshop in December 2023, to be included in the National Action Plan for Health Security in 2024, in line with WHO Preparedness and Resilience for Emerging Threats (PRET) guidance.

Integration: COVID-19 vaccination has been fully integrated into routine immunization at all vaccination sessions.

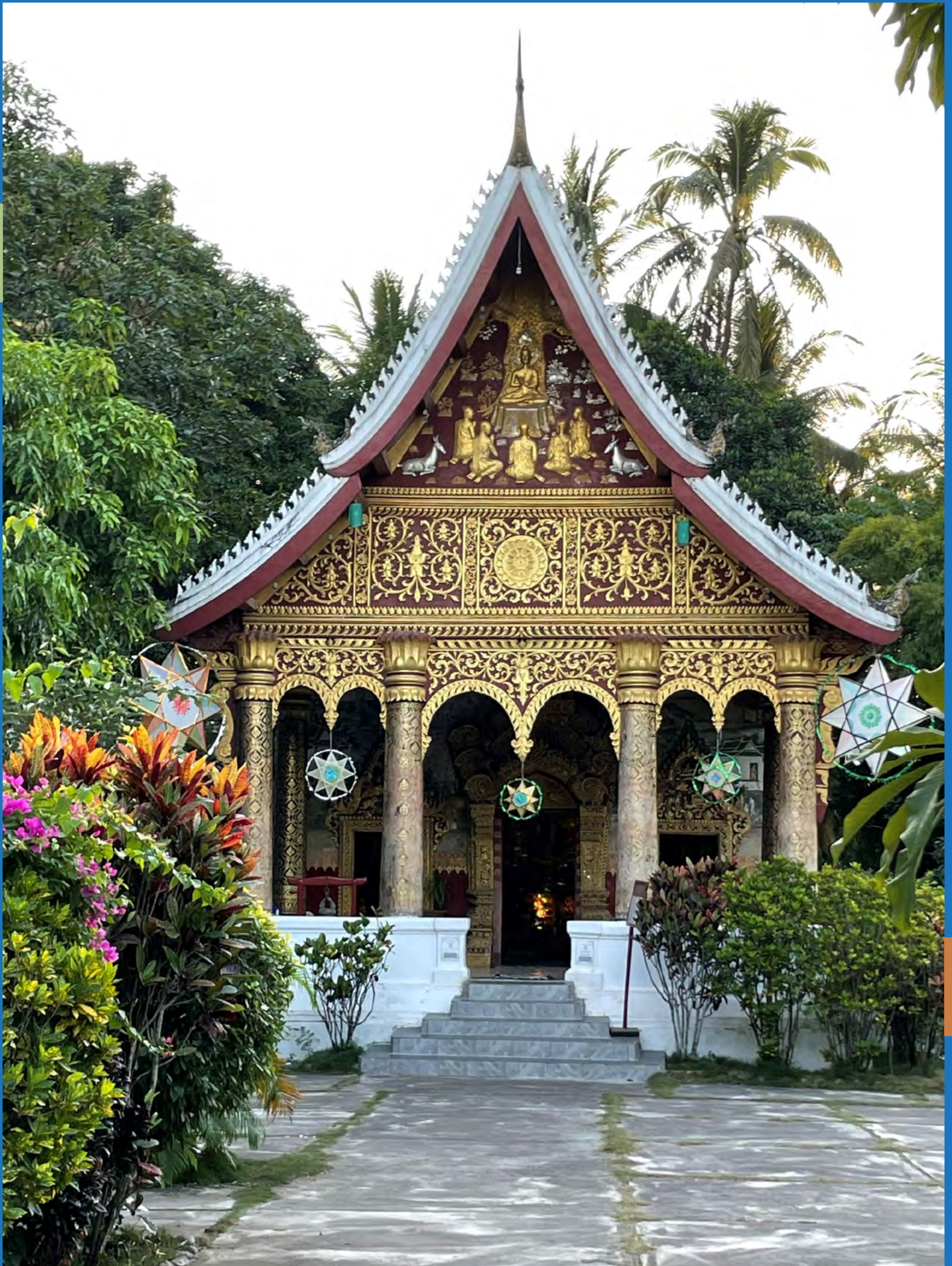
CHAI: A review of integration efforts done by CHAI showed the crucial need to tackle Non-Communicable Diseases (NCDs), such as hypertension and diabetes. COVID-19 vaccination had brought all age groups in contact with the health system. The country is now moving from immunization in the mother and child health age groups to life-course vaccination. An integration pilot project in 2021/22 in 8 vaccination sites in two provinces established integrated services for all adults >40 years coming for COVID-19 vaccination, with the idea that COVID-19 vaccination could serve as a platform to screen adults for NCDs. Community health workers engaged patients in health promotion activities and follow-up leading to 40% of them being tested for NCDs, and 38% being referred to a health facility for follow-up. Digitization was scaled up in 2023 to support national decision-making, and a digital app to simultaneously collect NCD and COVID-19 data was developed (H-EQUIP2). The pilot assessment showed that regular COVID-19 vaccination could be an entry point to delivering additional health services. In another view, the annual or frequent provision of NCD services may serve as a touchpoint to deliver vaccines and other health services.

