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Organization

REGIONAL OFFICE FOR **Africa**

Regional Immunization Technical Advisory Group (RITAG)

Report of the meeting conducted
18-19 November 2020





Executive Summary

The biannual meeting of the Regional Immunization Technical Advisory Group (RITAG) of the African region was conducted from 18-19 November 2020. The virtual meeting was attended by more than 250 global immunization experts. Participants included RITAG members, National Immunization Technical Advisory Group (NITAG) members of countries in the African region, representatives of development partners and donors, immunization programme managers of countries in the African region, and WHO and UNICEF immunization experts in the African region.

The meeting deliberated on three important issues: First, the COVID-19 pandemic and COVID-19 vaccine issues; second, the state of immunization services amidst COVID-19 and future strategies to revamp services; and third, the current state of polio eradication challenges, such as the growing number of circulating Vaccine Derived Polio Viruses type 2 (cVDPV2) and proposed responses.

A series of guiding and informative presentations were made by managers and focal points that lead the aforementioned issues. Presenters were from WHO/AFRO, WHO, Gavi, the Vaccine Alliance and the Strategic Advisory Group of Experts (SAGE) on immunization. The RITAG members provided key recommendations for implementation by WHO, partners and countries in order to address the challenges and issues identified in the presentations and discussions. The recommendations generally emphasized on ensuring fair and equitable allocation of COVID-19 vaccines for the region and priority populations. They also underlined the need to ensure immunization services are revamped and continued amid COVID-19. Additionally, the recommendations included measures to ensure the region maintains its wild polio free status.

This RITAG meeting uniquely featured a special virtual recognition event for Dr. Robb Linkins, a previous RITAG member; Dr. Robert (Bob) Davis, an immunization programme champion; and the late Dr. Koffi Isidore, a former WHO/AFRO polio programme expert.

Overview

COVID-19 Vaccine

COVID-19 is a pandemic of uncertain duration that is overstressing the weak health and surveillance systems in Africa. Social measures aimed at limiting transmission add a heavy socioeconomic burden particularly to vulnerable populations. However, the pandemic appears not to have been as deadly in Africa as it has been in Europe, North America and Asia. However, the precise burden of COVID-19 in the WHO African region is not clear due to sub-optimal testing and under reporting. Several seroprevalence studies are currently underway and should provide supplementary data on the extent of SARS-CoV-2 exposure in the African population.

However, RITAG notes with grave concern that the health worker deaths from COVID-19, as a proportion of all cases across the region and globally, are unacceptably high. This is very concerning, as the health workforce plays a critical role in the pandemic response and in the delivery of all essential health services. Every effort must be made to protect and preserve the health workforce and urgently implement the previous RITAG recommendations provided on this issue.

RITAG recognizes the concerted efforts of WHO, the Africa Centres for Disease Control and Prevention (Africa CDC) and other global stakeholders to provide support to countries for diagnosis, reporting and management of COVID-19 cases in the African region, despite the shortage of testing materials and Personal Protective Equipment (PPE) in some geographies. The expansion and decentralization of testing facilities and introduction of rapid diagnostic tests is also commendable.

The development and delivery of efficacious and safe vaccines, along with implementation of COVID-19 prevention measures, is one vital tool to bring this pandemic to an end. However, selecting the right type of vaccines and identifying the appropriate target populations is equally important. Learning from past successes of introducing vaccines such as MenAfriVac and Ebola vaccines that were evaluated and implemented in the African region, it is important to support these decisions with epidemiological data. While it would be preferable to have vaccine safety and efficacy data from the region, this might not be realistic noting the speed with which vaccines have had to be developed and introduced. Instead, once vaccines are introduced it will be critically important to have systems for rigorous monitoring of safety and effectiveness at a population level. RITAG believes that data-driven decision-making is essential to achieve the desirable vaccine acceptance, uptake and impact level.

Accordingly, RITAG welcomes and endorses the WHO SAGE values framework for the allocation and prioritization of COVID-19 vaccination, which is intended as an interim guidance for policy makers and expert advisors at global, regional and national levels. RITAG also endorses the guidance on prioritization of target populations under supply constrained situations while noting that a significant contextualization at country level will be essential.

The COVAX Facility aims to ensure adequate and equitable access to safe and efficacious vaccines for all countries of the world. RITAG welcomes the plan to subsidize support to 92 Advance Market Commitment (AMC) countries as well as allowing self-financing countries to get the benefit of collective price negotiations. The overall aim will be to provide all participating countries with vaccine purchases for up to 20% of their population in the first instance and share cost for the additional vaccines they may request. RITAG also noted the ambition and resource mobilization efforts of the African Union (AU) to have up to 60% of the population vaccinated against COVID-19 in order to build herd immunity and mitigate further health and economic impact of the virus.

RITAG recognizes the experience of the African region in responding to outbreaks such as Ebola, Cholera and yellow fever that may have

built some level of preparedness in dealing with epidemics that affect all ages, and require a host of preventive, diagnostic and therapeutic interventions. Though experiences of delivering vaccines can be drawn from these previous outbreaks, each pathogen epidemic has its unique characteristics that must be considered, particularly with regard to risk communications.

In comparison with other continents, the African region, outside of South Africa, has not felt the full direct health impact of the pandemic for reasons that are still being studied. This situation may wrongly imply to the public and even to many health workers, that COVID-19 is not an “African problem”. Such misconceptions, sometimes fueled by misinformation, can lead to vaccine hesitancy, which is a growing concern. In addition, there is evidence in the region of growing non-adherence to key preventive measures such as wearing masks, sanitizing and physical distancing. Given this context, communications about vaccines must be framed within the COVID-19 vaccine prevention package and contextualized within the social, cultural and political milieu of each country.

Revamping Immunization and Vaccine Preventable Disease (VPD) Surveillance in the African Region amid COVID-19

RITAG noted with concern the disruptions to immunization as a result of the COVID-19 pandemic that resulted in sharp drops in immunization coverage, as well as postponement of the introduction of new vaccines and of scheduled supplementary immunization activities (SIAs) in countries of the African region. Lockdowns and fear of getting COVID-19 had the most adverse effects with programme elements being disrupted. Similarly, VPD and acute flaccid paralysis (AFP) surveillance has been negatively affected by the repurposing of surveillance infrastructure and human resources to support COVID-19 activities. This has resulted in delayed case notification and investigation, and inadequate sample collection, transport and testing.

Countries are implementing various remedial innovative strategies to catch up for the lost performance based up on the WHO issued guidelines for maintaining essential service amid the COVID-19 pandemic. These innovative strategies include adjusting their immunization policies to accommodate delayed vaccination, deploying innovative service delivery modalities, integrating immunization services with other child health and nutrition campaigns, and conducting widespread communication and advocacy on service safety and availability. As a result, children who have missed doses are being vaccinated, postponed SIAs are being conducted, and countries are now increasing their vaccine buffer standards to withstand future shocks. RITAG acknowledges the countries’ efforts to manage the situation and revamp immunization services.

Regional Framework for the Operationalization of the Immunization Agenda 2030

RITAG noted that WHO/AFRO has developed the regional framework for implementation of the Immunization Agenda 2030 in the African region based upon its recommendation in previous meetings. It recognized the updated objectives, targets, milestones, strategies and proposed priority actions of the regional framework. RITAG also noted that the updated regional framework is proposed to the Regional Committee of the African region for its review and adoption in its upcoming meeting.

RITAG recognized the need to continue developing the Regional Strategic Plan for Immunization 2021-2025 as the basis for the operationalization of the regional framework. However, RITAG stressed that **it requires more time to deliberate on the regional framework’s newly developed indicators, targets and milestones,**

and advised the need for another dedicated session to conduct this consultation.

Polio Eradication, nOPV2 and IPV

RITAG remains concerned by the high numbers of circulating Vaccine Derived Polio Virus type 2 (cVDPV2) outbreaks in the region, but acknowledges the remarkable progress made in successfully resuming outbreak response campaigns despite the ongoing COVID-19 pandemic. Over 35 million children in 15 countries have received monovalent Oral Polio Vaccine type 2 (mOPV2) through campaigns conducted since September 2020.

RITAG recognizes the challenges posed by an outbreak response conducted using mOPV2, noting that a relatively high proportion of cVDPV2 cases are attributable to seeding from the mOPV2 vaccine. Therefore, RITAG welcomes the plan to use novel Oral Polio Vaccine type 2 (nOPV2) for cVDPV2 outbreak responses starting from 2021 and commends the efforts made in planning for

its roll out in high-risk countries. The nOPV2 vaccine is approved through emergency use listing as part of the polio end game strategy. As compared to mOPV2, it has reduced likelihood of seeding new cVDPV2 infections while providing equivalent protection.

The introduction of Injectable Polio Vaccine (IPV) into essential immunization has been to boost individual immunity, and along with the other strategies, contributes to the polio eradication effort. This has been hampered by the constrained global supply of IPV that deterred its widespread introduction and caused limited uptake. RITAG welcomes the news that global shortages in IPV vaccines have now been resolved.

The RITAG welcomed the African region's certification as wild polio free in August 2020. Against this background, RITAG acknowledged that there is likely to be confusion about why ongoing polio vaccination is required, and why a new polio vaccine (nOPV2) to control cVDPV2 is being introduced in some areas.



Recommendations

COVID-19 Vaccine

RITAG recommends:

- 1** WHO, Africa CDC and other partners should facilitate **detailed review and analysis of existing COVID-19 and SARS-CoV-2 clinical and epidemiological data**, including COVID-19 distribution, mortality rates and associated co-morbidities in the region to support evidence-driven prioritization of population groups for COVID-19 vaccination in the African region.

- 2** National governments should establish a National COVID-19 Advisory committee tasked with adapting the **WHO roadmap for prioritization of populations for COVID-19 vaccines**, to inform the fair allocation of vaccines, using national COVID-19 epidemiological and clinical data and readiness assessment result. These national structures should be supported by WHO, Africa CDC, partner organizations, NITAGs, civil society organizations (CSOs) and public health research institutions.

- 3** National governments, with coordinated support (and prequalification) from WHO and partners, **should choose suitable COVID-19 vaccines to be used in their countries**, based on **analysis of the data** on safety, quality and efficacy of the vaccine, **programmatic suitability and operational cost** of delivering the vaccine, and through guidance from the COVAX Facility as well as their NITAGs and National COVID-19 Advisory Committee.

- 4** WHO and partners should develop and **provide tools and technical support** for countries to enable them to identify **country-specific myths and misinformation about COVID-19 vaccines**, and implement proactive communication interventions that debunk this misinformation and address potential vaccine hesitancy.

- 5** Countries, with a coordinated support from WHO and partners, and through engagement of community groups, CSOs and other stakeholders, should **develop and implement a robust risk communication plan/strategy for COVID-19 vaccines that is grounded on risk perceptions, evident risk realities and cultural appropriateness** (local relevance). The strategy should be informed by **ethnographic and socio-anthropologic studies**, and be built on **previous experiences** of responding to similar outbreaks that involve vaccines (e.g., Ebola, yellow fever, Cholera, etc.). Furthermore, it should aim to communicate not only about vaccines, but also about the **full package of COVID-19 interventions**, and target not only communities but also **health care workers, social and political leaders, and high-risk groups**.

- 6** Countries that are fully funded through the AMC 92 commitment, and those that are self-financing, are encouraged to **acquire and procure COVID-19 vaccines through the COVAX Facility** at a negotiated price.

- 7** Noting the ambition of reaching at least 60% of the African population with COVID-19 vaccines, WHO/AFRO, AU, Africa CDC and other partners should jointly **mobilize resources from donors, lenders, domestic sources and private actors** to fund both the COVAX Facility and support countries to **procure COVID-19 vaccines**.

- 8** WHO, AU and other partners, in reference to the Addis Declaration on Immunization (ADI) commitment for building vaccine manufacturing capacity, and the need to build resilience against future outbreaks of VPDs in the African region, should support countries to **incrementally build vaccine manufacturing capacity**. This could include **fill and finish**, the production of **traditional and easy to make vaccines**, and later the production of the **more complex vaccines** including COVID-19 vaccines.

Revamping Immunization and VPD Surveillance in the African Region amid COVID-19

RITAG recommends:

- 1** WHO and partners should assist countries whose VPD and AFP surveillance systems are performing sub-optimally to explore models that **integrate and streamline VPD, AFP and COVID-19 surveillance systems more efficiently**. WHO and partners should urgently **share experiences** from Zimbabwe and Zambia in order to demonstrate proven methods that countries can implement to restore surveillance performance in the short term.
- 2** Countries should be encouraged by the WHO/AFRO and WHO country offices to develop systems to **track and account for catch-up activities in their national health management information systems**.

