



MEETING REPORT

Global Convening on COVID-19 Vaccination Monitoring and Related System Strengthening





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Contents

Global Convening on COVID-19 Vaccination Monitoring and Related System Strengthening Meeting Report.....	1
Acronyms and abbreviations	7
Participant list	8
Executive summary	10
Outcome statement	11
Background	14
Overview: Day 1	15
Welcome and opening remarks.....	15
Session 1: COVID-19 vaccination monitoring in 2023 and beyond.....	16
Session 2: COVID-19 vaccine program objectives in 2023 and foreseen monitoring needs.....	17
Session 3: Monitoring COVID-19 vaccination in the face of evolving policy & strategy recommendations.....	18
Session 4: Reassessing the minimum core and optional dataset for regional and global monitoring.....	19
Session 5: Monitoring integration of COVID-19 vaccination into national immunization programs	20
Overview: Day 2	21
Session 1: Financing made available for and investments made to immunization monitoring / data system strengthening	21
Session 2: Review of COVID-19 country proposal process, and discussion on research priorities to improve future processes.....	22
Session 3: Assessing & addressing root causes of reporting gaps on key COVID-19 vaccination metrics	23
Session 4: Exploring need for aggregate or individual reporting systems based on updated COVID-19 vaccination monitoring needs	24
Session 5: Future of COVID-19 vaccination monitoring systems.....	25
Session 6: Priority investments in immunization monitoring systems, incl. COVID-19 systems, over the next 2 years.....	26
Overview: Day 3	27
Session 1: Adjustments needed to COVID-19 vaccination monitoring in light of state of monitoring systems.....	27
Session 2: Future of COVID-19 vaccination monitoring with existing immunization monitoring & reporting processes (i.e., regional, and global)	28
Session 3: Convening outcomes & next steps.....	29
Closing remarks.....	29
Annex 1: Agenda	30



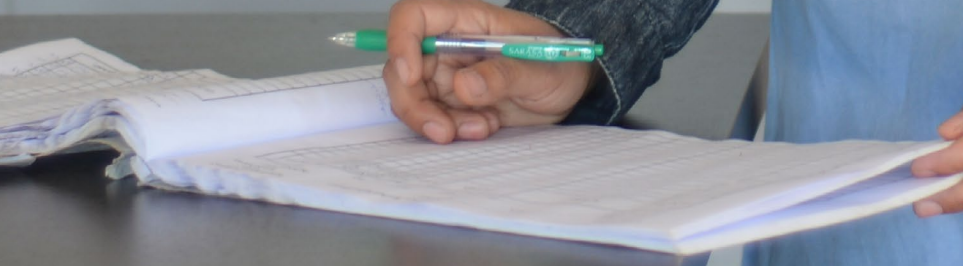
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من 5/22 لغاية 2/2022م

COVID-19



تخصين كل طفل من مرض شلل الأطفال



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Acronyms and abbreviations

AFRO	WHO Regional Office for Africa	IVB	WHO Department of Immunization, Vaccines, and Biologicals
CDC	Centers for Disease Control and Prevention	JSI	John Snow, Inc
CDS	COVID-19 Delivery Support	MOH	Ministry of Health
CoVDP	COVID-19 Vaccine Delivery Partnership	NIP	National Immunization Program
COVID-19	Coronavirus disease 2019	PAHO	Pan American Health Organization (WHO Regional Office for the Americas)
DDI	WHO Division of Data, Analytics, and Delivery for Impact	PHC	Primary healthcare
DHI	WHO Department of Digital Health and Innovation	RHIS	Routine health immunization systems
EIR	Electronic immunization registry	ROSA	UNICEF Regional Office for South Asia
eJRF	Electronic Joint Reporting Form	SAGE	Strategic Advisory Group of Experts on Immunization
EMRO	WHO Regional Office for the Eastern Mediterranean	SMART	Specific, Measurable, Achievable, Relevant and Timebound
EURO	WHO Regional Office for Europe	UiO	University of Oslo
Gavi	Gavi, the Vaccine Alliance	UNICEF	United Nations Children's Fund
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)	USAID	United States Agency for International Development
HISP	Health Information Systems Program	WHO	World Health Organization
HQ	Headquarters	WPRO	WHO Regional Office for the Western Pacific
IC	Immunization community		