Discussion:

The integration of COVID-19 with routine immunization was put in place in May 2023 and worked well, given that cold chain and human resources were in place, coupled with an established strategy to reach hard-to-reach communities. Community awareness was improved using grassroots structures and electronic media, and registration was conducted by village health volunteers, thus improving the health sector information of the target populations.

Day 1: Discussion following Country Presentations

Following a summary of best practices and key lessons learned in each of the countries, there was a brief discussion on cross-border vaccination needs. Representatives from UNICEF-Laos articulated that cross-border vaccination activities are important for the hard-to-reach populations. There is huge ongoing migration without registration from Lao to Thailand, with migrants not receiving any services in Thailand. There are discussions about the use of new technologies (e.g., iris scan) for the identification of beneficiaries. There is a specific need for further communication on cross-border vaccination between governments.



Day 1: Vaccine Demand and Acceptance

An interactive group exercise (World Café) was done, exploring issues around vaccine demand. This included a stepwise approach to demand generation, including how to make vaccines 'accessible' (easy to get), 'beneficial' (health benefits outweigh risks of getting the disease or perceived or real side effects from vaccination), 'convenient' (reduced out of pocket payments, reduced social and opportunity costs), 'desirable' (appealing), 'normative' (presented as a social default) and 'necessary' (indispensable for accessing things that people want to get back to doing). The participants moved from one topic to the next and suggested the following activities for each of these.

Accessible

Participants suggested the following ways of ensuring vaccines are accessible, involving activities around the delivery of vaccines. Both fixed and mobile sites should be offered for outreach, including a variety of hours and days for mobile vaccination in rural areas. Education and information should be provided at vaccination sites, via online applications, and through phone calls, and online registration should be offered for vaccination appointments. Health volunteers should be utilized to connect people with vaccine services, and partnerships should also be established with local groups.

In addition, to provide an enabling environment for vaccine rollout, the following actions were suggested. A vaccination policy should be established, and funding should be earmarked for COVID-19, influenza, and routine immunizations. Budget allocations should also be managed for necessary supplies, as well as for pandemic preparedness. Plans for vaccine quantities should be developed based on population density and using hospital databases of the number of individuals in high-risk populations. Advance planning should be done to reserve doses and plan for phased distribution of vaccines to local health offices. Co-payment options should be investigated if applicable, and countries should work towards the development of locally manufactured vaccines. Finally, multilateral cooperation should be enhanced for the procurement of equipment and vaccination support.

Beneficial

Ways of ensuring that vaccines are considered beneficial include the assessment of the populations' perceived risk of contracting COVID-19 or influenza. Participants suggested that risk perceptions depend on pandemic status, the current situation, and availability of scientific data (e.g., on increasing numbers of influenza cases, H1N1, or seasonal influenza). Currently there is high demand for influenza vaccines but limited supply, and vice versa for COVID-19 vaccines, as risk perception has decreased while COVID-19 vaccines remain available.

Vaccination strategies will need to consider the populations' perceived benefits of getting a COVID-19 or influenza vaccine. Perceived benefits can be informed by knowledge of vaccine efficacy to reduce mortality and morbidity, as well as feedback on the immediate benefits of vaccination, including reduction of individual disease risk, enhancing one's immunity status, and the effectiveness of variant-specific vaccines. Vaccine safety, with minimal AEFI, can also influence perceived benefits of vaccination. Additional factors that could impact perceived benefits include potential indirect protection for families, children, and communities, as well as socioeconomic benefits of vaccination.