Polio Eradication, nOPV2 and IPV

RITAG recommends:

- 1** Countries in the African region, with coordinated support from the Global Polio Eradication Initiative (GPEI), should strengthen their **communication** to the public, health workers and policy makers on the importance of continuing provision of mOPV2/nOPV2 and IPV in the immunization programme, and on the justification behind continuing vaccination even after the certification of the region as wild polio free.
- 2** Countries at a higher risk of cVDPV2 outbreaks, with coordinated support from WHO/AFRO and other GPEI partners, should develop **readiness plans**, introduce **nOPV2**, and conduct post-introduction **data monitoring to evaluate performance of nOPV2** with regard to population level effectiveness and safety, including seeding properties, in comparison with mOPV2.
- 3** WHO and partners should develop and implement plans to assist countries to **improve their IPV coverage in routine immunization**, including moving towards the introduction of a **second dose of IPV**, thus increasing population level immunity. National IPV based campaigns should be further **integrated with measles campaigns** to reach higher coverage.



I. Opening Session

Introductory Remarks

Professor Helen Rees, Chair of RITAG, gave introductory remarks. She welcomed participants to the biannual meeting and began her speech by appreciating the stellar achievements of the African region. Notably, the certification of the region as wild poliovirus free in August 2020, and the declaration of the end of the 11th Ebola outbreak in the Democratic Republic of the Congo (DRC) were applauded. She congratulated Dr. Matshidiso Moeti, the Regional Director of WHO/AFRO, Dr. Richard Mihigo, the Coordinator of the VPD programme in WHO/AFRO, and the entire WHO secretariat for the achievements in the region and their significant contributions thereof. She also appreciated the Strategic Advisory Group of Experts (SAGE) for engaging the RITAG during the formulation of their recommendations.

The Chair stated that COVID-19 is an unprecedented public health event that is impacting our personal and work lives, our communities, the African region and the entire world at large. She appreciated the efforts of global institutions such as WHO, the Coalition for Epidemic Preparedness Innovations (CEPI) and Gavi, the Vaccine Alliance, for creating innovative platforms and tools that strengthen the response against COVID-19 and mitigate its impact on essential health services. The Chair underlined the importance of the RITAG in providing bold and strong recommendations about ensuring fair and equitable access to these COVID-19 tools and vaccines in pipeline.

Professor Rees reminded RITAG members of the protocols of the meeting, including the need to declare any potential conflict of interest and later confirmed that all RITAG members have complied. Other participants were also requested to declare and specify any conflict of interest in the virtual chat. Citing the adoption of the programme of work in the closed door meetings of the RITAG before the opening of the official meeting, she invited the guest of honor – Dr. Joseph Cabore, the Director of Programme Management (DPM), delegated by Dr. Moeti – to make the opening remarks.

Opening Remarks

On behalf of the Regional Director, Dr. Cabore welcomed all participants to the meeting, noting that it was being held during a consequential time, with global interest in COVID-19 vaccines on the rise, and results of phase 3 clinical trials of vaccines against COVID-19 recently announced. COVID-19 has proven that a public health risk in any particular location in the world is a threat that can affect the global community. To mitigate the impact of COVID-19, several high income countries have committed resources and entered contracts to secure vaccines. In parallel, WHO, Gavi, the Vaccine Alliance and CEPI collaborated to create the COVAX Facility, which can benefit low- and middle-income countries (including the 47 countries in the African region) in securing equitable access to vaccines, irrespective of their income levels, when efficacious vaccines are available.

Dr. Cabore emphasized the potential benefit of the Facility for the African region, while highlighting the challenges associated with introducing such new vaccines that the region must prepare for. Preparing systems and institutions for regulatory approvals, defining priority groups to be vaccinated and refining distribution strategies were some of the key challenges stated by the DPM, requiring prior readiness. African countries, in particular, will need to build capacity that can enable effective distribution of vaccines while adhering to cold chain requirements of specific vaccines. He recalled that these potential challenges were raised by member states of the African region during the World Health Assembly conducted the week before the RITAG meeting, emphasizing the financial implication of such requirements and associated community mobilization strategies.

Dr. Cabore pointed out that the COVID-19 pandemic has negatively affected health services in general and immunization services in particular. Service disruptions caused by the pandemic

have caused more than 1 million children to miss their DPT3 vaccines. This will likely cause further declining of DPT3 coverage in the African region; worsening the 74% coverage reported in 2019. Citing the illustrative fact that 35 million children in 15 countries have been vaccinated with polio vaccine campaigns since July 2020, in response to the cVDPV2 outbreaks, he applauded the efforts to resume essential services including immunization amid COVID-19.

Dr. Cabore stated that the RITAG's advice regarding the COVID-19 vaccine will be highly welcomed and will be used by the WHO/AFRO secretariat to offer strategic guidance to countries in the region. Given the need to step up actions against all VPDs to prevent further decline in immunization coverage due to COVID-19, RITAG was also requested to advise on strategies to revamp immunization services. Dr. Cabore officiated the meeting, stating that the Regional Director is looking forward to receiving the RITAG's recommendations on COVID-19 vaccines, revamping immunization services and polio eradication efforts in the region.

Highlights from October 2020 SAGE Meeting

The Strategic Advisory Group of Experts (SAGE) met in October 2020 to discuss and provide guidance on key issues related to COVID-19 vaccines, immunization during COVID-19, service resumption and polio eradication. Dr. Alejandro Cravioto, the current SAGE Chair, presented the decisions of the group to the RITAG meeting. The recommendations made by the group included:

For immunization in the context of the COVID-19 pandemic and other disruptive events:

As immunization programmes recover, “Zero dose” children are likely to continue to be left out, exacerbating inequity. Accordingly, SAGE advised all countries to conduct catch-up vaccination strategies by endorsing the WHO recommendation for essential immunization services resumption while implementing COVID-19 control measures.

SAGE endorsed the document ‘**Immunization as an Essential Health Service**’. These guiding principles for immunization activities supersede the previous guiding principles issued in March 2020. The principles recommend actions that need to be taken during times of severe disruption, including during the COVID-19 pandemic. The document enhances prior principles regarding the importance of preserving immunization as an essential health service, and the essentiality of catch-up vaccination policies and strategies. It also underlines the importance of prioritization of activities to address outbreak-prone VPDs and to protect vulnerable populations. By recognizing the potential impact of any shocks on immunization systems, the guidance is broadened to any major disruptive event.

The interim guidance on seasonal Influenzae vaccination recommendations during the COVID-19 pandemic of 21 September 2020, guides that initial start on COVID-19 vaccines should continue along with seasonal flu vaccinations. There are currently limited data on COVID-19 comorbidity with influenza or pneumococcal disease as well as on benefits of influenza or pneumococcal vaccination during the COVID-19 pandemic.

In the context of COVID-19, SAGE reconsidered the prioritization of risk groups for influenza vaccination. It recommended that highest priority groups for influenza vaccination are health care workers and older adults. In no particular order, additional groups for influenza vaccination are pregnant women, individuals with underlying health conditions, and children (6-59 months of age).

SAGE also noted that evidence is insufficient to support a

recommendation to introduce an adult pneumococcal vaccination programme in response to the COVID-19 pandemic. However, in countries with existing adult pneumococcal vaccination programmes, improving vaccine coverage and thereby reducing pneumococcal disease may prove beneficial to alleviate the related burden on health systems.

For the COVID-19 vaccines:

With regard to COVID-19 vaccines, SAGE has supported a 3-step process to provide guidance for overall programme strategy as well as vaccine specific recommendations. These are:

- 1- The WHO SAGE values framework for the allocation and prioritization of COVID-19 vaccination, issued on 14 September 2020, outlines six principles and 12 public health objectives,
- 2- A Prioritization Roadmap that iterates the public health strategies and targeted priority groups for different scenarios of vaccine availability and epidemiologic settings, and
- 3- Vaccine-specific recommendations for the use of specific vaccines will be issued in the future as licensed vaccines become available. Evidence will be retrieved and assessed through a living systematic review.

In addition, the SAGE recommended that overall public health strategies should be grounded on ethical values as outlined in the values framework, and for the prioritization to be conducted continuously, which will assist SAGE in further adapting the Roadmap. The guidance will be a living document to be published as an interim guidance.

SAGE highlighted the need for early and comprehensive preparedness planning for post-licensure surveillance of COVID-19 vaccines' impact and safety. It underlined the need for strict adherence to Good Clinical Practice (GCP) with the focus on robust regulatory oversight and safety monitoring by independent data safety monitoring boards, and the rights to medical confidentiality of all trial participants.

For polio progress, IPV and nOPV2 use:

SAGE acknowledged the certification of the WHO African region as wild poliovirus free on 25th August 2020 by the African Regional Certification Committee. However, it expressed concern about continuing circulation of wild poliovirus in Afghanistan and Pakistan that increases the risk of potential importation to the African region. The challenges of the programme to effectively control outbreaks of vaccine-derived polioviruses in the African region is noted.

SAGE endorsed for a second Inactivated Poliovirus Vaccine (IPV) dose to be introduced into all 94 countries that currently administer one IPV dose and bivalent oral poliovirus vaccine (bOPV) in their routine immunization schedules. It also provided recommendations regarding preferred and alternative schedules for the two IPV doses.

SAGE was updated on the progress of the novel Oral Polio Vaccine type 2 (nOPV2) which was being submitted for Emergency Use Listing (EUL); nOPV2 is the first vaccine to go through the EUL process. SAGE re-affirmed its April 2020 recommendation on the nOPV2 initial use criteria under EUL and made new recommendations related to nOPV2 assessment and safety monitoring to support decision-making for subsequent phases of nOPV2 use. In principle, SAGE endorsed that nOPV2 becomes the vaccine of choice for response to circulating vaccine derived poliovirus type 2 (cVDPV2) outbreaks after the interim

recommendation for EUL is issued, and after review of the initial use period is completed and all requirements for use are met. SAGE noted that it does not recommend IPV to be used for poliovirus outbreak response.

For regional measles elimination:

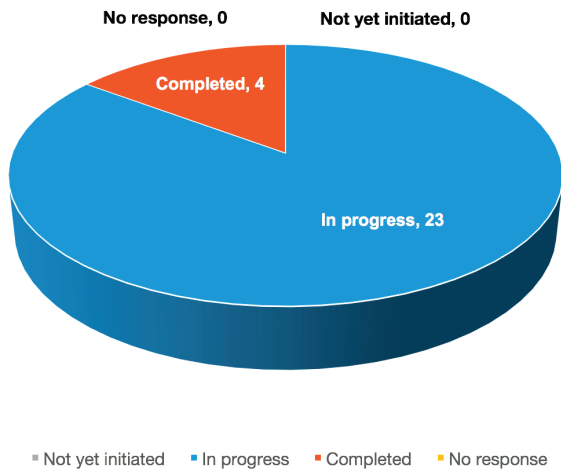
SAGE appreciated the progress towards regional measles elimination targets worldwide between 2000-2019, but noted the mixed pattern. During 2000-2016, annual reported measles incidence decreased globally; however, the incidence increased in all regions during 2017-2019. The global annual number of reported measles cases of over 872,000 in 2019 is recorded as the highest in 15 years. Since 2000, estimated measles deaths decreased by 62%, and measles vaccination has prevented an estimated 25.5 million deaths worldwide. Accordingly, SAGE endorsed the multi-partner Measles and Rubella Strategic Framework (MRSF), 2021-2030, to guide the strategic priorities and programmatic efforts towards measles and rubella elimination.

The purpose of the MRSF is to create the conditions for eradication through pivotal strategy delivered in a unified approach that strengthens routine immunization. Measles vaccine has the highest return on investment in immunization by a large margin. The modelled benefits of continuing measles vaccination during the COVID-19 pandemic also exceed all other antigens when considering overall child deaths averted through routine immunization. However, SAGE echoed concern that the COVID-19 pandemic is creating large immunity gaps and may increase malnutrition and disruption to Vitamin A supplementation leading to higher case fatality rates (CFRs).

Implementation Status of July 2020 RITAG Recommendations

On behalf of the WHO secretariat, Dr. Andre Bitá, the focal point for Meningitis in WHO/AFRO, presented the progress made in implementing the previous RITAG recommendations by WHO, partners and countries. Out of the 27 recommendations made by the group, four were reported as completed while the remaining 23 are in progress, and no activity remained uninitiated (Figure 1).

