TRAINING WORKSHOP ON THE DEVELOPMENT OF EFFECTIVE AND EFFICIENT PANDEMIC VACCINE DEPLOYMENT AND VACCINATION PLANS TO STRENGTHEN PANDEMIC PREPAREDNESS

12–14 September 2023
Manila, Philippines
MEETING REPORT

TRAINING WORKSHOP ON THE DEVELOPMENT OF EFFECTIVE AND EFFICIENT PANDEMIC VACCINE DEPLOYMENT AND VACCINATION PLANS TO STRENGTHEN PANDEMIC PREPAREDNESS

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NOTE

The views expressed in this report are those of the participants of the Training Workshop on the Development of Effective and Efficient Pandemic Vaccine Deployment and Vaccination Plans to Strengthen Pandemic Preparedness and do not necessarily reflect the policies of the conveners.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific for Member States in the Region and for those who participated in the Training Workshop on the Development of Effective and Efficient Pandemic Vaccine Deployment and Vaccination Plans to Strengthen Pandemic Preparedness in Manila, Philippines from 12 to 14 September 2023.
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Keywords

Influenza vaccines / Pandemics – prevention and control / Vaccination
SUMMARY

Ensuring access to medical countermeasures (MCM), including vaccines, diagnostics and treatments, is crucial to achieving a strengthened global health architecture for pandemic prevention, preparedness, readiness, response and resilience. National deployment and vaccination plans (NDVPs) are essential to ensuring a country can rapidly and effectively access, allocate and deploy key MCMs, in particular vaccines, to identified target populations.

Creating or updating an NDVP is an iterative process bringing together diverse stakeholders to ensure the plan is comprehensive and ready for use during an epidemic or pandemic. The World Health Organization (WHO) holds NDVP development trainings and regional workshops as part of capacity-building activities under the Pandemic Influenza Preparedness (PIP) Framework, which established access, allocation and deployment of pandemic MCM as an essential element of pandemic preparedness and response.

This report summarizes the activities and discussions of a regional workshop that supported countries in strengthening preparedness, developing and updating plans for national access, allocation and deployment of MCM against pandemic influenza and other respiratory viruses of pandemic potential. Working together with WHO headquarters, the meeting took place at the WHO Regional Office for the Western Pacific. The workshop was attended by participants from Cambodia, China, Fiji, the Lao People’s Democratic Republic, Mongolia, Papua New Guinea, the Philippines and Viet Nam.

The workshop began with presentations providing an overview of the global landscape, including ongoing initiatives to strengthen preparedness and access to MCM against pandemic influenza and other respiratory viruses of pandemic potential. Presentations reflected experiences, lessons identified and best practices from the COVID-19 pandemic to explore several key areas shaping how MCM are accessed and deployed. These included regulatory considerations, surveillance after deployment and the importance of harnessing the power of risk communication and community engagement to address vaccine hesitancy and build effective communication strategies.

The workshop offered an opportunity for participants to share lessons identified and best practices in their countries from the COVID-19 pandemic for future planning on national access, allocation and deployment of MCM. Experiences highlighted the need to strengthen capacities across several interrelated dimensions of the MCM national introduction cascade and in doing so support overarching national public health goals. The second part of the workshop invited participants to strengthen their MCM access, allocation and deployment plans for pandemic influenza and other respiratory viruses, as well as develop planning and implementation capacities through active participation in a simulation exercise – PIP Deploy. PIP Deploy was developed to facilitate discussion and engagement to explore preparedness for deploying pandemic influenza vaccines and to better understand related gaps. Discussions emphasized the importance of interactive workshops and activities, such as PIP Deploy, and how maintaining collective momentum is essential towards enhanced pandemic preparedness.
1. INTRODUCTION

1.1 Meeting organization

This report summarizes the activities and discussions of a World Health Organization (WHO) regional workshop held on 12–14 September 2023 in Manila, Philippines. The workshop was held in coordination with WHO headquarters and the WHO Regional Office for the Western Pacific and was attended by participants from eight Western Pacific Member States: Cambodia, China, Fiji, the Lao People’s Democratic Republic, Mongolia, Papua New Guinea, the Philippines and Viet Nam. A list of participants is available in Annex 1.

The interactive workshop combined presentations, discussions and a table-top simulation – “PIP Deploy” – to engage participants and facilitate participatory learning. PIP Deploy is a gamified in-person table-top simulation exercise that uses a progressive scenario of an emergency situation to explore key elements of emergency response, coordination of intersectoral efforts and underlying legal and regulatory frameworks. The exercise objectives were to (1) provoke discussions on key gaps in preparing for or updating national pandemic influenza deployment plans; (2) enable conversations on best practices for in-country pandemic influenza vaccine deployment governance and operations; and (3) better understand country training needs and barriers to future participation in simulation exercises.

The primary features of PIP Deploy include a scenario based on a fictitious non-vaccine-producing country named Timoa, in which participants progress through five themed missions anchored by a board-game map and activities where participants collect cards representing resources for pandemic response. Through facilitated injects (challenges), PIP Deploy invites participants to perform a situational analysis of their national deployment and vaccination plan (NDVP), identify challengers and enablers for complex pandemic responses, map immediate and long-term needs, as well as timelines for creating or updating their new plan.

The programme of activities is available in Annex 2.

1.2 Meeting objectives

The objectives of the meeting were:

1. to enhance collective understanding on the level of preparedness for pandemic vaccine deployment and vaccination planning in countries;
2. to reinforce the importance of in-country planning, development and/or updating of NDVPs to ensure capacities, capabilities and readiness for pandemic vaccine deployment in wider pandemic influenza preparedness as well as all-hazards emergency response;
3. to introduce new WHO tools to support the development and updating of NDVPs for pandemic influenza and other respiratory viruses; and
4. to develop NDVPs and road maps for finalization at country level as part of overall pandemic preparedness plans, taking into account lessons identified from COVID-19 vaccination preparedness and response.
2. PROCEEDINGS

2.1 Opening session

Ms Qiu Yi Khut, acting Regional Emergencies Director, WHO Health Emergencies Programme, Regional Office for the Western Pacific, opened the session and welcomed all participants. The workshop began with presentations that offered context on the global and regional landscape, including an overview of ongoing initiatives to strengthen preparedness and access to medical countermeasures (MCM) against pandemic influenza and other respiratory viruses of pandemic potential. Presentations reflected on lessons identified and best practices from recent epidemics and pandemics to explore several key areas shaping how MCM are accessed and deployed. These included presentations and discussions on regulatory considerations, surveillance after introduction of MCM, and the importance of harnessing the power of risk communication and community engagement to prevent impact of harmful rumours, mis- and disinformation related to MCM.

2.1.1 The global landscape of respiratory pathogen pandemic preparedness and planning

To set the scene, respective technical officers from the WHO Regional Office for the Western Pacific and WHO headquarters, Mr Nguyen Phuong Nam and Ms Shoshanna Goldin, connected the workshop to a broader global agenda and rich history of related initiatives for pandemic preparedness and response, including health emergency preparedness, response and resilience (HEPR) and preparedness and resilience for emerging threats (PRET). Participants were introduced to ongoing initiatives that emphasize the importance of developing coherent national pandemic preparedness plans that integrate the various stages of a pandemic response.