Convenient

Several methods were suggested for making vaccines convenient for people. Vaccination can be integrated with other outreach programs. Door-to-door vaccination strategies can be employed, understanding the needs of the target populations. Strategies for door-to-door vaccination could include vaccine teams staying in villages overnight or during weekends to perform vaccinations and announcing vaccination days ahead of time to allow for individuals to plan to be home. Vaccination campaigns can be conducted at convenient locations including fast food centers, malls, markets, factories, schools, national games, traditional festivals or events, drive-through vaccination sites, and border posts. In cases where vaccines are not

provided for free by governments, insurance options should be provided. Incentives could be provided for completion of an immunization schedule, for instance the RMNCH 100 days scheme. Communications should be provided in multiple languages on social media, and online surveys should be conducted to estimate vaccine demand in real-time. For longer-term planning, countries can work towards the development of advanced vaccination technologies such as injection-free vaccines, micro-array patches, and nasal sprays to make vaccines more convenient.

Desirable

Participants suggested several ways for making vaccines more appealing in the community. Encouragement from family, friends, peers, community and religious leaders, celebrities, role models, and influencers can increase desirability of vaccines. Health education can be conducted using relevant IEC materials, posters, social media, and applications, with communications in local languages. Social and behavioral approaches were suggested, including understanding the needs and beliefs of communities as well as challenges and barriers to vaccination, appealing to social responsibility through concepts such as herd immunity, painting vaccination as a social event for family and friends, and providing incentives by partnering with the private sector to offer benefits such as food or nutrition. Providing other health services with vaccination, such as Maternal and Child Health (MCH) or NCD screening, could also make vaccination more desirable.

Additionally, people can be motivated to get vaccinated through enhancing risk-benefit perceptions. Proper communications through multiple channels, including recommendations from health workers, can help to enhance the belief that vaccines protect from disease, illness, and complications. AEFI should be addressed promptly and properly. Providing products with fewer perceived side effects, and offering advanced vaccination technologies such as MAPs or vaccines with a longer duration of protection, can also increase desirability.

Normative

Several ways to share the benefits of vaccines and to normalize vaccine use were suggested. Governments should frequently share updated information about the disease, vaccine effectiveness for different types of vaccines, and vaccination schedules. Appropriate channels such as press conferences should be utilized to address AEFIs and rumors, and risk communication approaches should be strengthened. Influencers, community leaders, local 'superstars', and the prime minister should be painted as role models for receiving vaccines, and vaccination can be further normalized in popular culture using folk or karaoke songs in messaging. An 'immunization week' can be celebrated in schools, institutions, organizations, and factories. Vaccination can be brought to community sites, making it simple for people to be vaccinated and involving all stakeholders in vaccination campaigns. Vaccination literacy should be increased starting from childhood, by including it in the curriculum of primary schools and informing parents of the benefits of vaccines.

Necessary

Several ideas were shared for ways of making vaccination necessary, i.e. not allowing certain activities for the unvaccinated population. Activities could include restrictions on domestic and international travel; the ability to enter businesses or attend in-person meetings; entry to the workplace, schools, restaurants, bars, karaoke, supermarkets, malls, and movie theaters; participation in sports events, traditional events, weddings, and funerals; and obtaining work permits, for migrants.

Next steps in building continuous demand and raising acceptance for vaccines include identifying stakeholders involved, estimating resources needed, developing timelines, and identifying implementation challenges.

Day 1: Monitoring & Evaluation/Data Management

Findings from cPIEs in the areas of monitoring & evaluation and data management were briefly presented and discussed.

In **Lao PDR** an electronic reporting system for COVID-19 was part of a single national information system. Vaccination certificates were issued electronically and the LMIS (mSupply) was used to manage vaccine stock. The further adaptation of data systems proves challenging, with continuous parallel use of paper and electronic systems, and health workers not fully re-trained in data management. Defaulter tracking is not being conducted, and numbers of vaccinated persons are at times inconsistent across different databases. Going forward, additional training and supervisory support in electronic data reporting and management will be necessary. Linking the immunization databases with the Civil Registration and Vital Statistics (CRVS) system should be considered. The current ILI sentinel surveillance platform will benefit from the ongoing DHIS2 expansion.