Figure 1: Implementation status of July 2020 RITAG recommendations, as of November 2020



1. **Immunization in the context of Covid-19**
 - a) Routine immunization & integrated services delivery
 - b) COVID 19 Infection Prevention Control
2. **COVID-19 Vaccine**
 - a) Regulation and vaccine safety
 - b) Coordination and planning for COVID 19 introduction
3. **Polio**
 - a) IPV
 - b) Polio SIAs and integrated outbreak response
 - c) nOPV2

The recommendations were organized in 3 areas and highlights were provided accordingly:

1. **Immunization in the context of COVID-19 vaccine:** RITAG recommended that routine immunization services be provided through integrated service delivery in adherence to the COVID-19 control strategies, such as Infection Prevention and Control (IPC) measures. It was reported that implementation of all recommendations has been initiated. Despite COVID-19 related service disruptions, countries have managed to ensure continuity of services by coordinating their immunization systems. Partner agencies also have supported countries in adapting and implementing guidelines for continuity of services during the COVID-19 pandemic. Notably, countries, such as Ethiopia, the Democratic Republic of the Congo (DRC), and Central African Republic (CAR) have conducted measles Supplemental Immunization Activities (SIA), while Uganda, Ghana and Nigeria have carried out Yellow Fever SIAs. Countries that have been affected by cVDPVs have resumed conducting polio SIAs to curb the outbreaks. As recommended, WHO, partners and countries have continued monitoring and addressing rumors and misinformation on vaccines through community oriented risk communication.
2. **COVID-19 vaccine:** RITAG advised WHO, the African Vaccine Regulatory Forum (AVAREF) and partners to give due attention to coordinated

planning of introduction of the vaccine through robust regulatory preparedness, so as to ensure safety of the vaccine. Accordingly, AVAREF and other stakeholders are strengthening countries' capacity for review of COVID-19 vaccine licensure, subsequent introduction and mitigation of potential COVID-19 vaccine adverse events. WHO's AVAREF secretariat met with more than 100 product developers, 20 vaccine manufacturers and new manufacturers of products against COVID-19 from Europe, North America, South-East Asia and China. Discussions with these companies are currently ongoing.

3. **Polio eradication:** RITAG recommended maintaining of polio eradication efforts while using polio-related resources and platforms to intensify COVID-19 responses. Currently, efforts to have a second dose of IPV introduced in routine immunization by 2021 are ongoing and progressing well. Countries are using the Polio programme infrastructure to support response to the COVID-19 pandemic, including surveillance for cases. Vitamin A and deworming campaigns were also integrated with cVDPV2 SIAs. WHO's Emergency Use Listing (EUL) interim recommendation for nOPV2 was issued on 13 November 2020 and pilot countries are being prepared to use this vaccine to respond to cVDPV2 outbreaks.

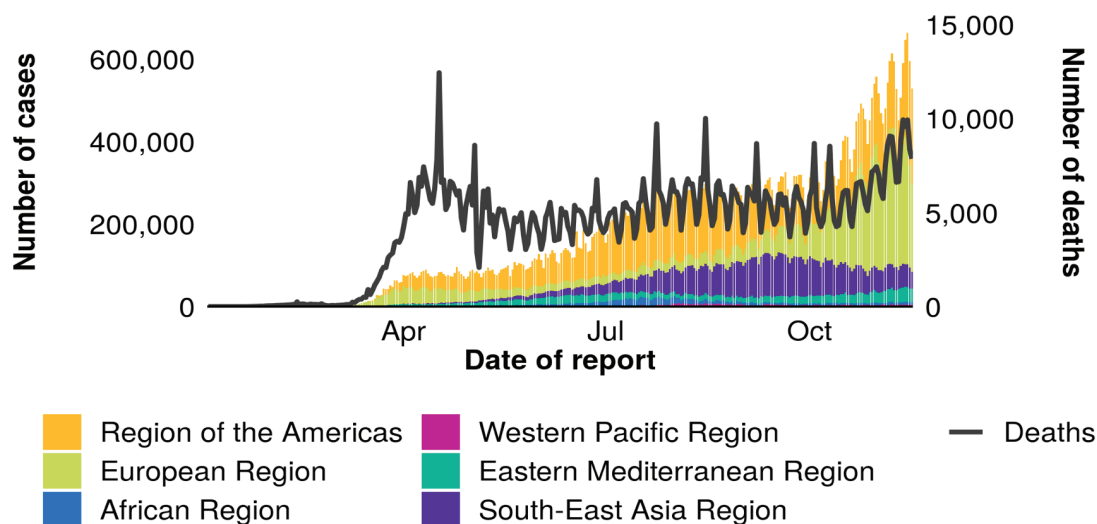
COVID-19 Vaccination

COVID-19 Epidemiological Update

Dr. Richard Mihigo, the Programme Manager for the VPD programme in WHO/AFRO, presented the update on the epidemiology of COVID-19 in the region. He highlighted the

global increasing trend of COVID-19 cases and deaths from April to October 2020, with the highest number of cases being in the American regions, followed by Europe and South-East Asia (Figure 2).

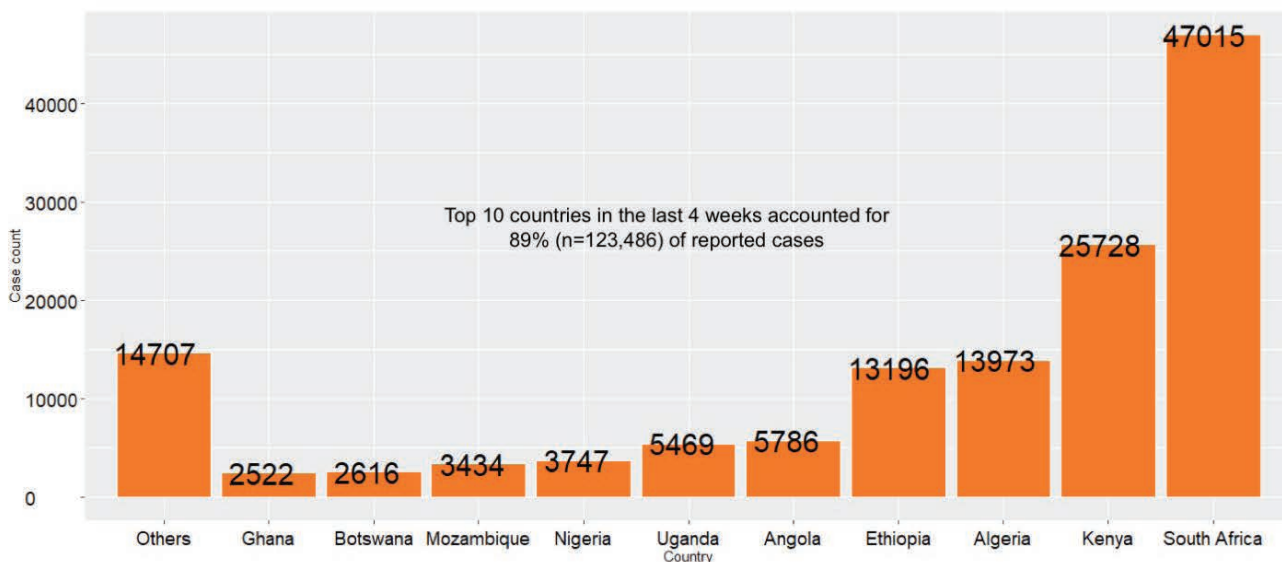
Figure 2: Global daily trends of COVID-19 cases and deaths

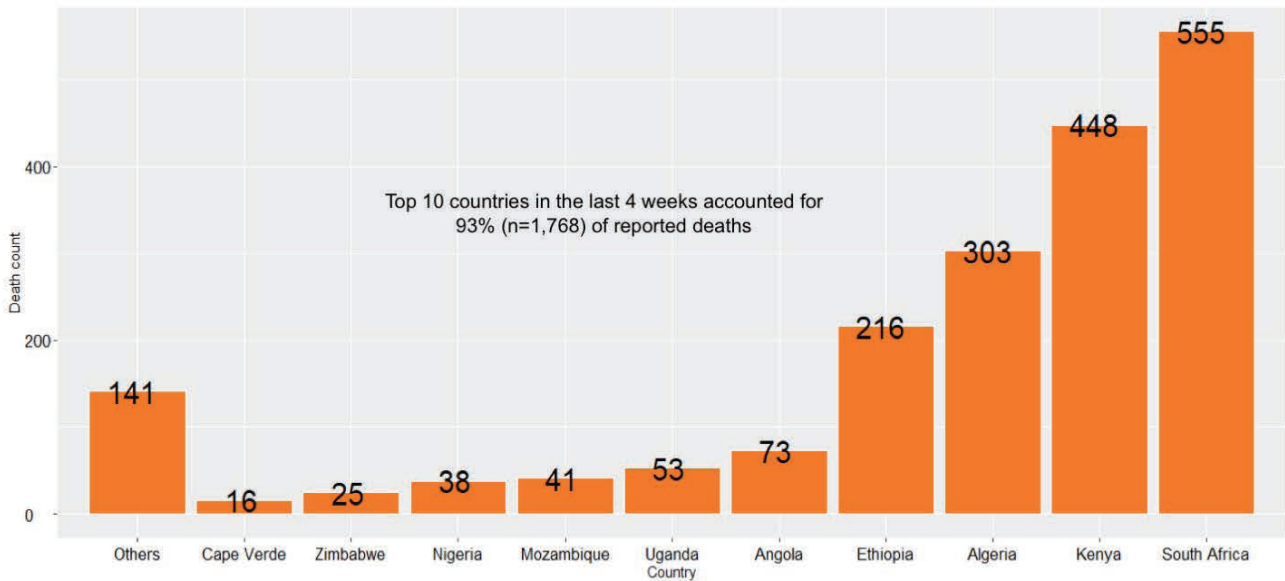


In the African region, the highest number of new cases during the report period is observed in Southern Africa, followed by Northern Africa where there is an increasing trend in Morocco, Egypt and Algeria. In other parts of the continent, there is a relative decrease and stabilization in the number of cases and deaths. The data

reported to WHO on the African continent as of 16 November 2020 indicated that the total number of cumulative COVID-19 cases and deaths reached 1,984, 818 and 47,606, respectively, making the case fatality rate (CFR) = 2.4%. In Africa, the highest burden of cases was recorded in the age group 30-39 years old.

Figure 3: Top 10 countries with the highest number of COVID-19 cases and deaths in the WHO African region, during the period 20 October - 16 November 2020

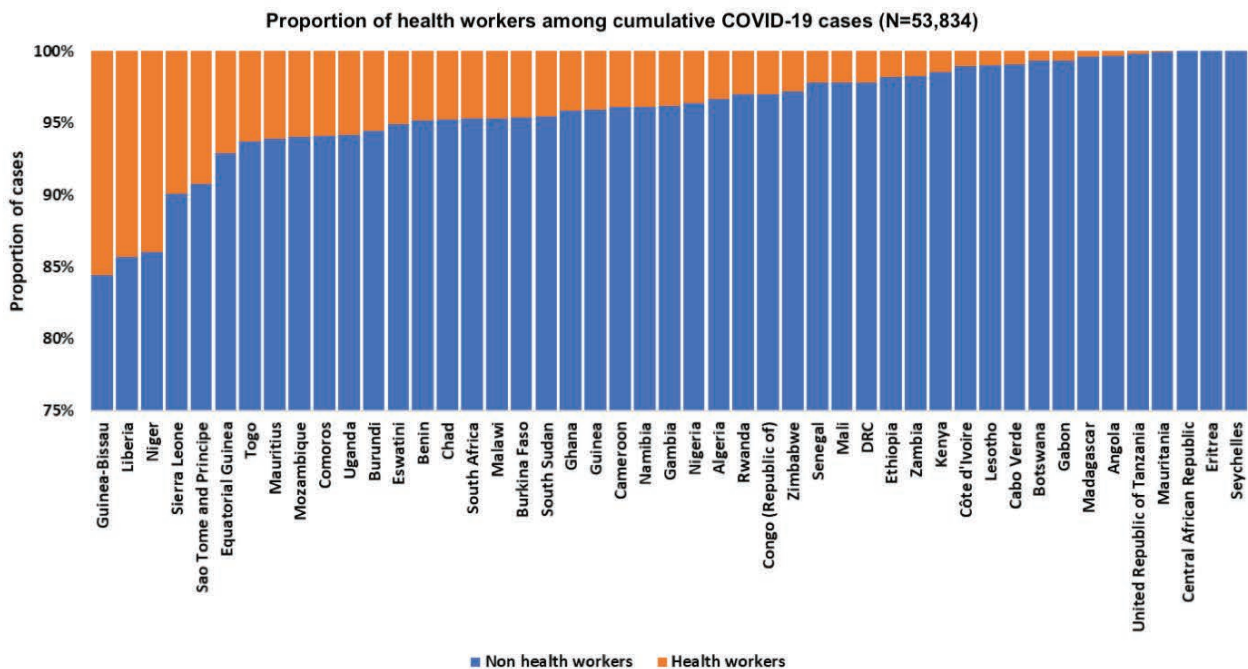




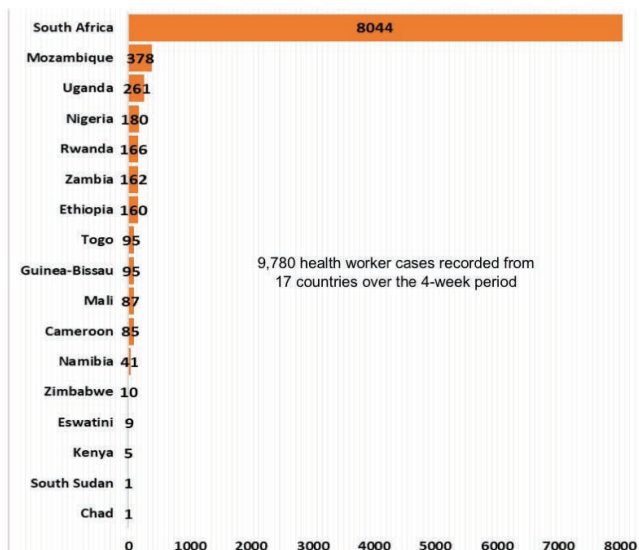
The analysis of the period 20 October - 16 November 2020 – the four weeks preceding the report – showed that the top 10 countries accounting for 89% of the cases and deaths notified included South Africa, Kenya, Algeria, Ethiopia, Angola, Uganda,