Following the 2009 H1N1 pandemic, several global efforts emerged to enhance core capacities of the International Health Regulations (2005) (IHR) and ways to prepare for pandemics caused by respiratory pathogens. In 2011, stakeholders and WHO jointly established the Pandemic Influenza Preparedness (PIP) Framework, which aims to improve preparedness and response for the next influenza pandemic. The PIP Framework supports preparedness activities, which are operationalized through implementation plans. In addition, in the event of a pandemic, Member States will have timely access to pandemic products in the event of an influenza pandemic through the PIP Framework with support from WHO and partners. These efforts are complemented by the Global Influenza Strategy 2019–2030, which aims to develop better global tools and strengthen country capacities to respond to pandemic influenza. The Global Influenza Strategy also emphasizes the importance of national planning for pandemic influenza preparedness.

2.1.2 Strengthening the global architecture for health emergency preparedness, response and resilience

More recently, reviews of the COVID-19 pandemic response have resulted in more than 300 recommendations on how to better prepare for future global health emergencies. Drawing on these recommendations, the HEPR framework builds on independent reviews of the global response to COVID-19, reports of prior outbreaks, views of Member States and ongoing multilateral consultation processes. The WHO publication Strengthening the global architecture for health emergency preparedness, response and resilience outlines five core health emergency components that shape our ability to effectively prevent, prepare for, detect, respond to and recover from health emergencies at subnational, national, regional and global levels.
HEPR consists of three key domains – governance, financing and systems – supported by five crucial and interconnected subsystems – access to countermeasures, collaborative surveillance, safe and scalable care, community protection and emergency coordination. The emergency coordination subsystem describes the importance of comprehensive, multisectoral and integrated national action plans, such as NDVPs, for better preparedness, response and resilience to epidemics and pandemics.

Building on the HEPR framework, the PRET initiative was launched in April 2023. PRET is an innovative, hazards-based approach to improving pandemic preparedness that recognizes that the same systems, capacities, knowledge and tools can be leveraged and applied to groups of pathogens based on their mode of transmission (respiratory, arboviruses, foodborne, etc.).

The global landscape, while complex, converges around similar goals to strengthen the global health architecture. Together, these agendas, initiatives and approaches all draw attention to the importance of regional considerations and national planning activities for respiratory pathogen pandemic preparedness.

To understand Member States’ status with regard to respiratory pathogen pandemic planning, a poll of participants and an exercise based on the checklist for respiratory pathogen pandemic planning was conducted. Results are presented in Annex 3.

### 2.1.3 The regional landscape of respiratory pathogen pandemic preparedness and planning

Several epidemic and pandemic disease events have occurred in the Western Pacific Region in the past few decades, and the Region also faces the ongoing risk of natural disasters leading to complex health emergencies. In the Region, pandemic preparedness has been practised and implemented for more than a decade using the two-tier approach of the Asia Pacific Strategy for Health Emergency and Emerging Diseases (APSED). The first tier is emergency planning. Health emergency plans need to be developed, practised, evaluated and updated, through coordinated mechanisms, engaging relevant stakeholders. The second tier is system readiness. For emergency plans to be effectively and efficiently implemented, systems, capacities and resources must be in place.

The WHO Regional Office for the Western Pacific is also leading the process to develop a new Asia Pacific Health Security Action Framework (APHSAF) underpinned by core values of equity, inclusivity and coherence, and guided by several principles, such as sustained long-term investment, solidarity and partnerships for collective action, whole-of-government and whole-of-society approach, and continuous learning for improvement, among others. The new framework includes six domains for health security to understand necessary and interacting elements of health security systems. These are: Lead and coordinate; Plan and prepare; Assess and respond; Readiness and resilience; Support and enable; and Monitor, evaluate and improve. APHSAF supports building resilient systems across health and other sectors to protect the health and well-being of the population. The workshop focused on planning and preparedness but in doing so touches on all elements of the framework.

Regarding vaccination, participants described the Regional Strategic Framework for Vaccine-Preventable Diseases and Immunization in the Western Pacific 2021–2030, which includes 18 strategies to achieve three strategic objectives aiming to eliminate vaccine-preventable morbidity, mortality and disability caused by 20 vaccine-preventable diseases in the Western Pacific. Three key areas included access and availability, vaccine deployment, as well as vaccine and immunization safety information monitoring and evaluation.
2.1.4 Planning for access, allocation and deployment of pandemic supplies

Ensuring equitable access to vaccines is a complex, yet essential, aspect of pandemic vaccine governance. Ms Ioana Ghiga, Technical Officer, WHO headquarters, provided key background information on why planning for pandemic MCM access, allocation and deployment is needed now. Access is supported by an NDVP, which allows WHO and others to understand what a country needs, how products can be delivered and how they will be used. Furthermore, the NDVP should set out strategies for how the respective country is planning to access vaccines in the event of a pandemic. Planning for allocation is crucial and must be complemented by a mechanism to guide equitable allocation and timely vaccine deployment within a country based on agreed and accepted criteria. This is particularly important during the early stages of deployment, when there may be a scarcity of countermeasures that must be allocated to those most at risk and vulnerable.

Considering pandemic influenza, when the next influenza pandemic arises the response arm of the PIP Framework policy instrument will activate, with manufacturers committed to providing vaccines as they are produced, including more than 420 million doses of vaccines. WHO will need to have a mechanism in place to effectively serve Member States, while Member States will need to have NDVPs in place to ensure they are prepared to quickly and effectively access these products. There is new WHO guidance on development and implementation of an NDVP to support this work. This guidance is broad in scope and builds on prior documents, including the 2012 pandemic influenza guidance, which served as a model for the COVID-19 guidelines that were more pathogen-specific.

Participants from Cambodia highlighted the importance of an updated NDVP and how plans can be strengthened by covering a breadth of diseases, not just respiratory diseases, as well as by understanding all hazards in the context of climate change and other drivers increasing infectious disease risks. Participants from Fiji similarly connected NDVP development to broader discussions around national disaster planning and the need for harmonized definitions and a common understanding to facilitate collaborative and targeted approaches across sectors.

2.1.5 Regulatory pathways and capacity-building for pandemic vaccine introduction

Dr Jinho Shin, Medical Officer, Essential Medicines and Health Technologies, Division of Health Systems and Services, WHO Regional Office for the Western Pacific, provided experiences and lessons on regulatory pathways for pandemic vaccines, including from the COVID-19 pandemic.

One such lesson was how reliance-based regulatory approval of vaccines was an essential enabler in resource-constrained countries. This mechanism was facilitated by cooperation across WHO, partners and agencies, and guided by frameworks and procedures across countries. Other lessons identified from the COVID-19 pandemic to strengthen regulatory preparedness were highlighted, including:

- the need for overarching legal and regulatory frameworks that allow rapid entry of products during public health emergencies;
- the importance of mechanisms to address misinformation based on evidence and regulatory science, while exercising independence; and
- the need for regulatory frameworks that accommodate flexibility, variation and risk-based approaches.