In **Thailand** there were electronic registries and national databases for real-time tracking of COVID-19 vaccination. Existing public health reporting mechanisms were used to report on COVID-19 with daily data review and real-time dashboards for monitoring. Data entry into the national database required the transfer of manual forms and local and national databases were not always interconnected. While multiple data sources were used to estimate the number of migrant workers, it remained difficult to track unregistered and mobile populations. Going forward, the country will work on standardizing data at all administrative levels and expanding data entry to the peripheral levels. Surveillance is ongoing with a good tracking system for COVID-19 cases and deaths, and the early integration of influenza surveillance at sentinel sites.

Discussion:

It remains difficult to integrate data systems due to issues with data security and accessibility. This results in health facilities often running several different systems in parallel. During the pandemic governments enforced reporting requirements also by the private sector, but this requirement has been weakened since. Big data processing needs must be managed, and costs are huge for maintaining the systems.

Day 1: Preparedness and Resilience for Emerging Threats/ Update from Influenza Learning Agenda

Preparedness and Resilience for Emerging Threats (PRET)

Creating and maintaining a pandemic preparedness plan is important for all countries. Such a plan needs multisectoral involvement building on lessons learned and should be a living document requiring continuous improvement. Resources will need to be made available for regularly updating these plans. The PRET monitoring framework outlines the steps for the updating of preparedness plans, increasing the connectivity among stakeholders, dedicating sustained investments, financing, and monitoring of pandemic preparedness. A training module is available for planning for respiratory pathogen pandemics.

In Lao PDR, an influenza pandemic preparedness plan is now being updated for COVID-19. Table-top exercises were done, and a simulation exercise is planned for 2024. Further policy and regulatory updates will be needed. The immunization program is intimately involved in the planning activities.

In Thailand, there is a national strategic plan for emerging infectious diseases with six strategies, including influenza preparedness plans at both national and subnational levels.

In Cambodia, a PRET workshop was held in September 2023 which will be followed by workshops at the subnational level. The country will be finalizing its pandemic preparedness plan in 2024.

Findings from Influenza Learning Agenda

The 2009 pandemic highlighted gaps in pandemic preparedness. Countries with influenza vaccination programs were able to distribute more WHO-donated vaccines than those without such programs. In countries without established regulatory pathways, NDVPs or pre-existing distribution systems vaccine distribution was slower. LMICs with influenza vaccination programs reached higher COVID-19 vaccination coverage more quickly than those without, leveraging established vaccine delivery approaches. These included vaccinating health workers and adults, and having microplans for these target groups, a trained vaccinator workforce, knowledge about vaccine acceptability and demand, and digital vaccine registries. Influenza vaccination programs contributed to demand generation for COVID-19 vaccines in priority groups and health worker vaccination was confirmed as a gateway to reaching other priority groups.

Day 2

Day 2: Immunization Life Course Approach and Integration

A presentation was given on immunization across the life course and the integration of COVID-19 vaccines into existing vaccination programs.

WHO Strategic Advisory Group of Experts on Immunization (SAGE) currently recommends giving priority to COVID-19 vaccination for older adults, adults with comorbidities or severe obesity, adults, adolescents and children with immunocompromising conditions, pregnant women, and healthcare workers. The updated SAGE Roadmap was presented which includes a simplified single-dose regime for most COVID-19 vaccines, considering that most people have had at least one prior infection. For optimal efficient use of COVID-19 vaccines, a single booster dose should be considered approximately 12 months after the previous dose(s) for older adults and adults with significant comorbidities or severe obesity; an additional dose within 12 months of the previous dose may be considered for extremely high-risk populations, in consultation with medical providers. For healthy adults and children, additional COVID-19 doses are not routinely recommended.

WHO recommends a life course approach to COVID-19 vaccination. Integrated delivery with other vaccines across the life course can increase COVID-19 vaccine uptake. Opportunities for integration may include integrated services at fixed health care facilities and long-term care facilities, through community outreach, and through mass vaccination campaigns targeted at the whole family. The WHO SEARO Regional Immunization Technical Advisory Group (RITAG) recommends developing local, context-specific strategies for integration to reach unvaccinated groups for both COVID-19 and routine immunization. WHO, UNICEF, and GAVI have developed a support package for integration, including a readiness assessment checklist, an integration mapping tool, and implementation support documents, which countries are encouraged to make use of.