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Executive summary

The COVID-19 vaccine rollout has required unprecedented levels of in depth and near real-time implementation data to support programmatic decision-making. Governments, international agencies, and other partners have made every effort to make sure these needs have been met. As the pandemic and vaccine rollout have evolved, however, data needs have shifted. Now, as countries move to routinize COVID-19 vaccines and as many end states of emergency for COVID-19, monitoring activities will need to merge with existing practices, while exploring opportunities to enhance of such practices where feasible. This will necessitate adjusting the breadth, depth, and frequency of monitoring.

Given this changing landscape and the need for alignment on the way forward, representatives from WHO and UNICEF, both at headquarters and regional levels, Gavi, US CDC, Africa CDC, European CDC, USAID, GIZ, World Bank, JSZI, HISP, and select Member States came together in Geneva, Switzerland from 13-15 March 2023 with the objectives to:

1. Take stock of the latest a) COVID-19 vaccination policies and strategies and their implications for COVID-19 vaccination monitoring and b) COVID-19 vaccination-related investments in immunization monitoring and health management information systems
2. Align on global-level COVID-19 vaccination monitoring minimum and optional data, key indicators, frequency & mechanisms of reporting, and related monitoring system strengthening efforts for 2023 and beyond
3. Plan for a) regional- & global-level evolution in monitoring systems and reporting flows and b) how to support country-level integration of COVID-19 vaccination monitoring and related system strengthening activities into existing systems & processes (with enhancements, where feasible)
4. Catalogue COVID-19 vaccination-related practices with regards to monitoring and related system strengthening that could be generalizable to routine and other immunization systems

The meeting was a pivotal moment in the COVID-19 vaccination monitoring and systems strengthening space, as an important opportunity to bring together different stakeholders and experts to conduct a comprehensive stock take and jointly plan a way forward. Coming out of the meeting, the participants made a series of recommendations for country-, regional-, and global-level actors to establish and advance key monitoring and systems strengthening priorities on the way to COVID-19 vaccine integration. The participants agreed to action the recommendations made by establishing several task-specific, time-limited working groups working on a time-horizon of end of Q3 2023.

The meeting was chaired by Donald Brooks (COVID-19 Vaccination Data Lead, Department of Immunization, Vaccines and Biologicals (IVB), WHO HQ) and Laura Craw (COVAX Data, Monitoring and Insights Lead, Office of the COVAX Facility, Gavi, the Vaccine Alliance).



Outcome statement

The participants of the Global Convening on COVID-19 Vaccination Monitoring and Related Systems Strengthening,

- Recognizing Member States are beginning to make considerable COVID-19 vaccine scheduling policy changes, notably integrating time-based booster recommendations for select groups, as recommended in the latest WHO SAGE Roadmap on COVID-19 vaccine use¹
- Appreciating that as more Member States reach higher primary series coverage levels, demand for COVID-19 vaccines will continue to decrease, and as a result, changes in reported uptake & coverage estimates will be slower and in smaller increments
- Acknowledging many Member States are ending states of emergency for COVID-19^{2,3,4}, and as a result, fewer human and financial resources for COVID-19-related activities, including vaccination monitoring, will be available – resulting in reduced capacity to collect data and monitor frequently across a wide set of indicators
- Taking into consideration that Member States are integrating COVID-19 vaccines into NIPs and PHC services, moving away from vertical COVID-19 vaccine programs

Recommend,

On COVID-19 vaccination monitoring approaches:

1. Member States and the global IC should transition to an “influenza-like” model for monitoring uptake of COVID-19 vaccines, meaning primarily monitoring doses administered / individuals vaccinated across disaggregated groups in the past x amount of time, unless a strong programmatic and policy use case articulates the need to continue tracking primary series status
2. Member States should prioritize collecting and monitoring COVID-19 vaccine uptake data across disaggregated groups for which they are able act programmatically; the IC should recognize that all uptake disaggregations will not be available at the national level in all countries
 - Ex. if a Member State has a strong maternal health platform, measuring COVID-19 vaccine uptake in pregnant women could be an appropriate use of

limited resources given the Member State can act via this platform to address monitoring findings