When considering regulatory preparedness for future pandemics, it is essential to think beyond mission-oriented innovations based on identified social challenges. During the preparatory phase focus should be on platform technologies, evidence generation, benefit-risk assessments, establishing a framework, production scale-up and skills building, as well as developing agile regulatory pathways.
2.1.6 Vaccine safety surveillance preparedness and response

Ms Heeyoun Gloria Cho, Technical Officer, Vaccine-Preventable Diseases and Immunization, Division of Programmes for Disease Control, WHO Regional Office for the Western Pacific, introduced several considerations when anticipating mass vaccination during a pandemic, including the possibility of more than one vaccine product being introduced, increased AEFI reports, clusters of AEFI and increase in serious AEFI cases for investigation. The presentation also emphasized the need to update reporting forms to include any additional necessary variables, the importance of training vaccinators to minimize immunization errors as well as AEFI monitors to recognize anxiety-related reactions and having anaphylaxis systems and AEFI causality assessments.

Adverse events of special interest (AESI) were introduced as a pre-specific medically significant event that has the potential to be causally associated with a vaccine product. These need to be carefully monitored and confirmed by special studies. AESIs are more accurately monitored through active vaccine safety surveillance systems (AVSS) that aim to collect complete, accurate information about AEFIs and their risk factors in a defined population via a continuous, organized process. AVSS can also be used for signal detection, determining the rate of an event in a defined population, as well as to determine the relative risk of the effect. The WHO Regional Office for the Western Pacific provided support in vaccine and immunization safety monitoring and response during COVID-19, including developing technical documents, templates, data collection support tools and decision-making algorithms for AESIs. WHO took several actions to support vaccine safety surveillance during COVID-19, such as establishing a COVID-19 subcommittee of the Global Advisory Committee on Vaccine Safety (GACVS).

2.1.7 Risk communication and community engagement

Emergencies begin and end in communities, it is essential that communities understand and engage with risks, protect themselves and adopt interventions. Communities can be defined broadly across multiple dimensions and it is important to recognize that communities are interconnected, even across vast distances. With technology, information can flow quickly across national borders, allowing people to access information in new ways and from new sources.

During public health emergencies, information – including rumours, misinformation and disinformation – can spread rapidly. Risk communication and community engagement interventions providing accurate information can help people make informed decisions about whether to take a pandemic vaccine.

Vaccine uptake is complex and different people-centred approaches are needed for different communities. The workshop stressed the importance of understanding the needs of end users by utilizing different tools, such as community listening mechanisms, Infodemic insights and others. Information from these sources can be used to plan and streamline interventions. A key part of developing risk communication and community engagement interventions for vaccination programmes is understanding drivers of vaccine uptake. WHO recommends the Behavioral and Social Drivers of Vaccination (BeSD) model, which considers behavioural and social drivers, including thinking and feeling, social process and the ways these factors shape motivation for vaccine uptake.

Challenges to generating demand for vaccination were discussed during the workshop. To address these, it is essential to apply the Communication for Health (C4H) approach, which is defined by six principles to be included in strategic information planning: (1) Informed by data and theory; (2) Measurable; (3) Planned; (4) Audience- and people-centred; (5) Collaborative; and (6) Targeted.
2.2 Lessons identified from COVID-19

Ms Cho presented on the characteristics of COVID-19 vaccine introduction in the Region, including the unprecedented and rapid pace at which vaccines were developed and the multiple vaccine products introduced, the limited and erratic vaccine supplies that followed, the need for vaccines to reach non-traditional target populations, complex vaccine management, widespread proliferation of rumours and misinformation, ensuring that vaccine sites did not become places of COVID-19 transmission, as well as global demand for data on vaccination. To support vaccination efforts, countries had to quickly innovate across several domains, including creating fast-track regulatory systems, creative and far-reaching delivery pathways supported by risk communication and community engagement strategies, and tools to educate about and advocate for COVID-19 vaccination. Despite successes, COVID-19 vaccination has been a resource-intensive process and across the Region, routine immunization programmes were challenged, with an estimated 5 million children un/under-vaccinated from 2019 to 2022. This puts the Region at risk of vaccine-preventable disease outbreaks (for example, measles).

Integrating COVID-19 vaccination is an area of ongoing work across the Region, in addition to strengthening life-course vaccination platforms in the context of primary health care.

Participants also reflected on their perspectives of the COVID-19 pandemic. Experiences highlighted the need to strengthen capacities across several interrelated dimensions of the MCM national introduction cascade, and in doing so support overarching national public health goals.

2.2.1 Leveraging national plans and building upon interim guidance

Participants underscored how national plans, guidelines and after-action reviews were essential to ensuring an effective response to COVID-19. Existing plans were leveraged and participants explained how interim guidance became essential to an effective COVID-19 response. Participants from Fiji reflected on how in the month preceding the emergence of COVID-19 they had finished a measles vaccination campaign and ongoing testing of disaster response plans. These plans provided a foundation for the response and will be adapted based on lessons identified during the COVID-19 pandemic.

Similarly, participants from Mongolia explained how the Ministry of Health, National Center for Communicable Diseases, National Center for Public Health, among other institutions, had begun preparing the country’s NDVP in October 2020. A joint assessment with relevant national stakeholders was conducted where areas for improvement were identified that will also be enhanced based on their COVID-19 experience. Participants from the Philippines described how a multisectoral COVID-19 after-action review and workshops were conducted based on existing plans and COVID-19 experiences to strengthen future pandemic preparedness, ongoing national action plans for health security operational planning and implementation of IHR core capacities.

2.2.2 Coordinating MCM through cross-sectoral, whole-of-government and whole-of-society approaches

Participants emphasized that coordination is necessary to ensure equitable MCM delivery across target groups. In particular, coordination championed at the highest levels of decision-making was highlighted as essential to implementing effective responses and vaccination programmes. In Cambodia, having a high-level champion was essential to bringing together different sectors in a coordinated response. Similarly in Fiji, the Prime Minister engaged with community members and listened to their concerns; the Government, opposition and all ministers worked towards common goals based on shared resources, contributing to a holistic response.
Cross-sectoral collaboration across multiple, diverse sectors towards a shared goal was identified as essential to delivering MCM where they were needed most during the COVID-19 pandemic. In Viet Nam all sectors came together to support the health sector; in the Philippines a whole-of-society approach was taken with synchronized and integrated efforts from different stakeholders including communities, academia and the private sector, and in a cross-sectoral approach with strongly engaged government agencies.

Participants from Lao People’s Democratic Republic highlighted how planning and implementation requires coordination between national and subnational leadership with downward delegation and upward collaboration at the regional and local levels. Participants from Papua New Guinea similarly described how provincial emergency operation centres were established in each district in line with ongoing health reforms that aim to decentralize capacities from the national to the subnational level.