Nigeria, Mozambique, Botswana and Ghana (Figure 3). The reported health care workers’ infection rate in the same period shows that about 10,000 health workers have been infected in 17 countries (Figure 4).

Figure 4: COVID-19 cases in health workers in the African region



Health worker cases recorded over a period of 4 weeks
(20 October - 16 November 2020)



Testing remains low as compared to the expected standard. The data from 46 countries show that a total of 13,591,990 Polymerase Chain Reaction (PCR) tests have been carried out, with an average of 1,130 tests per 10,000 population. The cumulative tests in the region increased by 3% over the last 4 weeks. Ten countries met the standard target of 10 tests per 10,000 population per week, and 12 countries had a positivity rate of above 5%.

Dr. Mihigo stated that the biggest impact of COVID-19 has been the disruption of essential services caused by service closures, repurposing of health resources, movement restrictions, lack of Personal Protective Equipment (PPE), fear and stigma. Out of the impacted essential health services, immunization took a significant brunt. A survey conducted in Eastern and Southern African (ESA) countries noted that vaccines were out of stock in seven of the eight countries that reported stockouts of essential medicines and supplies. The factors associated with shortages of drugs and supplies were mainly transport challenges, such as airline restrictions, and financial constraints aggravated by COVID-19.

Roadmap for Prioritizing Population Groups for Vaccines against COVID-19

Dr. Joachim Hombach from WHO-HQ presented the road map proposed by SAGE for COVID-19 vaccine allocation and prioritization. Addressing it as a living document that is updated as required, Dr. Hombach provided an overview of the steps and processes the SAGE pursued to develop this policy document. The guidance includes the values framework for the allocation of COVID-19 vaccination, the guidance on prioritization of target populations under supply constrained situations, and the recommendations on the use of COVID-19 vaccines once authorized.

Dr. Hombach shared the main elements of the values framework, stating the basic assumption that COVID-19 vaccines must be a global public good. **The overarching goal of the framework is for COVID-19 vaccines to contribute significantly to the equitable protection and promotion of human well-being among all people of the world. In this framework, the core principles are human well-being, equal respect, global equity, national equity, reciprocity and legitimacy. Eleven objectives for vaccination that correspond to the six core principles are also indicated in the guidance document (Table 1).**



Table 1: The six core principles of the values framework for COVID-19 vaccine allocation and prioritization

PRINCIPLES	OBJECTIVES
Well-Being	<p>Reduce deaths and disease burden from the COVID-19 pandemic</p> <p>Reduce societal and economic disruption including strategies for containing transmission, reducing severe disease and death, or some combination</p> <p>Protect the continuing functioning of essential services, including health services</p>
Equal Respect	<p>Treat the interests of all individuals and groups with equal consideration as allocation and priority-setting decisions are being taken and implemented</p> <p>Offer a meaningful opportunity to access vaccine to all individuals and groups who qualify for vaccine under prioritization criteria</p>
Global Equity	<p>Ensure that vaccine allocation takes into account the special epidemic risks and needs of low-and middle-income countries</p>
National Equity	<p>Ensure that vaccine prioritization within countries takes into account the vulnerabilities, risks and needs of groups who, because of underlying societal and/or biomedical factors, are at risk of experiencing greater burdens from the COVID-19 pandemic</p> <p>Develop the immunization delivery systems and infrastructure required to ensure COVID-19 vaccines access to priority populations and to take proactive action to ensure equal access to everyone who qualifies under a priority group, particularly socially disadvantaged populations</p>
Reciprocity	<p>Protect those who bear significant additional risks and burdens of COVID-19 to safeguard the welfare of others, including healthcare and other essential workers</p>
Legitimacy	<p>Engage all countries in a transparent consultation process for determining what scientific, public health, and values criteria should be used to make decisions about vaccine allocation between countries</p> <p>Employ best available scientific evidence, expertise, and significant engagement with relevant stakeholders for vaccine prioritization between various groups within each country, using transparent, accountable, unbiased processes, to engender deserved trust in prioritization decisions</p>

These principles and objectives of the values framework have been used to propose a roadmap for prioritizing groups, which lists about 20 different unranked priority groups in accordance with vaccination objectives and their relevance to the core principles. In order to support country level planning, the roadmap suggests public health strategies and target priority groups for different levels of vaccine availability in different epidemiologic settings. The proposed prioritization roadmap made an assumption that vaccines that meet the minimum efficacy level will be available, and these will be licensed meeting the WHO target product profile (TPP) criteria (Table 2).

Main considerations and information needed for prioritizing use of COVID-19 vaccines in the context of limited supply should include:

- 1- Epidemiology and phases in the pandemic,
- 2- Burden of the disease,
- 3- Preliminary findings from mathematical modelling,
- 4- Build on principles and priorities from values framework, and
- 5- Build on the population subgroups identified in the values framework

Table 2: Roadmap towards prioritization of target population, epidemiology vs. supply

To support country planning, the Roadmap suggests public health strategies and target priority groups for different levels of vaccine availability in different epidemiologic settings

Key assumptions:

- Vaccines are licensed and meet all minimum criteria of WHO TPP;
- Vaccines have at least minimal level efficacy in older age groups; idem for other subpopulations;
- NPI continue to be used;
- Vaccine effect on transmission less relevant for early scenarios, but information becomes available at some point;
- No account has been taken of seroprevalence and the possible degree of population protection already established.

	Community transmission	Cluster of cases/ sporadic transmission	No cases, risk of importation
Very limited supply (1-10%)			
Limited supply (11-20%)			
Moderate supply (21-50%)			

Contextualized and targeted public health strategies

8

Despite the recommended need for more evidence to implement the prioritization matrix, Dr. Hombach noted the paucity of researches and evidence in the African region, citing the only study being conducted in South Africa as an example.

He further stressed that, as countries implement the roadmap, the vaccine supply expressed in stages I (A/b), II and III should be adhered sequentially and these stages are linked to the phases defined in the access and allocation framework. Health workers being the lead priority group, defining what a health worker refers to is crucial. Accordingly, the definition of health worker will be based on the International Labour Organization's (ILO) classification; Annex 3. ILO defines health service providers as doctors, nurses, midwives, public health professionals, laboratory professionals, medical and non-medical technicians, personal care workers, and community health workers. It also includes health management and support workers, such as cleaners, drivers, hospital administrators, district health managers and social workers.

In the face of limited supply, countries will need to ensure prioritization is made based on weighed risk of exposure by a specific group into low, medium, high and very high.

- **Low risk:** No or infrequent contact with general public or people known or suspected of being infected with SARS-CoV-2
- **Medium risk:** Frequent contact with the general public or others but that do not require contact with people known to be or suspected of being infected with SARS-CoV-2
- **High risk:** High potential for close contact with people who are known or suspected of having COVID-19; contact with objects possibly contaminated with the virus
- **Very high risk:** Risk of exposure to aerosols with SARS-CoV-2, in settings where aerosol-generating procedures are performed on patients with COVID-19

Dr. Hombach also highlighted other issues to consider in the roadmap for prioritizing the use of COVID-19 vaccines in the context of limited supply, including gender, pregnancy, lactation, children, comorbidities and seroprevalence (for within group prioritization in the future).

Update on the COVAX Facility portfolio and COVID-19 vaccine allocation mechanism and remaining issues and challenges faced by African countries

Santiago Cornejo, Director at COVAX Facility, Gavi Secretariat, presented the updates on the COVAX Facility and vaccine allocation. The Facility is an umbrella mechanism through which demand and resources are pooled to support procurement of, and equitable access to, COVID-19 vaccines. He detailed the role of the partners involved in this work, including WHO, UNICEF, CEPI, Gavi and Multilateral Development Banks (MDB). CEPI is supporting vaccine research, development and manufacturing scale-up from the laboratory to the production facility; Gavi is organizing the pooled procurement and incentivizing manufacturing expansion to support adequate supply of safe and efficacious vaccines; WHO is providing normative guidance on vaccine policies, safety, regulation, and allocation; UNICEF is coordinating procurement and distribution across COVAX participants; and MDBs are offering financing support, including directly to participants.

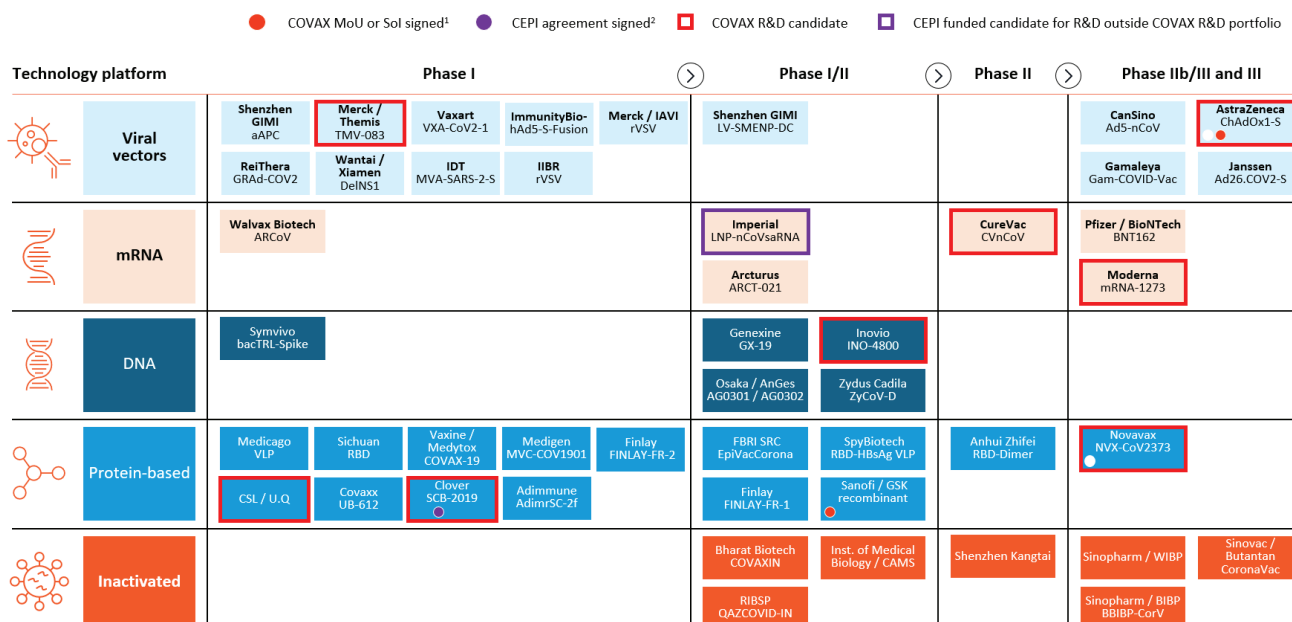
He described the overall objective of the COVAX Facility: to end the acute phase of the COVID-19 pandemic by the end of 2021. Specifically, the Facility aims to (i) deliver 2 billion doses of COVID-19 vaccine by the end of 2021, (ii) support the largest

actively managed portfolio of vaccine candidates globally, (iii) guarantee fair and equitable access to COVID-19 vaccines for all participants, and (iv) offer a compelling return on investment by delivering COVID-19 vaccines as quickly as possible. There are 187 countries confirmed with the Advance Market Commitment (AMC) that will be supported through the funds mobilized by Gavi from development partners. The Gavi COVAX AMC has raised USD 2.1 billion for 2020, and USD 5 billion is required for 2021.