Discussion:

International support is still available for the procurement of vaccines in 2024 and 2025, and countries are encouraged to make use of that support. WHO, UNICEF, and GAVI are also providing support for COVID-19 integration.

There are difficulties in ensuring sufficient funding for both COVID-19 vaccination and routine immunizations as well as to fund the "catch-up" on losses to routine immunization coverage that were seen during the pandemic. More funds are also needed for the preparation for future epidemics or pandemics. Financial support from funders is, however, decreasing, and countries will likely need to fund more of their vaccination programs from domestic budgets.

Day 2: Integration Checklist Group Work

Countries assessed their readiness for COVID-19 vaccination integration with immunization and other PHC services using the WHO integration checklist [1] (part of the WHO document on "Considerations for integrating COVID-19 vaccination into immunization programs and primary health care for 2022 and beyond") and reported a summary of their findings. Indicators were assessed across 8 building blocks: Leadership and Governance, Health Systems Financing, Demand and Community Engagement, Service Delivery, Health Workforce, Health Information Systems, Access to Essential Medicines (including quality vaccines), and Monitoring and Evaluation.

Lao PDR:

Overall, two indicators were marked as "Not started." In the area of Leadership and Governance, a working

1 https://www.who.int/publications/i/item/9789240064454

group has not yet been established to oversee integration planning. In the area of Health Systems Financing, analysis of health budgets and expenditures relating to COVID-19 vaccine integration has not yet been started. The majority of indicators were identified as "In process," with the lowest proportion of indicators marked as "Ready" for the building blocks Service Delivery (1 out of 7 indicators ready), Health Systems Financing (1 out of 5 indicators ready), and Demand and Community Engagement (1 out of 4 indicators ready). The building blocks with the highest proportions of readiness were identified as Access to Essential Medicines (5 out of 9 indicators ready), Health Information Systems (2 out of 4 indicators ready), and Leadership and Governance (2 out of 4 indicators ready). It was also noted that several items, including funding, are only in place for the next two years.

Thailand:

Thailand marked the vast majority of their action items as "Ready." Only one area of Health Systems Financing was identified as "In process:" the analysis of health budgets and expenditure changes relating to COVID-19 vaccine integration. The budget approval process was identified as a reason for complications for conducting a budget analysis. Thailand acknowledged that there were different stages of readiness regarding the indicators marked as "Ready" - some indicators were more "fully" ready than others.

Cambodia:

Cambodia identified seven indicators that are "Not started". In Health Systems Financing, three indicators were not started: mapping of human resources, training, and communication costs; estimation of funding needed for integration; and identifying opportunities for cost sharing across interventions. In Demand and Community Engagement two indicators were not started: considering data from behavioral and social drivers of vaccination for designing the integration plan; and identifying strategies for integrated demand generation for target groups. In Health Information Systems, one indicator was not started: expanding data systems used for COVID-19 to cover reporting for integrated services. Finally, in Access to Essential Medicines, one indicator was not started: exploring the possibility to bundle COVID-19 vaccine supply with other essential PHC supplies. Overall, the building blocks with the lowest proportions of readiness were Health Systems Financing (0 out of 5 indicators ready), Health Workforce (1 out of 5 indicators ready), and Demand and Community Engagement (1 out of 4 indicators ready). The highest proportions of readiness were observed in Leadership and Governance (3 out of 4 indicators ready), Access to Essential Medicines (6 out of 9 indicators ready), and Health Information Systems (2 out of 4 indicators ready).

Day 2: Integration Action Plan Group Work

Countries spent most of the afternoon working together to develop draft action plans for the integration of COVID-19 vaccination into other routine immunization and PHC programs. Action plans followed the WHO Health Systems Building Blocks framework.[2]

Lao PDR:

The following priority actions were identified for each of the building blocks:

Leadership & governance: Mapping out priorities, strategies, and resources for various health plans; conducting consultation workshops with stakeholders to strengthen coordination mechanisms for integration; streamlining action plans across different departments; and revitalizing the COVID-19 taskforce to oversee integration planning and implementation of COVID-19 into RI.