2.2.3 Developing legislation and regulatory approaches

Participants explored the legal and regulatory considerations that shape approval of and equitable access to MCM. Participants from Fiji explained how they leveraged existing legal frameworks including the Public Health Act, the National Disaster Act and the Quarantine Act. As part of the Quarantine Act, health at borders was emphasized and a lesson learnt in Fiji was the importance of having health workers present at the ports to enhance border management and mitigate and anticipate risks. However, existing legislation needed refinement to build on what was in place and with consideration of human rights and public health goals.

Participants from China explained how during COVID-19 several efforts were made to enhance regulatory processes. These included special review and approval procedures and optimizing the review process. Best practices were highlighted, including carrying out drug special review procedures in response to public health emergencies with efforts to optimize and refine workflows in compressed time periods while ensuring unified command, early intervention and rapid, efficient and scientific review and approval. Participants from the Philippines reflected on reliance and developing a systematized process for registering products. The Philippines leveraged recognition of other regulators, such as the United States of America and the European Union, as well as WHO mechanisms to support reliance and recognition to enhance vaccine access and mechanisms for rapid access during emergencies.

2.2.4 Strengthening supply chains and logistics

Reflecting on COVID-19, participants described supply chain considerations in delivering products to remote areas and efforts and solutions to ensure cold chain is maintained. Participants from Cambodia explained how the COVID-19 pandemic was both a crisis and an opportunity to enhance capacities and systems within the country. For example, cold chain, vaccine storage and transportation were rapidly expanded and now able to reach all areas of the country. There were also procurement challenges for personal protective equipment (PPE). The Prime Minister called for textile factories to transform into PPE manufacturing facilities and as a result Cambodia had sufficient PPE domestically and for export.

Participants from Mongolia described how the National Central Vaccine store underwent expansion to address gaps in storage and cold chain, resulting in a three-fold increase in capacity. To further enhance cold chain and equipment capacity, refrigerators, cold boxes, temperature monitoring devices, refrigerated cars and other necessary appliances for the 580 immunization units were procured. Ultra-cold freezers have been installed in the central storage facility as well as in 21 provinces and nine districts.

2.2.5 Harnessing technology for MCM deployment and monitoring

The technological revolution of the 21st century has led to rapid innovation and advancement in digital technologies. Experience from the COVID-19 pandemic demonstrated how technology has revolutionized
MCM deployment and monitoring. Participants from Cambodia described how digital systems were leveraged for vaccination, as well as for surveillance to understand the evolving situation to monitor vaccination efforts. Data on vaccination are aggregated from community vaccination sites up to the central level for monitoring and evaluation. Participants from Mongolia shared their achievements during the COVID-19 pandemic, including establishing an electronic immunization registry integrating vaccination databases based on personal information; self-reporting of AEFI by citizens; issuances of vaccination certificates in English and Mongolian as well as international travel health certificates; and appointment booking online for pregnant women.

In Fiji, large amounts of data were generated by surveillance systems and efforts were taken to manage and harness these data as part of the COVID-19 response. Information technology (IT) systems and tracking systems were crucial to preventing vaccination fraud. Moving towards digital platforms requires back-up in physical registries, as well as strategies to face IT challenges in ways that ensure operational security. In particular, when volunteers are supporting data entry efforts, extra training may be necessary to ensure they have complete understanding of the importance of appropriately and accurately registering data. Collecting and harnessing data from the grassroots and ensuring a robust data and IT infrastructure were highlighted as key to effective responses.

Participants from China explained innovative regulatory inspection methods and the development of remote drug registration inspection that harness digital technologies to enhance and streamline these processes.

### 2.2.6 Supporting the health workforce to deliver MCM in communities

Delivering MCM to all communities depends on a well-supported health workforce able to provide services effectively and safely during emergencies and beyond. The COVID-19 pandemic led to many examples of task-shifting but this requires an understanding of the basic skills and knowledge required on the ground as part of preparedness so there is clarity on who does what and the scope of individual roles. Participants emphasized that human resources for health are chronically lacking worldwide, and there is a need to support the health workforce and think outside the box when it comes to recruitment and capacity building. In Fiji, communities sought information on COVID-19 and countermeasures from community health workers (CHWs); however, CHWs often did not have enough information. Training was conducted on risk communication and community engagement training so that CHWs could translate best practices and information to the local context and local ways of communication. At the height of the COVID-19 pandemic, pandemic community engagement workshops and infection prevention and control trainings were conduct country-wide, which enabled reflections from both the communities and the health workforce.

Participants from the Lao People’s Democratic Republic described the need to establish vaccination strategies where site types and operations match the local context and needs. COVID-19 vaccination teams (at fixed vaccination sites and at mobile/outreach sessions) composed of five to 10 health workers were leveraged and based on smaller-scale microplans. Teams included one vaccinator per four support staff for registration and crowd control. Naibans (village leaders) and village police supported crowd control. Participants emphasized that when multiple vaccine types are given at a single site, processes and instructions to health workers should be clear and communicated effectively to avoid vaccination errors.

Participants from Cambodia described how health workers at the grassroots level were instrumental in reaching hard-to-reach and remote communities. They also highlighted ongoing challenges faced by the health workforce, including increased workload following integration of COVID-19 vaccine delivery into routine vaccination, and a need to increase human resources to ensure services reach all communities, while COVID-19 vaccine uptake has been declining.
2.2.7 Enhancing surveillance, monitoring and evaluation systems

Once MCM are deployed, systems must be in place to ensure AEFI surveillance, as well as monitoring and evaluation of vaccination programmes. Participants from Fiji described a gap in reporting AEFIs and therefore the need to ensure feedback mechanisms and ways to capture and record AEFI. Participants from the Lao People’s Democratic Republic emphasized how data collection is operationally challenging but key for monitoring performance and progress.

Some suggestions for managing this include: keep data collection and entry simple to reduce the data entry workflow; give data-driven feedback on low performance; identify potential problems down to the facility level and troubleshoot with specific vaccination teams to monitor progress; mobilize volunteers to help with vaccination and surge capacity to accelerate data entry; implement online pre-registration quickly to reduce data entry workloads on-site; and allocate budget for catch-up support in the initial stages while processes are being refined. There will be a need for additional support as scale-up progresses, particularly during surge times and times of high demand.

Considering evaluation systems, participants from Mongolia described their COVID-19 Post-Introduction Evaluation (cPIE), which aimed to highlight achievements from the COVID-19 vaccine roll-out and implementation strategies; determine challenges needing corrective action; identify best practices from the COVID-19 vaccination response and its impact on the health system; recommend strategies to improve the roll-out of COVID-19 vaccination; and identify lessons learnt for future pandemic response.

2.2.8 Risk communication and community engagement to support MCM delivery

The COVID-19 pandemic has been closely associated with an infodemic, with rampant spread of rumours, misinformation and disinformation that eroded trust in public health and fuelled vaccine hesitancy. Participants from Mongolia emphasized the importance of consistent messaging through daily conferences, recommendations provided by professionals, handbooks for information and public calls for vaccination.