The COVAX Facility pools purchasing power from all participating countries to invest in a broad portfolio of promising vaccine candidates. It will build a diversified portfolio across different technologies, geographies and vaccine characteristics. The candidates to join the portfolio are assessed based on several dimensions such as safety, efficacy, immunogenicity, probability of success, programmatic suitability, availability of supply and timing of doses. The decision is made by the COVAX advisory committee and a joint tender for procurement and supply agreements by UNICEF/PAHO. On the date of the RITAG meeting, the Facility had enrolled three vaccine candidates across two technology platforms.

The overview of the COVID-19 vaccine landscape (as of 11 November 2020) shows 47 candidates in human clinical trials (Figure 5). Eight of the nine candidates from the COVAX R&D portfolio are in human clinical trials, and 19 candidates are in phase IIb/III and III. On 9 November 2020, the first efficacy data readouts were released for one of the first candidates, which were needed to start the process for Emergency Use Authorizations (EUA). The first EUA are expected by the first quarter of 2021, and start for commercial distribution thereafter.

Figure 5: COVID-19 vaccine landscape – 47 candidates in human clinical trials (as of 11 November 2020)




The final COVAX Facility portfolio is expected to have around 10 or more candidates across four to five technology platforms, with early doses available in Q1 2021. Candidates to be included in the COVAX Facility portfolio are being selected from the COVAX


R&D portfolio and other clinical candidates. Additional candidates will be brought into the COVAX Facility portfolio through newly established processes, such as UNICEF/PAHO's announcement of joint request for proposals for Independent Product Group (IPG).

Figure 6: CEPI R&D portfolio – 9 pipeline assets, 8 in human in clinical trials (as of 11 November 2020)


Candidate	DNA / mRNA			Viral vectors			Protein-based		
	Inovio INO-4800	Moderna mRNA-1273	CureVac CVnCoV	Merck / Themis V591	AstraZeneca ChAdOx1-S	U. of Hong Kong	Novavax NVX-CoV2373	Clover SCB-2019	CSL / Queensland
Location	USA	USA	Germany	USA / Austria	UK	China	USA	China	Australia
Antigen / adjuvant	Full-length S protein	Full-length S protein	Full-length S protein	Full-length S protein	Full-length S protein	Receptor Binding Domain / AS03	Full-length S protein / saponin-based Matrix-M	Full-length S protein/AS03 or CPG1018	Full-length S protein / MF59
Current phase	Phase I/II	Phase III	Phase II	Phase I	Phase III	Pre-clinical	Phase III	Phase I	Phase I



Speed



Scale



Access

Mr. Cornejo stated that the first two mRNA candidate vaccines have recently released interim efficacy data from their Phase III trials. These are the Pfizer/BioNTech BNT162 vaccine and the Moderna mRNA-1273 vaccine. The former is reported to have 90% efficacy at 7 days after the second dose (later reported to be 95%), and the latter is reported to have 94.5% efficacy at 7 days after the second dose. There are trade-offs to including first mRNA candidates in the COVAX portfolio, which need to be considered. In terms of timing, four to five candidates are expected to have efficacy readouts by Q2 2021; in terms of pricing, based on public sources (not COVAX negotiations), the vaccines are expected to be at higher prices per dose. For example, the Pfizer/BioNTech vaccine is expected to be priced at USD 19.5/dose and the Moderna vaccine at USD 32-37/dose. It is also crucial to consider higher costs and logistics complexities associated with delivery, such as the need to use Ultra-Cold Chain (UCC) to keep mRNA vaccines at -20°C or -80°C. In terms of novel technology, there is limited experience outside of clinical trials (no mRNA vaccine has previously been approved for human use).

Guidance is still sought on the inclusion of the first mRNA vaccines from three potential decision options: (i) do not include mRNA vaccines, (ii) include in small volumes to urgently vaccinate healthcare workers (1-3% of the population), and (iii) include in larger volumes to vaccinate healthcare workers and other high-risk groups (3-10% of the population). These three options are to be assessed based on two criteria: (i) the opportunity cost for the portfolio in accessing other vaccines/candidates (whether none, limited or high), and (ii) the delivery costs and complexities (whether low, medium or high). Mr. Cornejo reported that vaccine allocation will be driven by public health needs for priority groups, which may represent about 20% of the population at least in the first year. Countries will be asked to develop vaccination plans following advice from the SAGE. WHO recommends front-line personnel (such as health workers) and older age people be the first priority groups to receive the vaccine.

In preparation to deploy the vaccine, Gavi expects the AMC countries to solicit different forms of support. The countries are expected to need assistance in preparation and roll out of the vaccines. For this assistance, Gavi has offered guidance on applications to access this support, which has multiple components

with different submission timelines. These include requests for technical assistance by 27 November 2020, vaccine doses by 7 December 2020 and cold chain equipment from December 2020 through Q1 2021.

Given that the vaccine development process is extremely expedited and the fastest ever in history, manufacturers are unwilling to self-insure for product liability claims and are requiring that all countries and territories receiving vaccine doses indemnify them against such claims. All participants allocated vaccines through COVAX will be required to indemnify the manufacturer for the vaccines received by them. Lack of such an indemnification may limit or delay access to vaccines. To decrease time and transaction costs in negotiating indemnity provisions between participants and manufacturers, Gavi is negotiating model indemnification language to be shared with participants prior to deployment of vaccines. All vaccines supplied through the COVAX Facility will undergo a rigorous regulatory review and will be approved for general use. There will also be a compensation mechanism to cover unexpected serious adverse events occurring in countries of AMC 92 participants.

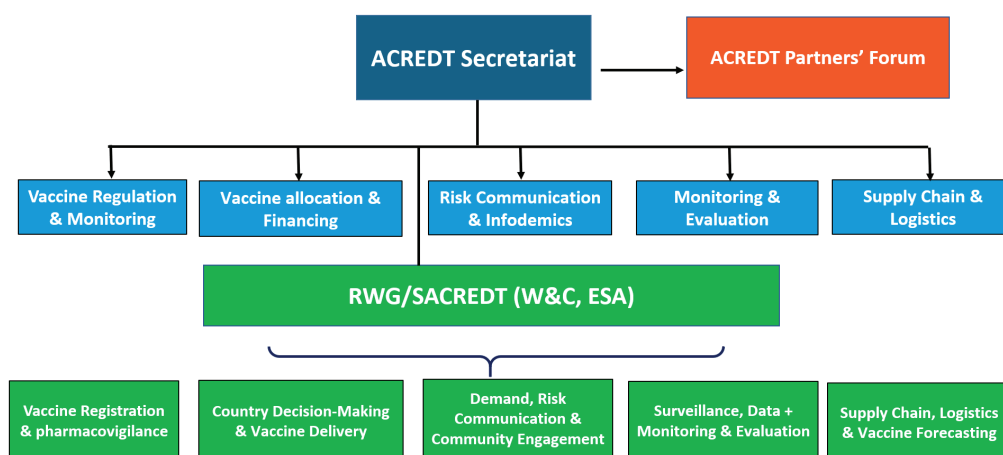
Mr. Cornejo concluded his presentation with details of the cost-sharing approach that is being considered by the Facility. According to the plan, fully subsidized donor-funded doses will be distributed across AMC-eligible participants, “jumpstarting” introductions and until donor resources are exhausted. The current aspiration is for donor-funded doses to reach about 20% of AMC participants’ populations, depending on vaccine development success, price, vaccine characteristics, and available resources. Cost-sharing will then “top-up” donor resources, enabling higher population coverage. Participants will have the opportunity to cost-share to purchase supplementary doses, beyond what donor resources cover. These additional doses will be fully paid for by cost-sharing funds (i.e., not donor-subsidized). This will help participants reach a greater share of their populations if desired. Participants who do not cost-share would still receive their share of donor-funded doses but no additional doses. There will be advantages of procuring additional doses via the COVAX Facility. Multi-lateral donors, such as the World Bank, have earmarked up to USD 12 billion for consensual loans for additional doses from the COVAX Facility.

Regional COVID-19 vaccine readiness and delivery activities: Updates and way forward

Dr. Phionah Atuhebwe, the focal point for new vaccines introduction in WHO/AFRO, introduced the structure of the African Region COVID-19 Vaccine Readiness and Equitable Deployment Task force (ACREDT). The establishment of this taskforce was welcomed by the RITAG in its previous meeting. She

shared updates on the structure and functionality of the platform in the readiness and delivery preparedness support it provides to countries. The regional level ACREDT is functionally and structurally linked with the sub-regional level working groups, where the regional immunization working groups are based and coordinated from. The structure also has the ACREDT partners platform that will play a strategic and policy oversight role for the region to guide the sub-regional platforms (Figure 7).

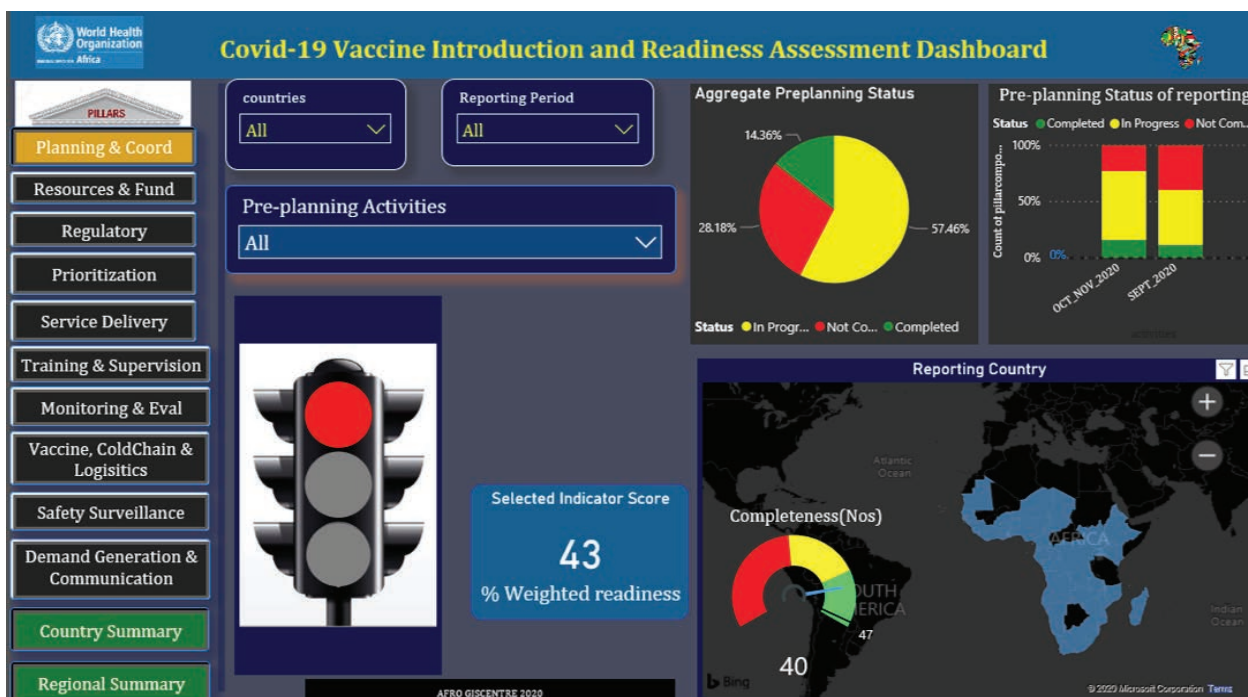
Figure 7: Structure of the African Region COVID-19 Vaccine Readiness and Equitable Deployment Task force (ACREDT)



Dr. Atuhebwe stated that regional level readiness for COVID-19 vaccine introduction is showing promising progress. The African region has introduced the Vaccine Introduction Readiness Assessment Tool (VIRAT) to help countries self-assess their level of preparedness in ten key areas. The results of the assessment are essential to guide the development of the roadmap for countries' introduction plans. As of 18 November 2020, 40 out of 47 countries in the region have reported the result of their initial assessment

using the online monitoring dashboard. The output from the monitoring dashboard on readiness is guiding management actions to be taken at a national level (Figure 8). The baseline preparation assessment identified specific country improvement and technical assistance needs. The lowest score on readiness was on Training and Supervision, as that guideline is still under development and awaited by countries for use.