3. The IC should conduct additional trade-off analyses to assess the pros and cons of fully product-disaggregated uptake monitoring (as is currently suggested) against aggregate only monitoring

On the global-level COVID-19

vaccination monitoring minimum dataset:

4. From 2024, the IC should transition to measuring uptake of COVID-19 vaccines across select disaggregated groups during that year, moving away from measuring cumulative uptake since COVID-19 vaccine introduction, as has been the case until now
5. The IC should proceed transition as soon as possible to a more modest reporting frequency for all indicators, including uptake, shifting towards quarterly reporting from weekly & monthly
6. The IC should continue to use uptake of COVID-19 vaccines in certain priority groups (specifically health care workers and older adults) as proxy measures for Member State capacity to target priority groups more generally
7. The IC should continue to track many of the existing policy, service delivery, and systems metrics currently included in the global minimum dataset (see Annex 1) and should supplement them in case of additional needs
8. The IC should have further discussions on global stock & wastage monitoring, in particular, to understand data needs and data already collected via UNICEF’s Thrive 360 platform prior to any metric inclusion in the global minimum dataset
 - Recognizing that UNICEF and Gavi may have specific use cases to be explored in a subset of countries on this topic

On global COVID-19 vaccination monitoring processes:

9. The IC should continue to collect monthly COVID-19 vaccination data at least until 30 June 2023
10. The IC must organize follow-up discussions on the remaining use cases for monthly COVID-19 vaccination data after 30 June 2023; this discussion should happen in concert with on-going discussions related to the quarterly collection of month-disaggregated routine immunization data

1 WHO SAGE roadmap on uses of COVID-19 vaccines in the context ofOMICRON and substantial population immunity, WHO, link

2 COVID-19 Public Health Emergency (PHE), United States Department of Health and Human Services, link

3 Japan to downgrade COVID classification as it seeks to ‘live with the virus’, The Japan Times, link

4 France end Covid state of emergency, dissolves scientific council, RFI, link

11. The IC must prepare to integrate at least some COVID-19 vaccination indicators into the next annual WHO-UNICEF Joint Reporting Form exercise, which has a deadline for submission of 30 June 2023

On monitoring COVID-19 vaccine integration:

12. Global-level monitoring of COVID-19 vaccine integration may be needed as a short-term, once- or twice-off exercise; programmatic experts of the IC should prepare a clear global-level use case for integration monitoring prior to monitoring exercise setup
13. If it is determined that such a monitoring exercise has a clear global-level use case, the exercise should proceed with a limited dataset to reduce reporting burden

On COVID-19 vaccination monitoring generally:

14. The IC should develop guidance documents and tools to address specific requests from Member States and partners on strengthening estimations of target population sizes (denominators)
15. WHO should proceed with an update of the “Monitoring COVID-19 Vaccination: Considerations for the collection and use of vaccination data” document given the significant changes in the COVID-19 vaccine rollout since its publication
16. The IC should hold a series of follow-up discussion on questions relating to data governance and data sharing for COVID-19 vaccination data, notably of non-eJRF collected data
17. The IC should engage in additional conversation on possible levers to use in case of political-based non-reporting on key vaccination metrics in concert with other non-immunization monitoring colleagues
18. The IC should update standard modules of DHIS2 and other HMIS systems to fully align with the above Member State-level monitoring recommendations

On financing for immunization monitoring systems:

19. The global IC should update analyses of funding requests from Member States for monitoring & evaluation and data support with more recent applications (beyond 2022), including from new funders where possible (USAID, GIZ, others)
 - Further, this analysis update should aim to understand how financing was used in practice via deep dives to understand actual use of funds
20. The IC should re-iterate with Member States that the reprogramming of requested COVID-19 vaccine-related financing is feasible; the IC should engage in additional advocacy to Ministries of Health regarding the importance of investment in data systems

On addressing key COVID-19 vaccination indicator reporting gaps:

21. The IC should quickly organize a two-level concertation between global & regional actors to plan a process for assessing root causes of non-reporting of key COVID-19 vaccination indicators, specifically 1) uptake of booster doses and on uptake in 2) healthcare workers and 3) older adults
 - Noting that WHO EMRO expressed interest in receiving possible support for planning such an approach
22. WHO AFRO should revisit Member State COVID-19 vaccination data improvement plans developed during data support missions, which generally were developed in the context of vertical COVID-19 vaccination-specific monitoring systems, to take into consideration moves towards various forms of integration

On immunization monitoring

system transitions and priority investments:

23. There is not an urgent need to promote Member State system transition to EIRs for COVID-19 vaccination to meet core Member State-, regional-, or global-level monitoring needs. This does not detract from the recognition that EIRs do offer beneficial functionalities beyond those of aggregate systems
24. To support Member States opting to incorporate COVID-19 vaccination monitoring into an existing RHIS, the IC should aim to keep reporting requirements to the minimum dataset required at the most infrequent frequency required
25. To support Member States with COVID-19 vaccine-specific EIRs:
 - The IC should adapt the existing EIR transition readiness tool, DQS+, and SMART guidelines to aid Member States and partners in assessing the success of COVID-19 vaccine EIRs, recognizing that what worked in the context of COVID may not be what would work during peacetime (notably with regards to questions of sustainability)
 - The IC should finalize and publish the EIR transition readiness tool to help Member States assess their readiness to transition from an aggregate monitoring system to an EIR, including those exploring pathways to scale up & expand a COVID-19 vaccine-specific EIR
 - The EIR readiness assessment tool should include both a national level management tool and a subnational / health facility level readiness checklist
 - The IC should develop and publish a “roadmap” of the process for a Member State to transition from an aggregate monitoring system to an EIR, looking to positive country experiences to inspire the “idealized”

path, recognizing all country contexts are different; in the context of this:

- The IC should develop a modeled, hypothetical example of the financing, time, people, skills would be needed for a Member State moving from an aggregate monitoring system to an EIR
- The IC should explore use cases beyond a QR-coded vaccination certificate as a motivating factor for adhering to an EIR transition for routine immunization
- The IC should organize a coming together of donors to address the reality that investment in EIR transition will involve mainly HR and material costs, which are typically not preferred investment areas

And, agree to,

- Stand up three time-limited interagency working groups on:
 - COVID-19 vaccination uptake monitoring, working on a 30 June 2023 timeline, specifically to finalize:
 - Country-level COVID-19 vaccination monitoring approach recommendations in light of SAGE decisions and updated SAGE roadmap
 - Minimum global COVID-19 vaccination dataset, in light of the above and SAGE decisions and updated SAGE roadmap
 - Design integration of COVID-19 vaccination metrics into the annual JRF exercise
 - COVID-19 vaccine stock & wastage, working on a 30 June 2023 timeline, to discuss open questions pertaining to stock and wastage monitoring needs
 - Immunization monitoring systems, working on a 15 September 2023 timeline, to carry forward key actions related to short-term guidance and support document needs and to continue the dialogue on integration more broadly



Background

The Coronavirus disease 2019 (COVID-19) vaccine rollout has required unprecedented levels of in depth and near real-time implementation data to support programmatic decision-making. Governments, international agencies, and other partners involved in the rollout at all levels have had to rapidly develop both a) monitoring frameworks and b) data systems and infrastructure for COVID-19 vaccination, whether by building on existing resources or by developing new ones. Due to the epidemiology of COVID-19 infection, this has meant monitoring vaccine uptake in new population groups and reporting key data at increased frequencies, as compared with typical practices under routine immunization.

As a result of continued evolution in the pandemic situation, COVID-19 vaccine implementation monitoring needs have shifted. Key data required in preparing for vaccine introduction are no longer needed on a regular basis. At the same time, other data have become more important, such as those related to measuring vaccination in high priority groups and booster dose rollout. Still, new data may be required, in particular as countries integrate time-based booster recommendations for select groups. As the vaccine rollout has progressed, both monitoring frameworks and data system strengthening efforts have continued to evolve organically and, at times, independently across engaged parties to meet these changing monitoring needs.