Health system financing: Mapping the existing domestic financial resources; developing the health financing transition strategy for Official Development Assistance (ODA) transition; advocating for international and domestic resource mobilization; and monitoring and optimizing existing resources for immunizations through public financial management.

2 https://extranet.who.int/nhptool/BuildingBlock.aspx

Demand and community engagement: Operationalizing PHC laws; conducting two studies for immunization and gender assessments; incorporating social listening platform results into the Social and Behavior Change Communication (SBCC) plan; strengthening collaborations for CONNECT projects; and strengthening VHV support and incentives.

Service delivery: Supporting health centers to develop integrated and costed microplans for high priority groups and resources for integrated services; and promoting integrated routine immunization, COVID-19, and MCH services at fixed sites.

Health workforce: Addressing gaps in the health workforce through updating the National Human Resources policy; monitoring outcomes of training into job application; completing mapping of VHVs by 2024; and adopting online registration for VHVs.

Health information systems: Leveraging the eIR platform; strengthening life course vaccination; and strengthening event-based surveillance for vaccine-preventable disease including COVID-19 in low-performing areas.

Access to essential medicines: Performing preventive maintenance for cold chain equipment; improving vaccine management including data visibility and vaccine distribution; creating SOPs to minimize vaccine wastage; reviewing existing waste management plans; and communicating between MOH and Ministry of Public Works and Transportation to coordinate on infection prevention and control measures.

Monitoring & evaluation: Conducting joint monitoring and supervision visits between surveillance and EPI in low-performing areas; performing supervisory visits by AEFI committee in high-risk areas; and conducting quarterly meetings between the EPI, the National Center for Laboratory and Epidemiology, and the AEFI committee.

Thailand:

The following priority actions were identified for each of the building blocks:

Leadership & governance: Enhancing the NDVP with relevant stakeholders following the established integration timeline.

Health system financing: Designating the national health security office to secure the budget and collaborate with stakeholders for immunization campaigns.

Demand & community engagement, Monitoring & evaluation: Having the MOPH cooperate with the Ministry of Interior to monitor COVID-19 vaccine performance indicators for local authorities, including community engagement with the digital platforms.

Service delivery & access to essential medicines: Conducting immunization campaigns, and effective communications among different high-risk groups to gain higher vaccine uptake.

Human resources: Increasing incentives among health workers responsible for vaccination and AEFI reports; and training on vaccine orientation, AEFI surveillance, digital data entry, communication skills, risk management, and the M&E process among health workers and local authorities.

Monitoring & evaluation: Strengthening investigation capacities including hospital-based pathological laboratories and autopsy for serious AEFI at the subnational level. Increasing incentives among health workers responsible for vaccination and AEFI reports; and moving forward with implementing digital platforms.

Cambodia:

The following priority actions were identified for each of the building blocks:

Leadership & governance: Seeking Technical Working Group in Health endorsement on PHC and COVID-19 integration strategic plan.

Health system financing: Developing a COVID-19 integration strategic plan including costing and funding; and exploring opportunities for cost-sharing across health interventions and resource mobilization.

wheelofnames.com

Demand & community engagement:
Conducting an assessment of integrated services acceptance and health worker behavior; collecting and reviewing results of pilot programs of COVID-19/ PHC integration; and updating strategies for integrated demand generation in target groups through existing platforms.

Service delivery: Updating immunization guidelines after endorsement from the MOH based on recent WHO-SAGE recommendations for COVID-19 vaccination.

Health workforce: Analyzing the capacity of the health workforce across health programs; and conducting a training needs assessment at all levels.

Health information systems: Reviewing the outcome of the eIR pilot and exploring opportunities for nationwide expansion; and having a discussion between the MoH and the Ministry of Post and Telecommunications for transferring KhmerVac data to the national health management information system.

Access to essential medicines: Exploring the opportunity to convince the MOH on integrating EPI and PHC supplies based on WHO guidance.

Monitoring & evaluation: Updating the M&E plan, guidelines, and SOPs, including a checklist for data management.

Conclusion and Next Steps

The workshop provided opportunities for countries to share best practices and lessons learned from cPIEs and subsequent follow-up actions, as well as a platform to exchange ideas and strategies for COVID-19 integration.