Figure 8: Results of the reported baseline assessment of 40 countries in the African region, as of 18 November 2020





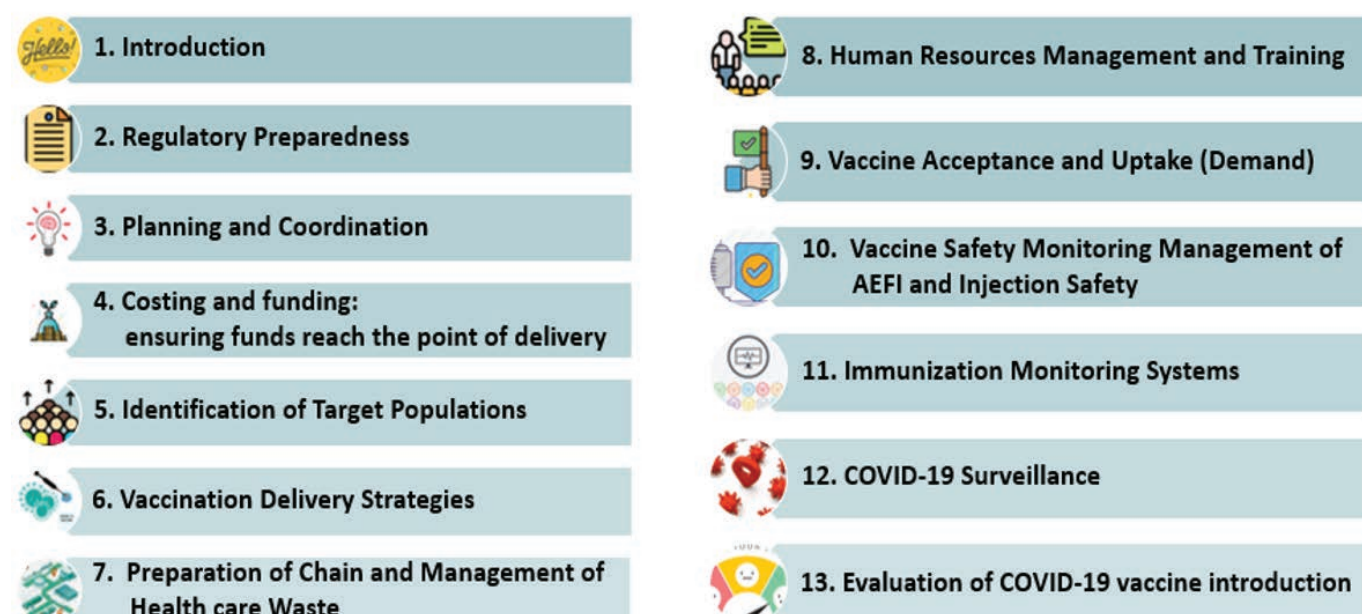
The continent has made considerable progress to drive towards equitable access to COVID-19 vaccines. The establishment of the COVID-19 African Vaccine Acquisition Task Team (AVATT) to implement the Africa Vaccine Strategy is one marker of progress. This strategy aims to fast track adequate vaccine acquisition to end the pandemic as soon as possible. The AU financing strategy aims to vaccinate 60% of the African population to stop further transmission of the virus and associated deaths. The AU Commission stated that about USD 12 billion was required to cover the aforementioned vaccine need, and this is expected to be sourced from the COVAX Facility, The World Bank, direct donors, and the African Import Export Bank, which has committed to raise up to USD 5 billion.

Dr. Atuhebwe stressed that in addition to securing financing to cover the cost of vaccines and technical assistance, countries will

need to be prepared to expedite regulatory licensing requirements via WHO Emergency Use. This needs to include the procedures for post-Emergency Use Listing approvals by National Regulatory Authorities (NRA) using the AVAREF platform. Strong national level coordination led by top political leadership is also required for success, along with involvement of all relevant stakeholders, including CSOs.

Going forward, an official guidance on developing a National Vaccine Deployment Plan (NVDP) has been released to facilitate country level planning with respect to key components of vaccine introduction. The guidance has 13 chapters and helps country teams to conduct their planning step by step (Figure 9).

Figure 9: National Vaccine Deployment Plan Components



Immunization in the Context of COVID-19

Revamping immunization and VPD surveillance in the African region in the COVID-19 context

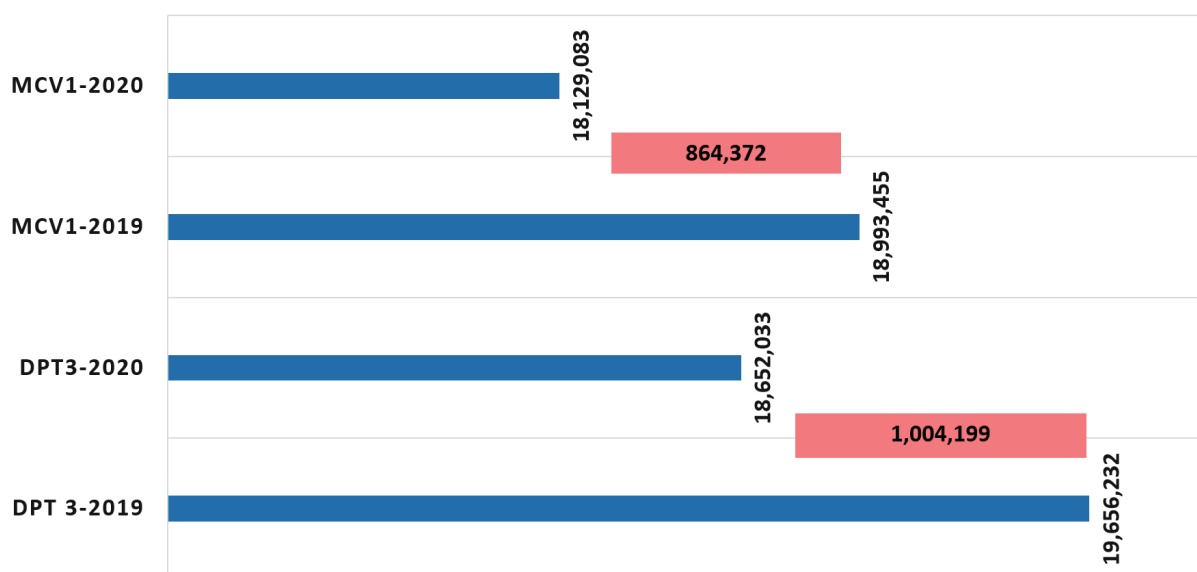
Dr. Balcha Masresha, the focal point for measles and rubella elimination in WHO/AFRO, presented by recognizing the significant impact COVID-19 has brought on immunization and VPD surveillance. He noted that due to COVID-19, there has been a shift of resources and programmatic focus in African countries that resulted in disruption of immunization and VPD surveillance, including postponement of scheduled new vaccine introductions and Supplemental Immunization Activities (SIA).

There was a sharp drop in the number of children vaccinated and in the number of VPD cases reported from March to May 2020.

The decline was sharper and more acute in countries with weaker programmes, where there was a prior prolonged period of decline in service delivery. However, from June 2020, countries had started the recovery process. Between July and August 2020, the majority of countries had started implementing catch up sessions for routine immunization activities, and resumed SIAs and new vaccine introductions that were rescheduled due to the pandemic.

Since the onset of the pandemic, a significant number of additional infants missed vaccinations in the region. There were 1,004,199 children who missed vaccinations for DPT3 and 864,372 children were left unvaccinated for MCV1, between January and July 2020 as compared to the same period in 2019 (Figure 10).

Figure 10: Number of children vaccinated with MCV1 and DPT3, January – July 2019 vs. January – July 2020

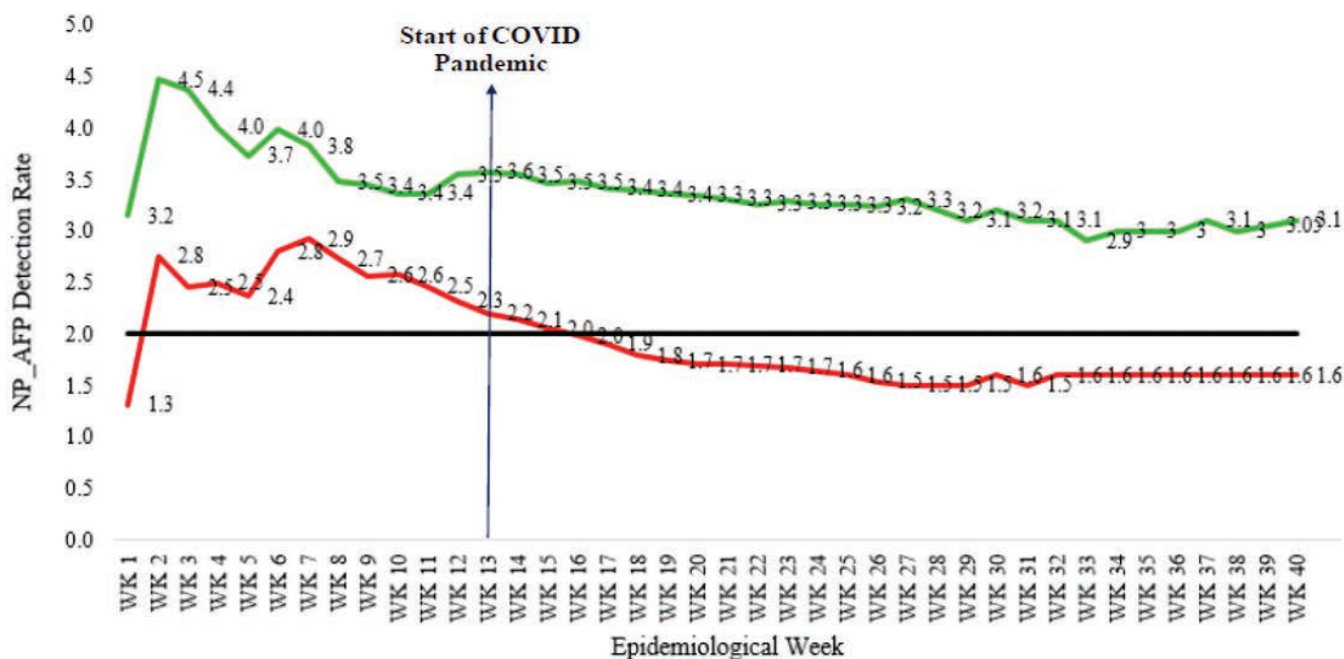


There was also a significant decline in the number of integrated supportive supervision visits conducted in the region, captured in the Open Data Kit (ODK) real time data system. For instance, in the Eastern and Southern Africa sub-region, there was a sharp decline in visits in April 2020. Though this improved in the months between May and September 2020, the total visits conducted during this time remained lower than during the same period in 2019.

COVID-19 has also severely impacted VPD surveillance efforts across the region. There were significant interruptions to

supervisory visits to districts and active surveillance visits. The overall decline in the number of reportable VPDs such as Acute Flaccid Paralysis (AFP) and measles cases was also significant. AFP case 60-day follow-up visits were also delayed. For example, in Kenya, the weekly non-polio AFP reporting rate from week 1 to 40 was quite revealing: in 2019, the non-polio AFP rates reported stayed above the minimum 2 per 100,000 detection thresholds from week 1 to week 40; however, as soon as the pandemic hit in 2020, the rate dropped below the 2019 rates and has stayed below the minimum threshold from week 15 to week 40 of 2020 (Figure 11).

Figure 11: Weekly non-Polio AFP reporting rate, week 1-40 in 2019 compared with the same time period in 2020



Similarly, the region experienced a significant decline in the number of districts investigating suspected measles cases in the first 44 weeks of 2020. The Non-Measles Febrile Rash Illness rate (target ≥ 2 per 100,000 population) and the number of countries that met the targets for the principal surveillance monitoring indicators, as compared to 2018 and 2019, has decreased considerably. Illustratively, in countries within the Western African region, there was a visible decline in the number of blood specimens received at national measles laboratories across countries, except for a few countries such as Burkina Faso, Cote d’Ivoire and Senegal. Furthermore, there were delays in the confirmation of what seems to be meningitis epidemics in some districts, in at least five countries within the meningitis belt.

The disruption in VPD surveillance was due to cancellations and delays in sample collection, shipment, investigation and laboratory result confirmation of suspected cases, which are largely due to movement restrictions and stockouts of essential test kits. PCR machines that were used for laboratory testing and suspected case confirmation were backing up COVID-19 testing, which precipitated the delay in taking the appropriate action on suspected cases.