Many participants also highlighted the role of media, both traditional and social, in ensuring messages reached communities. Participants from Viet Nam explained how mass media and social networks played an important role in quickly informing the people of the importance of vaccination and to guide the public during the response. In the Philippines, communication strategies tapped into behavioural insights with differing engagement strategies for primary series vaccination versus additional doses. Many of these strategies leveraged media through strategic media campaigns, webinars, mass media rounds, as well as tapping into social structures by partnering with celebrities, as well as religious and cultural leaders. Participants from Fiji similarly highlighted how faith-based organizations and community celebrities are key to community engagement strategies during emergencies. For example, a famous rugby player documenting his vaccination increased vaccine confidence among youth in Fiji.

Participants from Fiji emphasized the importance of community-engaged, fact-based messaging and transparency on AEFIs as an opportunity to address hesitancy and answer questions by taking a health protection and promotion lens. They underscored the importance of two-way communication between health centres delivering vaccines and those at the planning and strategy level to ensure that programmes are tailored to the needs of those implementing vaccines and the communities they serve. For example, key representatives of Indigenous groups were included in a video conference on YouTube conducted in their dialect. At-risk populations were identified by organizations, including those living in informal settlements and who shared housing near textile factories. Monitoring and evaluation efforts were undertaken that adopted a social determinants of health approach to address needs beyond health (for example, education, nutrition, etc.).
Participants also discussed how emergencies begin in communities and how the word resilience echoes across discussions of community engagement globally. They reflected on the global and national commitment necessary to strengthen primary health care, which will ultimately have knock-on effects on trust as people are more connected to the health system.

2.3 Learning in action – PIP Deploy

The second part of the workshop invited participants to strengthen their pandemic influenza deployment planning and implementation capacities through active participation in a simulation exercise – PIP Deploy. The exercise consisted of five missions with corresponding objectives that explored key elements of the influenza pandemic response at country level. An overview of the missions and their objectives is available in Annex 4.

Participants were divided into groups and given a situation – a challenge – for each mission and asked to develop a potential solution. After brainstorming and discussion, each group shared a proposed solution with other groups and the game facilitators, collected resources for the implementation of the proposed solution and then moved to the next challenge. Each step of the game was followed by a facilitated discussion and technical input with facilitators from WHO.

Participants reported appreciating the interactive format of PIP Deploy, describing how the activity was a valuable opportunity to bring people together, hear new perspectives and gain practical knowledge. Through the activity, participants identified gaps in their NDVP and considered elements from other plans that could be leveraged to strengthen their NDVP. Experiences from COVID-19 shaped how participants reflected on the activities in each of the missions. Discussions drew on lessons learnt and best practices coming out of the COVID-19 pandemic and how these would shape future NDVPs.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

The main conclusions from the meeting were:

- Multisectoral engagement in NDVP development is important to ensure the plan is comprehensive and ready for use during an epidemic or pandemic.
- The workshop helped to broaden perspectives on how vaccination efforts and MCM in general are an essential component of pandemic planning activities.
- NDVPs that were developed before the COVID-19 pandemic will need to be updated based on experiences from pandemic response and in consideration of other respiratory pathogens.
- Multisectoral engagement in the development of NDVP is important to ensure diverse needs and priorities are taken into consideration during planning.
3.2 Recommendations

3.2.1 Recommendations for Member States

Member States are encouraged to consider the following:

(1) Continue to update country-specific national pandemic plans for respiratory pathogens that include planning for deployment and vaccination and hold simulation exercises to test plans.

(2) Engage a wider range of stakeholders in planning activities and exercises to ensure a comprehensive whole-of-government and whole-of-society approach, including involving WHO and other partners.

(3) Proactively share experiences and best practices in pandemic vaccines deployment with other Member States to improve collective learning and strengthen preparedness and readiness in the Region.

3.2.2 Recommendations for WHO Secretariat

WHO is requested to:

(1) Support Member States in development and/or update of national pandemic plans for respiratory pathogens that include planning for deployment and vaccination, including their exercises for finalization.

(2) Work with partners including WHO collaborating centres to support Member States to update national regulatory frameworks to ensure timely access to MCMs during a pandemic.

(3) Make available a regional forum for Member States to share best practices on pandemic vaccine deployment and vaccination planning.
ANNEXES

Annex 1. List of participants

Cambodia
Dr Krang Sidonn, Deputy Director, Communicable Disease Control Department, Ministry of Health, Phnom Penh

Mr Ork Vichit, Deputy Director, National Maternal and Child Health Center, Ministry of Health, Phnom Penh

Dr Neth Bunnazeth, Chief of Health Communication Unit, National Centre for Health Promotion, Ministry of Health, Phnom Penh

Ms Vannaravattey Khuon, Logistics Officer, National Immunization Program, Ministry of Health, Phnom Penh

Mr Huot Limsrean, Drug Registration Bureau Officer, Department of Drugs and Food, Ministry of Health, Phnom Penh

China
Dr Xue Bo, Level III Inspector Rank Official, Division of Emergency Response, Department of Emergency Response, National Disease Control and Prevention Administration, Beijing

Dr Song Ting, Level II Consultant, Division of Biological Products, Department of Drug Registration, National Medical Products Administration, Beijing

Ms Miao Ning, Associated Researcher, National Immunization Program, Chinese Center for Disease Control and Prevention, Beijing

Prof Yang Xiaokun, Associated Professor, Division of Infectious Diseases, Chinese Center for Disease Control and Prevention, Beijing

Fiji
Dr Kulae Kuru Tuisabeto, Principal Medical Officer, Centeral Division, Ministry of Health and Medical Services, Suva

Dr Anaseini Adi Bau Maisema, General Manager, Incident Management Team (IMT), Arm of the COVID-19 Taskforce Unit, Health Protection Unit, Ministry of Health and Medical Services, Suva

Ms Litiana Saunivalu Tuvuki Volavola, National Immunization Program Manager, Family Health Unit, Ministry of Health and Medical Services, Suva
Ms Bulou Adilaite Jikinimasei Ganivavalagi, Principal Supplies Officer, Procurement-Fiji Pharmaceutical & Biomedical Services, Ministry of Health and Medical Services, Suva,

Ms Ilisabeta May Pesamino, Chief Pharmacist, Fiji Medicines Regulatory, Authority, Ministry of Health and Medical Services, Suva

**Lao People’s Democratic Republic**

Ms Chansavang Vongkhamsaao, Deputy Director, Mother and Child Health Center, Ministry of Health, Vientiane

**Dr Kongxay Phounphenghack,** National Immunisation Program Manager, Department of Hygiene and Health Promotion, Head of Vaccine Preventable Disease Division, Ministry of Health, Vientiane

Ms Latsada Phameuang, Head of Health Promotion Division, Department of Hygiene and Health Promotion, Ministry of Health, Vientiane