Now, the vaccine rollout is entering a new stage, integration, which will have significant consequences both for how COVID-19 vaccination is monitored and for how monitoring systems are structured. As engaged parties begin the shift to sustainable COVID-19 vaccination as an integral part

of national immunization programs (NIPs), primary health care (PHC), and other relevant health services, monitoring activities, too, will need to merge with existing practices, while exploring enhancement of such practices where feasible. This will mean reviewing and, in some cases, restructuring both immunization monitoring frameworks and data systems, building on lessons learned and best practices from the COVID-19 vaccine rollout to date.

Further, as the pandemic continues to evolve, many countries are also now ending states of emergency for COVID-19^{5,6,7}. This means that fewer human and financial resources for COVID-19-related activities, including vaccination monitoring, will be available. This will result in reduced capacity to collect data across a wide set of indicators previously monitored, therefore the breadth, depth, and frequency of monitoring will have to be adjusted accordingly.

Given this changing landscape, it was essential that engaged parties meet in early 2023 to a) take stock of recent developments, b) align on the way forward on both COVID-19 vaccination monitoring and related system strengthening, and c) plan phase-over to and enhancement of existing processes. To accomplish this, the World Health Organization (WHO), alongside its key partners Gavi, the Vaccine Alliance (Gavi), the United Nations Children's Fund (UNICEF), and the COVID-19 Vaccine Delivery Partnership (CoVDP), organized the Global Convening on COVID-19 Vaccination Monitoring and Related System Strengthening from 13-15 March 2023 at WHO Headquarters.

5 COVID-19 Public Health Emergency (PHE), United States Department of Health and Human Services, [link](#)

6 Japan to downgrade COVID classification as it seeks to 'live with the virus', The Japan Times, [link](#)

7 France ends Covid state of emergency, dissolves scientific council, RFI, [link](#)

Overview: Day 1

Welcome and opening remarks

Dr. Katherine O'Brien (Director of Immunization, Vaccines, and Biologicals (IVB), WHO Headquarters (HQ)),

Benjamin Schreiber (Senior Health Advisor, UNICEF HQ & CoVDP)

The convening began with remarks from Dr. Katherine O'Brien, who framed the upcoming discussions. She highlighted that throughout the COVID-19 pandemic the Immunization Community (IC) has had greater access to timely data than any prior vaccine rollout. As the pandemic has evolved, it is now important to recognize that the data needs have shifted and that ongoing monitoring must be in service of in-country operational use cases. Benjamin Schreiber also noted the importance of emphasizing human-centric designs while assessing and addressing future data needs, particularly as the IC begins to think about integrating COVID-19 vaccination-related data systems and maintaining the investments that have been made in this space. Both speakers stressed the need to take forward the lessons learned into routine immunization and beyond.

Session 1: COVID-19 vaccination monitoring in 2023 and beyond

Donald Brooks (COVID-19 Vaccination Data Lead, IVB, WHO HQ & CoVDP)

Donald Brooks provided an overview of the historical evolution and present state of COVID-19 vaccination monitoring, covering monitoring approaches, technical guidance document development, and the global minimum monitoring dataset. This highlighted that the COVID-19 vaccine rollout has presented unique data needs and subsequent demands on immunization monitoring systems. As such, institutions at all levels have needed to rapidly develop monitoring frameworks and systems for COVID-19 vaccination monitoring. Recognizing the incredible accomplishments made in monitoring efforts since the rollout began, particularly at country level, he highlighted that gaps remain. Further, he stressed that the IC must anticipate that upcoming policy changes and ecosystems changes will impact monitoring efforts, including the standing down of states of emergency for COVID-19. He outlined the questions to be answered by participants over the course of the convening.



Session 2: COVID-19 vaccine program objectives in 2023 and foreseen monitoring needs

Panel discussion:

Dr. Ann Lindstrand (Unit Head, Essential Programme on Immunization, IVB, WHO HQ & CoVDP),

Benjamin Schreiber (UNICEF HQ & CoVDP),

Quentin Guillon (Head – Strategy, Gavi, the Vaccine Alliance)

Moderator:

Laura Crow (COVAX Data, Monitoring and Insights Lead, Gavi)

This panel discussion across Alliance partners provided an overview of organizational priorities with regards to the COVID-19 vaccination program and COVAX for 2023 and looking forward to 2024.