In order to avert and withstand the impact of COVID-19 on essential immunization services and VPD surveillance, WHO issued a number of technical guideline documents between March and June 2020. These guidelines emphasized the need to prioritize and maintain essential services such as immunization and VPD surveillance through optimizing health service capacity, ensuring safe flow of clients, availing required supplies, providing information to communities and strengthening monitoring of essential services. These guidelines have been well received and adapted by a number of countries with support from WHO/AFRO.

Countries used these guidelines to take actions to help maintain, resume and revamp immunization services amid COVID-19. These actions include: 1) Adapting WHO guidelines to their respective country contexts in collaboration with NITAGs, 2) Monitoring of essential services, high risk population and areas, and vaccines stock levels, so as to inform their decision making, 3) Conducting advocacy, communication and social mobilization activities by engaging national COVID-19 task forces so as to assure the public on the availability and safety of immunization services, 4) Building skills of health workers in infection prevention and control measures through virtual platforms, and 5) Modifying service delivery by implementing the appropriate IPC, PPE use, and distancing measures, through organizing more frequent and smaller sessions in open spaces, and conducting mobile service delivery.

Despite efforts to maintain immunization services, there has been a decrease in clients who seek for and access services. This has required catching up through jumpstarting and revamping immunization services. Many countries used different methods and tools to revamp services. Advocating to senior leaders and officials has enabled the reinstatement of services and building confidence. Improvements in service delivery by reinstating interrupted fixed and outreach sessions and adoption of modified vaccination calendars for delayed doses have enabled many children to access those vaccines they had missed. Reaching out to remote communities and integrating immunization services with nutrition monitoring and other child health services have improved the access. Some countries have responded to supply chain challenges by frontloading vaccine orders and expanding their buffer stocks from 3 months to 6 months.

Figure 12: Vaccinators in Eritrea carrying out outreach services in an endeavor to revamp vaccination services



In order to boost the access to immunization for children who missed their doses, some countries integrated and provided routine EPI doses with mass campaigns, while others identified communities with high numbers of unvaccinated children and conducted catch up campaigns. Multi-antigen interventions and Periodic Intensification of Routine Immunization (PIRI) are also coupled with efforts to build health worker and community confidence using preventive SIA platforms. Integration of VPD surveillance with COVID-19 surveillance is used in some countries. Some are implementing remote integrated supervision using existing virtual tools including WhatsApp. Innovative technologies such as development and use of mobile applications that remind health workers on due vaccine doses, and the use of drones to deliver vaccines, have also been tried.

Based on the country experiences and the required boosting of immunization services in the African region, Dr. Masresha iterated on key priority actions proposed for scaling up immunization and strengthening VPD surveillance. These include amending immunization policies and guidelines to integrate the aforementioned service delivery innovations and adjustments into routine immunization activities. These changes can include revising policies related to vaccination age restrictions, multi-dose vials, catch up vaccination and eligible vaccinators. Such changes, along with intensified social mobilization and evidence-driven planning and implementation of new and proven immunization strategies, can help revamp essential services in the African region. Given the growing rate of misinformation about vaccines and VPDs, learning from the efforts of the Africa Infodemic Response Alliance, proactive efforts to addressing misinformation through dissemination of ‘viral facts’ have been underlined.

As countries strive to revamp their immunization services, they are advised to monitor, identify, plan and implement the proposed priority activities. In addition, the countries should be provided with technical and financial support, including laying the groundwork for COVID-19 vaccine introduction. Comprehensive documentation and dissemination of best practices and success stories are other areas that can have fundamental impact.

Dr. Masresha concluded his presentation by recalling the fact that many countries have used WHO’s guidance for advocacy and to kick-start their programmes. In addition, SAGE has issued guiding principles for immunization activities during COVID-19 and other kinds of severe disruptions. These guiding principles lay out the role of RITAGs and NITAGs, emphasizing integrated service delivery, adapted strategies and catch up vaccination strategies. Countries are advised to continue to use this guidance to sustain their immunization revamping efforts.

Operationalizing the Immunization Agenda 2030 in the African region

The Regional Strategic Plan for Immunization 2014-2020 of the African region closes out by the end of this year and calls for a new strategic vision that guides the region in its work from 2021 to 2030. The WHO/AFRO has been developing this strategic vision in alignment with the global Immunization Agenda 2030 (IA2030). A draft approach to developing the regional framework for IA2030 was presented to the RITAG and recommendations on next steps were given.

Dr. Ephrem Lemango, Consultant, for Essential Immunization and Primary Health Care, WHO/AFRO, presented the update focusing on the operationalization of the Immunization Agenda 2030 (IA2030) in the African region. In his introduction of the presentation, he recognized the previous recommendations provided by the RITAG members on the then draft framework and proposed approach. He stressed that the purpose of this presentation is to share the updates since then and request for guidance on the proposed operationalization modalities.

He pointed out that the IA2030 is a new global strategy for the achievement of shared immunization goals covering the period 2021-2030. The agenda sets a unifying vision for the decade and clear impact goals that are aligned with the Sustainable Development Goals (SDGs). The IA2030 supersedes the global decade of vaccines 2011-2020. Its vision is to realize a world where everyone, everywhere, at every age, fully benefits from vaccines for good health and well-being.

The key impact goals within this vision are to reduce mortality and morbidity from VPDs for all across the life course, and leave no one behind, by increasing equitable access to and use of new and existing vaccines. The other goal is to ensure good health and well-being for everyone by strengthening immunization within primary health care (PHC), and contributing to universal health coverage (UHC) and sustainable development.

The subsequent development of the Framework for IA2030 in the African Region has been ongoing for the past one year. The development of the framework employed key principles to ensure its fitness for purpose and robustness to achieve the vision. These are: 1) Grounding the strategy on successes and lessons learnt from the past, current state of affairs, and understanding of the future, 2) Factoring in new elements and developments such as issues of UHC, SDGs and PHC, broadening of the health agenda, and tailoring of country support to their needs, and 3) Focusing on operationalization of the framework and vision by putting in place the right enablers such as a comprehensive Monitoring and Evaluation (M&E) framework and a clear accountability framework.

Based on the RITAG recommendation in November 2019, the presenter reported that considerable progress has been made to ensure the updated framework captures research and learning strategies to understanding country-level sub-optimal immunization coverage. Engagement of ‘non-traditional’ actors in advancing towards immunization targets is also well addressed in the strategies within the framework. RITAG had also recommended for a “bottom-up” approach to be pursued for target setting, whereby the national level aggregates are used in development of regional targets and to model future country level resource requirements for immunization, based on projected population growth. The presenter reported that this will be undertaken through additional consultations and deliberations during the development of the strategic plan, as it proved difficult to do so during the height of the COVID-19 pandemic.

According to its principles, the framework anchors its vision on the current state of immunization in the region. It recognizes the stagnation of coverage of key immunization antigens and the sub-optimal progress made in measles and rubella elimination. The promising progress made in introducing new vaccines into essential immunization programmes, elimination of maternal and neonatal tetanus (MNT), and MenAfriVac campaigns in limiting meningococcal meningitis is also acknowledged. The success of the region, albeit delayed, in achieving wild polio free certification is appreciated while cautioning for the growing number of circulating vaccine derived polio viruses (cVDPVs). Notably, the impact of COVID-19 on hard earned successes of immunization is well recognized, eyeing for the readiness needed to prevent similar shock.

Based on the aforementioned facts and in-depth analysis, the framework identified seven major issues and challenges that the region needs to address in its quest to achieve the vision of the IA2030. These include: 1) The system-wide limitations and weak health systems, 2) The unproportionally limited access to immunization services, particularly, by underserved communities and populations, 3) The weak data systems and inadequate use of data for decision-making, 4) The sub-optimal vaccine supply and management system, 5) Demographic transition, climate change and associated change in VPD epidemiology, 6) The growing vaccine hesitance, and decline in confidence and demand for immunization, and 7) The inadequate preparedness and responses to VPD outbreaks including surveillance, and its heavy reliance on polio resources.

The Regional Framework is aligned with the global vision and it proposes five preliminary targets that are poised to be achieved

by 2030 where all member states have: 1) Achieved 90% coverage rate for all vaccines in all districts and at the national level, 2) Verified and maintained elimination of MNT and 70% of them validated for Hepatitis B elimination, 3) At least 80% of them verified for elimination of measles and rubella, 4) Allocated at least 5% of their domestic resources for immunization to support VPD surveillance and laboratory networks, and 5) Maintained wild polio free status and controlled cVDPVs. Interim milestones are also indicated for 2023 and 2026.

Furthermore, the updated framework proposes strategies, priority interventions and actions for implementation of the agenda. These are centered around six pillars, namely: health systems, leadership, service delivery (including integration), logistics, data management, and resilience.

Dr. Ephrem mentioned that the Regional implementation framework is shared with the Regional Committee (RC) for the African region for its review and adoption. Due to other competing agenda items, the RC has not had the chance to review the framework yet. He further described that the next steps in operationalizing the regional vision will be translating the framework into an actionable Regional Strategic Plan for Immunization 2021-2025 and supporting countries to develop country-level national immunization strategies.

Finally, RITAG is requested to provide guidance and key recommendations on the operationalization plan and the key targets, strategies and proposed actions of the latest regional framework.



Polio Eradication

Curbing the spread of cVDPV2 outbreaks in Africa and nOPV2 country preparedness and rollout

Dr. Paskal Makanda (WHO/AFRO) presented the current update on the status of the African region with regard to cVDPV2 outbreaks, the outbreak response and the new Global Polio Eradication Initiative (GPEI) cVDPV2 strategy. In August 2020, the African region was certified as wild poliovirus free after it

reported no cases of wild polio for the prior three years. This success has, however, been celebrated with caution, due to growing number of cVDPV2 cases reported.

A total of 452 cases in 16 countries have been reported from week 1 – week 43 of 2020, including from environmental isolates. There are also samples for which laboratory confirmations are pending. In 2019, the same number of cases were reported in the entire year (Table 3).

Table 3: Number of circulating Vaccine Derived Polio Virus type 2, including environmental isolates

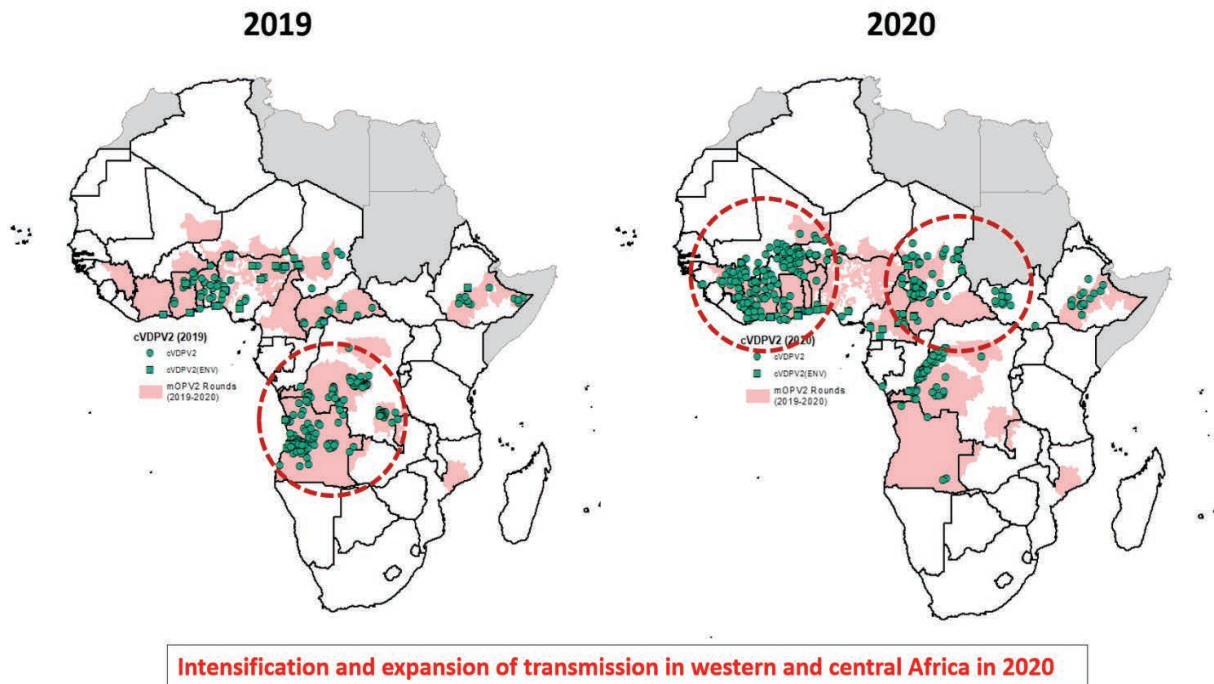
Country	2016 (1)	2017 (1)	2018 (5)	2019 (14)	Week 43-2020 (16)	Total
Angola	0	0	0	155	4	159
Benin	0	0	0	8	2	10
Burkina Faso	0	0	0	1	38	39
Central African Republic	0	0	0	31	4	35
Cameroon	0	0	0	4	15	19
Chad	0	0	0	19	90	109
Côte d'Ivoire	0	0	0	7	95	102
Democratic Republic of the Congo	0	22	20	88	61	191
Ethiopia	0	0	0	15	21	36
Ghana	0	0	0	35	31	66
Guinea	0	0	0	0	29	29
Kenya	0	0	1	0	0	1
Mali	0	0	0	0	29	29
Mozambique	0	0	1	0	0	1
Niger	0	0	10	1	7	18
Nigeria	2	0	78	78	5	163
South Sudan	0	0	0	0	12	12
Togo	0	0	0	8	9	17
Zambia	0	0	0	2	0	2
	2	22	110	452	452	1038