Dr Chanthavy Soulaphy, Technical Officer, National Center for Laboratory and Epidemiology, Department of Communicable Disease and Control, Ministry of Health, Vientiane

Dr Sanathip Vilavong, Surveillance Officer, Surveillance Division, Ministry of Health, Vientiane

**Mongolia**

Dr Tselkhaasuren Batjargal, Epidemiologist, Immunization Department, National Center for Communicable Diseases, Ministry of Health, Ulaanbaatar

Ms Altanchimeg Samdan, Epidemiologist, Immunization Department, National Center for Communicable Diseases, Ministry of Health, Ulaanbaatar

Dr Dolgorkhand Adiyadorj, Senior Officer in Charge in Emergency Operations Center and Zoonoses, Department of Public Health, Ministry of Health, Ulaanbaatar

Ms Bujmaa Ganzorig, Officer in Charge of Medicine Registration Changes, Medicine Registration Division, Medicine and Medical Devices Regulatory Agency, Ulaanbaatar

Dr Tuguldur Burmaajav Head of National Polio Laboratory, Department of National Reference Laboratory, Mongolian National Center for Public Health, Ulaanbaatar
Papua New Guinea

Dr Edward Waramin, Manager of Population & Family Health Services, National Public Health Division, National Department of Health, Port Moresby

Mr Judah Brian Iparam, Manager of Health Promotion, Public Health Division, National Department of Health, Port Moresby

Ms Martha Pogo, Acting Manager of Expanded Program for Immunisation, Public Health Division, National Department of Health, Port Moresby

Mr Makolm Sabak, Acting Manager of Medical Supplies Procurement & Distribution, National Health Policy and Corporate Service Medical, Ministry of Health, Port Moresby

Ms Vienna Nonwo, Immunisable Disease Surveillance Technical Officer, Expanded Program on Immunization, National Department of Health, Port Moresby

Philippines

Mr Willison John De Luna, Food-Drug Regulation Officer IV, Food and Drug Administration, Manila

Ms Royce Anne Vicentino, Food-Drug Regulation Officer III, Food and Drug Administration, Manila

Ms Hazel Torreblanca, Senior Health Program Officer, Field Implementation and Coordination Team-Field Operations System Management, Manila

Viet Nam

Dr Nguyen Manh Hung, Senior Researcher, National Expanded Programme on Immunization, National Institute of Hygiene and Epidemiology, Hanoi

Dr Nguyen Dac Trung, Senior Researcher, National Expanded Programme on Immunization, National Institute of Hygiene and Epidemiology, Hanoi
Secretariat

**WHO Regional Office for the Western Pacific**

Ms Qiu Yi Khut, Technical Officer, Country Health Emergency Preparedness and IHR, and acting Regional Emergency Director, WHO Health Emergencies Programme, World Health Organization, Regional Office for the Western Pacific, Manila, Philippines

Mr Nguyen Phuong Nam, Responsible Officer, Technical Officer, Pandemic Influenza Preparedness, Country Health Emergency Preparedness and IHR, WHO Health Emergencies Programme, World Health Organization, Regional Office for the Western Pacific, Manila, Philippines

Ms Lieke Visser, Technical Officer, Risk Communications, Country Health Emergency Preparedness and IHR, WHO Health Emergencies Programme, World Health Organization, Regional Office for the Western Pacific, Manila, Philippines

Mr Jan-Erik Larsen, Technical Officer, Emergency Operations, WHO Health Emergencies Programme, World Health Organization, Regional Office for the Western Pacific, Manila, Philippines

Dr Jinho Shin, Medical Officer, Essential Medicines and Health Technologies Division of Health Systems and Services, World Health Organization Regional Office for the Western Pacific, Manila, Philippines

Ms Heeyoun Cho, Technical Officer (Vaccine Safety), Vaccine-preventable Diseases and Immunization Division of Programmes for Disease Control, World Health Organization Regional Office for the Western Pacific, Manila, Philippines

**WHO Cambodia**

Dr Chham Samnang, Technical Officer, Office of the WHO Representative in Cambodia, World Health Organization, Phnom Penh

**WHO China**

Dr Lee Chin Kei, Medical Officer, Office of the WHO Representative in China, World Health Organization, Beijing

**WHO Fiji**

Dr Nuha Mahmoud, Team Coordinator, Pacific Health Security, Communicable Diseases and Climate Change (PSC), Division of Pacific Technical Support World Health Organization, Suva
WHO Lao People’s Democratic Republic
Dr Batmunkh Nyambat, Technical Officer, Office of the WHO Representative in the Lao People’s Democratic Republic, World Health Organization, Vientiane

WHO Papua New Guinea
Dr Joaquim Da Silva, Team Coordinator, Office of the WHO Representative in Papua New Guinea, World Health Organization, Port Moresby

WHO Viet Nam
Dr Sangjun Moon, Team Coordinator, Office of the WHO Representative in Viet Nam, Hanoi

WHO Headquarters
Mr Yutaka Endo, Project Officer, Epidemic and Pandemic Preparedness and Prevention, World Health Organization, Geneva, Switzerland

Ms Ioana Ghiga, Technical Officer, Epidemic and Pandemic Preparedness and Prevention, World Health Organization, Geneva, Switzerland

Ms Shoshanna Goldin, Technical Officer, Epidemic and Pandemic Preparedness and Prevention, World Health Organization, Geneva, Switzerland

Ms Victoria Haldane, Scientific Writer, Epidemic and Pandemic Preparedness and Prevention World Health Organization, 1211 Geneva 27, Switzerland

Dr Katherine Robinson, Senior Advisor for Global Health Coronavirus and Other Respiratory Viruses Division (CORVD) National Center for Immunization and Respiratory Diseases (NCIRD), Centers for Disease Control and Prevention (CDC), USA
## Annex 2. Programme of activities