Key highlights:

- Monitoring of boosting in priority population groups will be paramount moving forward
- Discussions on monitoring needs should be human-centric, considering the work burden of inputting data on frontline vaccinators.
- Available COVID-19 vaccine-specific financing is going to decrease going forward; therefore, generating guidance regarding priority investments to be made from a systems perspective is particularly timely.
- Questions regarding data quality, governance, and sharing will be important learnings from COVID-19 and areas for improvement.



Session 3: Monitoring COVID-19 vaccination in the face of evolving policy & strategy recommendations

Tania Cernuschi (Unit Head, Agenda, Policy, and Strategy, IVB, WHO HQ)

Tania Cernuschi presented an overview of current COVID-19 vaccination policy recommendations and the WHO “Global COVID-19 Vaccination Strategy in a Changing World: July 2022 update”⁸. Additionally, she briefed participants on ongoing & upcoming SAGE discussions related to COVID-19 vaccination⁹, including possible scheduling changes for priority population groups. Participants then broke out into three working groups to discuss possible COVID-19 vaccination policy scenarios and their potential implications on monitoring approaches.

Working group 1: COVID-19 vaccine scheduling and boosting

Facilitator: Laura Craw (Gavi)

Key highlights:

- The group provided a strong steer to look towards an influenza-like model of monitoring, where monitoring focuses on annual uptake of COVID-19 vaccination across disaggregated population groups, unless a strong policy and programmatic use case is articulated on the necessity to continue tracking priming and boosting statuses as distinct.

Working group 2: Monitoring of priority population groups

Facilitator: Donald Brooks (WHO HQ & CoVDP)

Key highlights:

- The group made a strong call to ensure countries are only collecting data if they are able to act programmatically using the data collected.
- The group recommended that adopting a global-level monitoring approach using uptake across select priority population groups as proxies for the extent to which countries are prioritizing and reaching target groups in general would be more feasible than global-level monitoring of uptake across all target groups given complexities.
- The group recognized the call for clearer guidance to countries on best practices in estimating denominators.

Working group 3: Vaccine product monitoring

Facilitator: Ashley Germann (COVAX Data Analyst, Gavi)

Key highlights:

- The group acknowledged that this is a challenging topic on which to arrive at alignment. The group suggested discussing the merits and need for further trade-off analyses between scenarios to continue asking countries for product-specific reporting versus no longer requesting product-specific uptake data
- Additionally, there was a clear view that further discussions with colleagues who work closely with stock, product and wastage is necessary to continue these discussions.

⁸ Global COVID-19 Vaccination Strategy in a Changing World: July 2022 update, link

⁹ WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines, link

Session 4: Reassessing the minimum core and optional dataset for regional and global monitoring

Donald Brooks (WHO HQ & CoVDP)

Donald Brooks began the session with an overview of the development and evolution of the global-level minimum dataset for COVID-19 vaccination monitoring. Following this overview, the group split into three working groups to discuss the design of the global-level minimum core and optional dataset for COVID-19 vaccination and monitoring in 2023 and 2024, covering the following thematic areas: 1) uptake/coverage; 2) stock and wastage; 3) policy, service delivery, and safety.

Working group 1: COVID-19 uptake and coverage

Facilitator: Marta Gacic-Dobo (Team Lead – Global Monitoring, IVB, WHO HQ)

Key highlights:

- In this new phase of the pandemic, the group concluded there is a need to evaluate how to be more purposeful with regards to what data are needed and at which reporting frequency (i.e., shifting to quarterly and away from monthly / weekly)
- The group highlighted that there is a need to further discuss the role of surveys going forward, and how they may be able to inform monitoring coverage equity.
- This group also suggested that the IC needs to weigh the necessity of reporting across all priority groups, in addition to highlighting the need for further guidance on estimating target groups size.

Working group 2: Stock and wastage

Facilitator: Laura Craw (Gavi)

Key highlights:

- As stock and wastage monitoring is challenging for countries, the group recognized that there are likely systems investments that may need to be made to strengthen stock monitoring and reporting capacities.
- Additional discussions with UNICEF colleagues are needed in order to have a greater understanding of Thrive360 and how it could be utilized for COVID-19 vaccine monitoring.
- The group acknowledged that Gavi and UNICEF may have specific use-cases for this data, while the global use-case may not be clearly defined.