The goal, moving forward, is for countries to utilize and adapt the integration action plans developed during this workshop to address priority areas of action identified. Countries are encouraged to make use of available resources to strengthen their integration plans, financing, and readiness for future pandemics that may arise.

The professional connections made during this workshop, both between agencies and between countries, can be maintained to continue sharing ideas and success stories of COVID-19 integration.

Annex 1: Reference Documents

COVID-19 vaccine introduction lessons

TechNet-21 Global Compendium of Country Knowledge on COVID-19 Vaccination: https://www.technet-21.org/en/covid-compendium

Integration

WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines: https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Roadmap

Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond (with Annex 3: Readiness assessment checklist) https://www.who.int/publications/i/item/9789240064454

Working together: an integration resource guide for immunization services throughout the life course: https://apps.who.int/iris/handle/10665/276546

Operational framework for Primary Health Care. Transforming vision into action: https://www.who.int/publications/i/item/9789240017832

WHO/UNICEF Integration Mapping Tool: https://www.technet-21.org/en/resources/tool/covid-19-vaccine-integration-mapping-tool

Options for linking health interventions for adolescents with HPV vaccination: https://www.who.int/publications/m/item/options-for-linking-health-interventions-for-adolescents-with-hpv-vaccination

PRET

Preparedness and Resilience for Emerging Threats homepage: https://www.who.int/initiatives/preparedness-and-resilience-for-emerging-threats

A checklist for respiratory pathogen pandemic preparedness planning: https://www.who.int/publications/i/item/9789240084513

PRET Module 1: Planning for respiratory pathogen pandemics: https://www.who.int/publications/m/item/preparedness-and-resilience-for-emerging-threats-module-1-planning-for-respiratory-pathogen-pandemics-version-1

Demand

Walk a Mile Exercise: https://www.cdc.gov/vaccines/covid-19/vaccinate-with-confidence/community.html

Annex 2: Workshop Feedback

A total of 41 workshop participants completed the feedback survey.

1

The workshop sessions participants found the most helpful or interesting on Day 1 were Preparedness and Resilience for Emerging Threats (25), Vaccine Demand and Acceptance (20), and Monitoring and Evaluation/Data Management (17).

2

Comments and suggestions for Day 1 included having more interactive sessions and having more time for discussion between the three countries after presentations.

3

Comments and suggestions for Day 2 included positive feedback about the group work and action plan developments, allocating more time for the checklist and action plans, further simplifying the integration checklist, and providing countries with information on the content for the group exercises in advance.

4

The majority of participants found the vaccine demand activity, the integration checklist work, and the action plan group work to be "very helpful" or "somewhat helpful".

5

Participants reported numerous lessons learned from colleagues in other countries, including:

- The use of electronic registration systems, immunization registries, and digital platforms
- Understanding the different country contexts but finding the experience from other countries useful for helping each other
- Integration of COVID-19 vaccines with routine immunization and/or NCD screening
- Using a variety of approaches for community engagement
- Data management practices

6

15 / 41 respondents specified that there are other topics they would like to have seen in the workshop, including:

- More insights into building pandemic preparedness plans
- Theories/tips for working with other ministries or departments for integration
- Building health literacy for vaccine acceptance
- Global and regional goals and strategies for integration
- Current policies and plans in each country for national vaccination programs for the next 5 years
- Estimating finances for vaccine procurement
- AEFI management
- Building demand

7

Overall, things that worked well in the workshop were identified as:

- Group work and discussions (13 participants)
- Learning from other countries (7 participants)
- Action plan development (6 participants)
- Logistics and timing (5 participants)

8

Things that could have been improved were identified as:

- Including more content on integration
- More interactive discussions / energizing activities
- Introductions / more icebreaker sessions
- Strategies to strengthen national immunization programs

9

Additional comments from participants were primarily positive, but other comments/ suggestions included:

- Timing felt a bit rushed
- Would like to have the workshop annually
- Arrange post-workshop activities or day trips
- Extend the content to include regional preparation for vaccine security
- Keeping the network of participants actively engaged

ເພື່ອປັບປຸງການຈັດຕັ້ງປະຕິບັດ
ກຳປູເຈຍ ແລະ ໄທ
2023

NAM KHONG

THE TASK FORCE FOR GLOBAL HEALTH