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
<th>Speaker / Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1: Tuesday, 12 September 2023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:30-08:45</td>
<td>Registration</td>
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<tr>
<td>08:45-09:00</td>
<td>1. Welcome and opening remarks</td>
<td>Ms Qiu Yi Khut</td>
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<td></td>
<td>Objectives and expected results</td>
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<td></td>
<td>Administrative arrangements</td>
<td></td>
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<tr>
<td>09:00-09:20</td>
<td>2. Scene setting for pandemic planning</td>
<td>Mr Nguyen Phuong Nam</td>
</tr>
<tr>
<td>09:20-09:45</td>
<td>Introduction to PRET</td>
<td>Ms Shoshanna Goldin</td>
</tr>
<tr>
<td></td>
<td>Current status of country pandemic plans</td>
<td>Ms Shoshanna Goldin</td>
</tr>
<tr>
<td>09:45-11:00</td>
<td>Identifying priorities</td>
<td>Ms Shoshanna Goldin</td>
</tr>
<tr>
<td>11:00-11:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:30-12:00</td>
<td>Resources and needs</td>
<td>Ms Shoshanna Goldin</td>
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<tr>
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<td></td>
<td>Mr Nguyen Phuong Nam</td>
</tr>
<tr>
<td>12:00-12:30</td>
<td>Moving forward</td>
<td>Ms Shoshanna Goldin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mr Nguyen Phuong Nam</td>
</tr>
<tr>
<td>12:30-13:30</td>
<td>Break</td>
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</tr>
<tr>
<td>13:30-14:00</td>
<td>Why plan for pandemic medical countermeasures access, allocation and deployment now?</td>
<td>Ms Ioana Ghiga</td>
</tr>
<tr>
<td>14:00-15:30</td>
<td>Country presentations</td>
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<td></td>
<td>Country lessons learned and best practices from the COVID-19 pandemic medical countermeasures response experience</td>
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<tr>
<td></td>
<td>- Cambodia</td>
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<td></td>
<td>- China</td>
<td></td>
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<td></td>
<td>- Fiji</td>
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<tr>
<td></td>
<td>- Lao People’s Democratic Republic</td>
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<tr>
<td>15:30-15:45</td>
<td>Break</td>
<td></td>
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<tr>
<td>Time</td>
<td>Activities</td>
<td>Speaker / Moderator</td>
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<tr>
<td>15:45-16:45</td>
<td>Regulatory pathways and capacity building for pandemic vaccine introduction</td>
<td>Dr Jinho Shin</td>
</tr>
<tr>
<td>16:45-17:05</td>
<td>EPI presentation – regional perspective</td>
<td>Ms Heeyoun Gloria Cho</td>
</tr>
<tr>
<td>17:05-17:35</td>
<td>Active and Passive surveillance: Capturing real-world data and evidence including AEFI/AESI</td>
<td>Ms Heeyoun Gloria Cho</td>
</tr>
<tr>
<td>17:35</td>
<td>Closure of Day 1</td>
<td></td>
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<tr>
<td>17:40</td>
<td>Welcome Reception</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
<th>Speaker / Moderator</th>
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</thead>
<tbody>
<tr>
<td>Day 2: Wednesday, 13 September 2023</td>
<td></td>
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<tr>
<td>09:00-09:15</td>
<td>Group photo&lt;br&gt;Recap of Day 1 and overview of Day 2</td>
<td>Ms Victoria Haldane</td>
</tr>
<tr>
<td>09:15-11:00</td>
<td>Country presentations&lt;br&gt;Country lessons learned and best practices from the COVID-19 pandemic medical countermeasures response experience&lt;br&gt;- Mongolia&lt;br&gt;- Papua New Guinea&lt;br&gt;- Philippines&lt;br&gt;- Viet Nam</td>
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<tr>
<td>11:00-11:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:30-12:00</td>
<td>Welcome to PIP Deploy: Game Introduction&lt;br&gt;PIP Deploy Game&lt;br&gt;Mission 1: National Deployment and Vaccination Plan</td>
<td>NDVP team &amp; Secretariat</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>Break</td>
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<tr>
<td>13:00-14:30</td>
<td>PIP Deploy Game&lt;br&gt;Mission 1: National Deployment and Vaccination Plan</td>
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<tr>
<td>14:30-15:00</td>
<td>PIP Deploy Game&lt;br&gt;Mission 2: Legal and regulatory planning</td>
<td>NDVP team &amp; Secretariat</td>
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<tr>
<td>Time</td>
<td>Activities</td>
<td>Speaker / Moderator</td>
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<tr>
<td>15:00-15:30</td>
<td>Break</td>
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<tr>
<td>15:30-16:00</td>
<td>Risk Communication and Community Engagement</td>
<td>Ms Lieke Visser</td>
</tr>
<tr>
<td>16:00-17:00</td>
<td>PIP Deploy Game</td>
<td>NDVP team &amp; Secretariat</td>
</tr>
<tr>
<td></td>
<td>Mission 3: Vaccine acceptance and uptake – Risk communication, community resilience, infodemic</td>
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<tr>
<td></td>
<td>management and science communication</td>
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<tr>
<td>17:00-17:15</td>
<td>End of Day 2</td>
<td></td>
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<tr>
<td></td>
<td>Day 3: Thursday, 14 September 2023</td>
<td></td>
</tr>
<tr>
<td>09:00-09:15</td>
<td>Recap of Day 2 and day 3 overview</td>
<td>Ms Victoria Haldane</td>
</tr>
<tr>
<td>09:15-10:30</td>
<td>Mission 4: Supply and chain and waste management</td>
<td>NDVP team &amp; Secretariat</td>
</tr>
<tr>
<td>10:30-10:45</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:45-12:00</td>
<td>Mission 5: Post-deployment surveillance system and management</td>
<td>NDVP team &amp; Secretariat</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>Break</td>
<td></td>
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<tr>
<td>13:00-15:00</td>
<td>Outlining NDVP: Self-assessment of NVDP and defining next steps</td>
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<tr>
<td>15:00-16:00</td>
<td>Group presentations of country roadmaps for update/development of NDVPs</td>
<td>Groups</td>
</tr>
<tr>
<td>16:00-17:00</td>
<td>Feedback on the table-top simulation</td>
<td>All participants</td>
</tr>
<tr>
<td></td>
<td>Summary and conclusions</td>
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<tr>
<td></td>
<td>Wrap up and next steps</td>
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<tr>
<td></td>
<td>Closure of meeting</td>
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</tr>
</tbody>
</table>
### Annex 3. Feedback from participants on the checklist for respiratory pathogen pandemic planning

<table>
<thead>
<tr>
<th>Emergency coordination</th>
<th>Community protection</th>
<th>Clinical care and access to countermeasures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Poll results:</strong></td>
<td><strong>Poll results:</strong></td>
<td><strong>Poll results:</strong></td>
</tr>
<tr>
<td>• A poll was conducted</td>
<td>• A poll was conducted</td>
<td>• A poll was conducted to determine to what extent</td>
</tr>
<tr>
<td>to determine different</td>
<td>to determine to what extent</td>
<td>Member States has established or strengthened</td>
</tr>
<tr>
<td>states of progress towards</td>
<td>Member States had</td>
<td>robust regulatory</td>
</tr>
<tr>
<td>having dedicated sustainable</td>
<td>coordinated with public</td>
<td>systems/pathways to expedite</td>
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<tr>
<td>financing to pandemic</td>
<td>health authorities to develop</td>
<td>the importation, marketing,</td>
</tr>
<tr>
<td>preparedness and response for</td>
<td>or update appropriate</td>
<td>authorization, licensing and</td>
</tr>
<tr>
<td>respiratory pathogens. Of the 8</td>
<td>pandemic respiratory</td>
<td>distribution, and post-market</td>
</tr>
<tr>
<td>answered received, 50%</td>
<td>pathogen risk</td>
<td>surveillance for priority</td>
</tr>
<tr>
<td>reported that this was in progress, 37.5% reported this being in progress and 12.5% report that this had been conducted/completed.</td>
<td>communication messages. Of the 8 responses, 75% reported this was in progress and 25% reported this had been completed.</td>
<td>respiratory pathogens of pandemic potential. Of the 8 responses, 62.5% reported that this work was in progress, 25% reported that this work had been conducted/completed, and 12.5% reported that this was of interest but not yet started.</td>
</tr>
<tr>
<td>• Another poll was conducted to understand the extent to which Member States had made efforts to strengthen scientific literacy and people’s understanding of evidence about respiratory pathogens and pandemics. Of the 8 responses, 87.5% reported that this was in progress, while 12.5% report that this was of interest but not yet started.</td>
<td>• Another poll sought to determine to what extent Member States had developed or strengthened policies and programmes to implement and sustain adult vaccination programmes for seasonal influenza, COVID-19 and/or other priority diseases to prevent morbidity and mortality. Of the 8 responses, 75% reported that this work was in progress, while 25% reported that it had been conducted/completed.</td>
<td></td>
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</tbody>
</table>