Thus, there has been a significant increase in number of cVDPV2 cases since 2019. The analysis of the geographic spreading of cVDPV2 outbreaks in 2019-2020 in the African region shows intensification and expansion of transmission in Western and Central Africa in 2020 (Figure 13). The increasing number of these outbreaks in the African region is mainly due to the low immunity to cVDPV2. This is mainly due to:

- 1- Low quality of outbreak response campaigns,
- 2- Regional migration patterns, fueling spread of the virus and causing children to miss vaccination campaigns,

- 3- Declining mucosal immunity levels to the type 2 virus after the vaccine switch,
- 4- Insufficient coverage of the injectable Inactivated Polio Vaccine (IPV), and
- 5- The continued use of existing monovalent Oral Polio Vaccine type 2 (mOPV2), leading to the seeding of new cVDPV2.

Figure 13: Geographic spread of cVDPV2 outbreaks in the African region, 2019 (week 1-52) vs. 2020 (week 1-43)



The majority of outbreaks in the region have been responded to with mOPV2, approved for response before the end of 2020. Despite the COVID-19 pandemic, 36 million children have been reached with mOPV2 in the cVDPV2 affected countries since the resumption of the outbreak responses in July 2020, after a three-month interruption.

These mOPV2 rounds have been largely effective in stopping most cVDPV2 outbreaks (Table 4).

Table 4: Impact of mOPV2 campaigns on cVDPV2 transmission

- In 70% of infected districts, no evidence of ongoing transmission was detected after two rounds of mOPV2 SIAs
- 75% estimated reduction in the incidence of cVDPV2 was recorded following two rounds SIAs (95% CI 66-81%)
- 77% of cVDPV2 cases reported occurred before conducting any outbreak response SIAs
- 7% of cVDPV2 cases occurred after two SIAs, and some are associated with seeding due to mOPV2 use

In order to respond to these outbreaks, a new GPEI cVDPV2 strategy was developed for 2020-2021. The Africa Polio Rapid Response Team (RRT) was established in June 2019 for effective cVDPV2 outbreak responses and the implementation of the strategy. The strategy has four main pillars:

- 1- Optimize mOPV2 for outbreak responses, currently the best tool for cVDPV2,
- 2- Accelerate development of novel Oral Polio Vaccine 2 (nOPV2) as an alternative and possible replacement for mOPV2,
- 3- Strengthen routine immunization and delivery systems in high risk areas, and
- 4- Ensure sufficient supply of OPV2 is available to reach every at-risk child.

The nOPV2 is a new vaccine that has been under development since 2011 as part of the polio endgame strategy and in response to the

foreseen risk after withdrawal of trivalent oral polio vaccine (tOPV). It is a modified version of the existing mOPV2 vaccine and has the same levels of immunity against poliovirus, while being more genetically stable. It is less likely to revert to a form that can cause paralysis and has reduced risk of seeding new cVDPV2 outbreaks. Compared to mOPV2, it has reduced risk of Vaccine Associated Paralytic polio (VAPP).

Interim Emergency Use Listing (EUL) was granted on 13 November 2020 to nOPV2 manufactured by Bio Farma in Indonesia with an anticipation that approximately 160 million doses will be available for the vaccine's initial use. This authorization came after a series of recommendations by the WHO executive board and endorsement by the SAGE. Since the vaccine will be available beginning December 2020, a planned initial use will commence in January 2021 in countries that meet the preparedness and readiness criteria.

The countries that will be eligible for nOPV2 vaccine will be those at higher risk of new outbreaks, those bordering areas with intense transmission, countries who recently used mOPV2, and countries having huge cross-border population movement. All new cVDPV2 outbreaks occurring after January 2021 also will use nOPV2. In this respect, the WHO Regional Director for Africa is sending official communication to all 47 Ministers of Health on nOPV2 initial use under the granted EUL. Though the decision to use the vaccine is dependent on countries interest, the elected high-risk areas for the initial use of nOPV2 are identified based on high likelihood of outbreaks. These are areas with huge transmission and population movements across the borders of Liberia, Côte d'Ivoire and Guinea; the DRC, Congo and Angola; and Uganda, Kenya and South Sudan.

Countries are advised to monitor and collect robust outbreak and cVDPV2 circulation data after the introduction of the nOPV2.

If the initial use proves to be successful in stopping cVDPV2 outbreaks, it will be a tool of choice for all such outbreaks in the African region and could later be considered for future use in routine immunization.

Dr. Makanda concluded his update on polio eradication in the African region by sharing the initiative of the GPEI to develop a global strategy to eradicate all forms of polio globally. The vision that guides the polio eradication strategy for the period post-2021 is being developed with the engagement of all six GPEI partners, donors, and the national governments of polio-affected countries. It is planned to be presented to the World Health Assembly in May 2021.



Recognition Award

A virtual recognition session was conducted to appreciate and recognize the exceptional contribution of three immunization champions in the African region: Dr. Robb Linkins, a previous RITAG member; Dr. Robert (Bob) Davis, an immunization programme champion; and the late Dr. Koffi Isidore, a former WHO/AFRO polio programme expert.



Dr. Robb Linkins, Former RITAG member for WHO/AFRO

Robb Linkins obtained a master's degree in public health at the University of California, Berkeley, where he focused on behavioral science and epidemiology. He went from Berkeley to Johns Hopkins University, where he completed a PhD in epidemiology and a post-doctoral fellowship in clinical trials methodology. Robb then joined the US Centers for Disease Control and Prevention's Epidemic Intelligence Service (EIS) and was posted to the state health department in New Mexico. After EIS, Robb moved to CDC headquarters in Atlanta to work in the National Immunization Programme, starting as an epidemiologist in the Polio Eradication Team, then as Chief of the Immunization Registry Branch, and then as Director of the Data Management Division.

After 14 years at CDC headquarters, Robb joined the Thailand Ministry of Public Health - US CDC Collaboration in Bangkok and functioned as Chief of the HIV Research Programme. After 5 years in Bangkok, Robb returned to Atlanta in 2009 as Chief of the Vaccine Preventable Disease Eradication and Elimination Branch (now called the Accelerated Disease Control and Vaccine Preventable Disease Surveillance Branch (ADCDSB)) at CDC. The Branch's focus is on helping countries meet measles, rubella, hepatitis B, and neonatal tetanus control and elimination targets through strong immunization systems, and developing robust, lab-linked surveillance systems for vaccine preventable diseases.

In addition to being ADCDSB Chief, Robb currently serves as Chair of the Measles and Rubella Initiative's Management Team, member of the South East Asia Regional Immunization Technical Advisory Committee, member of the Indian Expert Advisory Group on Measles and Rubella Elimination, and member of the European Regional Verification Commission on Measles and Rubella Elimination.

Robb has served for four consecutive years as a RITAG member and completed his tenure in July 2020.

RITAG & the WHO Secretariat would like to thank Robb Linkins for his immense role in advancing immunization in the African Region.



Dr. Robert (Bob) Davis, Immunization Champion in the African region

Mr. Robert Davis has served as a dedicated public health officer for nearly five decades, starting as a US Peace Corps Volunteer assigned to the Ministry of Health in Thailand in 1971. He graduated from the Johns Hopkins University in 1978 and joined the International Rescue Committee (IRC) in Kinshasa in 1979 and joined the world of immunization as a technical officer for Save the Children and WHO between 1982 and 1988. In 1988, Bob joined UNICEF as a project officer for immunization and later as the Health Programme officer working in different duty stations, before becoming the UNICEF regional advisor for immunization in 1999. He played a big role in advancing immunization and polio eradication during the critical years of the fight against polio, and the launch of new and underutilized vaccines in many countries in the African region.

In 2008, Bob joined the American Red Cross as the measles delegate, coordinating technical and financial support to countries in Sub-Saharan Africa. As a key member of the Measles and Rubella Initiative, Bob has been (and remains) a strong advocate for measles and rubella elimination until his retirement in early 2020. But his work will continue into his retirement as he will serve as a volunteer with the American Red Cross.

Bob is a hardworking and tireless professional who is very passionate about immunization and child survival. He has made it his life's mission to help protect the weakest in society. In addition to his advocacy and technical guidance to countries in the region, Bob has authored many opinion pieces and research publications and contributed to the documentation of progress in the area of immunization in the region. Anyone who has attended meetings with Bob remembers how he always manages to capture the proceedings of meetings in real-time. In addition, Bob has been diligently curating and disseminating relevant research outputs by e-mail to hundreds of immunization professionals for more than 10 years. Bob is the founding member of TechNet, and he has mentored many public health experts in his years of work across Africa. He has received many recognitions, including the UNICEF staff award in 1997 for his service during the emergency in Rwanda, and the WHO AFRO TFI award in 2003 for outstanding support for immunization in Africa. All who know Bob recognize his profound knowledge of the political history of Africa, his ability to connect with people, as well as his wit and his excellent sense of humor.

RITAG & WHO/AFRO would like to thank Bob Davis for his immense role in advancing immunization in the African region.



Dr. Koffi Isidore Kouadio, Special Award for Lifetime Service

Dr. Koffi Isidore Kouadio was posthumously celebrated as a polio warrior. Koffi joined WHO on February 2013 as a Polio STOP consultant at the WHO/Congo Office in Brazzaville. Koffi was very passionate about public health and immunization and brought his past public health experience to bear in his work with WHO. Because of his strong commitment to reinforcing EPI, Koffi became the WHO Regional Polio Eradication Certification Officer in July 2014. He supported the achievement of interruption of wild poliovirus transmission within the region and then played a critical role in preparing the African region for polio certification, which, as we all know, was successfully achieved earlier this summer.

Kofi served as a member of the WHO/AFRO Secretariat of the African Regional Commission for Certification of Polio Eradication. He provided technical guidance to countries on all aspects of certifying National Containment Task Forces as well as provided specific support to maintain sensitive polio surveillance systems.

Koffi was living proof of how fine a person can be. He was a strategic thinker, a visionary who was brilliant, innovative and creative, and generously gave us his knowledge, his expertise, his skills – right to the very end of his life. To all those who knew Koffi, news of his death last month was received with profound sorrow. Koffi was 50 years old when he passed away and is survived by his wife and two children, to whom we convey our sincere and deep condolences.

This special RITAG Award honours the life and work of Koffi Kouadio – especially his tireless work and immense contribution to wild poliovirus eradication in the African region.

Rest in peace Koffi.

Conclusion and Way Forward

The RITAG meeting on 18-19 November 2020 was concluded with members providing synthesized recommendations on the discussed topics for implementation and follow up by the WHO, partner organizations and countries. The recommendations are given on pages 5-6.

Dr. Joseph Cabore, Director of Programme Management, closed the meeting with key remarks and appreciations. He commended the RITAG awardees for their exceptional lifetime contributions to immunization, and appreciated the participants for taking part in the RITAG meeting. He added that all RITAG recommendations will be seriously considered to guide the current regional effort against COVID-19. He disclosed that the Regional Director has constituted a small committee, including WHO representatives, to consider how the issue of COVID-19 vaccination should be approached in the region. The next Regional Committee meeting will discuss the recommendations, including those on COVID-19 vaccines.

Finally, he invited the RITAG Chairperson to a meeting with the Regional Director, to discuss the issues raised during the RITAG meeting as well as to present the recommendations of the RITAG. He then thanked everyone who contributed to this successful deliberation and adjourned the meeting.



All photos used in this report are courtesy of WHO and Gavi, the Vaccine Alliance.



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