<table>
<thead>
<tr>
<th>Emergency coordination</th>
<th>Community protection</th>
<th>Clinical care and access to countermeasures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key themes:</strong></td>
<td></td>
<td><strong>Key themes:</strong></td>
</tr>
<tr>
<td>• Political advocacy and high-level champions</td>
<td>• Emphasis on RCCE to accurately communicate real and perceived risks and influence related risk perceptions with the public.</td>
<td>• There is diversity in where countries are at in strengthening robust regulatory systems and pathways.</td>
</tr>
<tr>
<td>• Developing or updating public health laws</td>
<td>• Scientific literacy includes both educating the public, as well as briefing high-level officials. Scientific committees were highlighted as a way to inform the pandemic response.</td>
<td>• Most countries were building on COVID-19 policies and programmes to implement and sustain adult vaccination programmes through an integrated and lifecourse approach.</td>
</tr>
<tr>
<td>• The challenge of addressing sustainable financing</td>
<td></td>
<td><strong>Key themes:</strong></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Participant examples:</th>
<th><strong>Participant examples:</strong></th>
<th><strong>Participant examples:</strong></th>
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</thead>
<tbody>
<tr>
<td>• Participants from Cambodia emphasized the importance of strong government support from the highest levels in case of health emergencies, particularly epidemics and pandemics.</td>
<td>• Participants from Mongolia shared how during the COVID-19 pandemic, national scientific committees were highlighted and worked under the Emergency Operation Committee.</td>
<td>• Participants from the Philippines highlighted the recognition of other regulators such as the United States and European Union, as well as WHO mechanisms to support reliance and recognition. The Philippines emphasized the importance of greater vaccine access and mechanisms for rapid access during emergencies.</td>
</tr>
<tr>
<td>• Participants from Fiji highlighted the importance of leadership at the highest level and described how the Prime Minister was a champion of the COVID-19 response. Across ministries, leaders came together to assess what resources they had to contribute to ensure a holistic response that included all aspects of health and well-being, including the spiritual.</td>
<td>• WHO Regional Office for the Western Pacific participants explained work with Member States to strengthen RCCE priorities in the new Asia Pacific Health Security Action Framework and finalize their Regional Action Framework for Communication for Health to harness the power of communication to support behaviour change. In addition, the importance of putting communities at the center of all interventions was underscored, in addition to ensuring that communities understand the benefits, as well as have a space to ask questions and engage in dialogue.</td>
<td>• Participants from Viet Nam emphasized the importance of maintaining local vaccine production capacity, including for influenza vaccination. It is important for production capacity be included in government policies and supported by financing mechanisms to ensure that the vaccines that are produced and can be effectively and efficiently used and not expire.</td>
</tr>
</tbody>
</table>
Annex 4. PIP Deploy missions and objectives

<table>
<thead>
<tr>
<th>Mission overview</th>
<th>Mission objectives</th>
</tr>
</thead>
</table>
| **Mission 1: NDVP structure, risk assessment, public health goals, coordination, target populations and delivery strategies** | 1) Define what constitutes a NDVP, understand its purpose and importance, identify the most important components covered and recognize the rationale for periodically assessing the NDVP.  
2) Specify the type of roles, responsibilities, structures and processes (including standard operating procedures) that need to be in place for effective management of deployment and vaccination operations at all levels.  
3) Identify potential public health goals that can be attained with the help of a pandemic vaccine and other medical countermeasures.  
4) Specify the type of data and stakeholders involved in view of taking decisions on identifying target population vaccination approaches/strategies and estimations for calculating doses of vaccines and other medical countermeasures (e.g., antivirals) required.  
5) Identify and plan for the different risks that may impact a pandemic vaccination response, and vice-versa the risks the pandemic vaccination response may bring to other sectors. |
| **Mission 2: Legal and regulatory planning**                                      | 1) To describe the existing legal and regulatory requirements, both international and national, before an event and associated preparedness activities required to meet these requirements.  
2) To identify the process to ensure the appropriate authorities are familiar with all legal and regulatory requirements and complete the related procedures for importing, warehousing, packaging, shipping and using a vaccine before it is needed.  
3) To specify procedures that need to be followed for using a vaccine under research protocol. |
| **Mission 3: Vaccine acceptance and demand, science communication, infodemic management, risk communication and community resilience** | 1) To determine which evidence should be integrated into different type of communication messaging to focus on changing or maintaining public behaviour in support of vaccination and trust in authorities.  
2) To list basic principles and tools of communicating with the segmented audiences during an outbreak and identify challenges that may exist in convincing target groups to seek vaccinations.  
3) To define characteristics of evidence-based communications strategy, structure, and plan for various stages of vaccine deployment. |
<table>
<thead>
<tr>
<th>Mission overview</th>
<th>Mission objectives</th>
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</table>
| **Mission 4:** Human resources, supply chain and waste management | 1) To identify supply chain management processes required to successfully deploy vaccines and ancillary items within a set number of days.  
2) To document capacity of the country's supply chain logistic system, identify gaps, and prepare surge capacity along with a budget to support it.  
3) To collect information to manage vaccine deployment and enable real-time decision-making.  
4) To plan and manage the safe disposal of used infection equipment, vaccine vials and other hazardous medical waste, and ensure that waste management systems are able to deal with the additional waste generated by a pandemic response. This includes recording the management process for dealing with waste in the country's management information system.  
5) Plan for acquiring and maintaining an adequate, skilled and trained workforce and understanding actions that are important for managing personnel.  
6) Develop a security plan for protecting staff, equipment, facilities, vaccine, ancillary items and data back up and alternative systems and platforms (security of data). |
| **Mission 5:** Post-deployment surveillance (PDS) system and management of adverse events following immunization (AEFI), monitoring and evaluation (M&E) and termination of operations. | 1) To include enhanced post-deployment surveillance in the NDVP.  
2) To explain how to evaluate the current post-deployment surveillance operations and ensure they perform as required during an influenza pandemic.  
3) To describe managerial functions for planning, preventing, investigating, responding to and monitoring AEFIs.  
4) To identify activities that should be planned for enabling monitoring and evaluation and termination of deployment and vaccination operations. |