Working group 3: Policy, service delivery and safety

Facilitator: Donald Brooks (WHO HQ & CoVDP)

Key highlights:

- This group reviewed the current eJRF module content and made recommendations regarding the ongoing relevance of questions included. In particular, the following recommendations were highlighted:
 - Collapse questions regarding targets groups into a single, multiple-choice question
 - Need to ask countries to clarify the age range of reporting groups
 - Continue asking for booster dose uptake across all target groups
 - Include a policy question regarding the dose schedule for J&J uptake
 - Add a question regarding which vaccine delivery strategy is being used (outreach/fixed/campaign)
 - Ask countries if there is a country-level safety monitoring committee in place

Session 5: Monitoring integration of COVID-19 vaccination into national immunization programs

Dr. Ann Lindstrand (WHO HQ & CoVDP)

Dr. Ann Lindstrand provided an overview presentation on current integration guidance. COVID-19 is continuously evolving, and although there is currently a reduction in reported cases and deaths, it is reasonable to expect that spikes may occur in the future. Countries have started to think about integration, and WHO & UNICEF have compiled detailed, four-step guidelines for countries COVID-19 vaccine integration¹⁰. On the implementation and monitoring step (step 3) of the guidelines, there is a need to define the indicators for monitoring integration progress. This overview was then followed by a panel discussion on monitoring integration approaches.

Panel discussion:

Souleymane Kone (Team Lead – Vaccine Supply Chain and Logistics, IVB, WHO HQ),

Jan Grevendonk (Technical Officer – Immunization Information Systems, IVB, WHO HQ),

Hilary Adams (Senior Health Advisor, UNICEF ROSA)

Moderator:

Diana Chang-Blanc (Team Lead – Programme Strengthening, IVB, WHO HQ)

This panel discussed integration approaches by thematic area, aiming to suggest possible indicators to monitor integration efforts. These thematic areas included: 1) Policy and Strategy; 2) Stock management/LMIS; 3) Data collection tools and systems; and 4) Service delivery.

Key highlights:

- Recognizing that there is already an existing workforce strain, including information tools and reporting, panelists cautioned against development of a long list of additional indicators to monitor integration without a clear use case.
- Developing indicators to monitor integration is inherently difficult, as there is not necessarily a defined endpoint to integration - integration is a process and looks different in every setting.
- In order to define and monitor integration, it is necessary to clarify into which systems integration is happening.
- In light of this, the steer from the session was ultimately to remain cautious – the global-level monitoring of COVID-19 vaccine integration may be needed as a short-term, once - or twice-off exercise but should not proceed without a clear use case.

¹⁰ Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond, WHO, link

Overview: Day 2

Session 1: Financing made available for and investments made to immunization monitoring / data system strengthening

Benjamin Schreiber (UNICEF HQ & CoVDP),

Dr. Mukesh Chawla (Chief Advisor, Health Security, World Bank),

Laura Crow (Gavi)

The objective of this session was to take stock of the financing made available to immunization monitoring/data system strengthening under COVID-19-related mechanisms. Benjamin Schreiber began by highlighting that at the outset of the pandemic, COVID-19 vaccine delivery funding came relatively late. Now, there is a lot of delivery funding available, including Gavi COVID-19 Delivery Support (CDS) funding, that has not yet been utilized at country-level. This is an opportunity to support countries in reprogramming this funding to help strengthen the health system overall. Dr. Mukesh Chawla highlighted financing support available from the World Bank and emphasized that given most countries have not used all, and some not even significant portions, of funding allocated, that they are very much open to countries restructuring their planned programs. Speaking to Gavi's experience, Laura Crow highlighted that data system strengthening efforts pre-date the pandemic and helped provide key foundations for certain COVID-19 vaccination efforts (such as DHIS2). She indicated, with examples from different countries, that data-related strengthening and needs have to-date been an important component of approved grants under CDS funding windows.

Key highlights:

- Investments need to be focused on building up data systems supplemented by financing on building up the people aspects of systems, leadership, management, and capacities
- Reminder for countries to look into implementing digital transitions, WHO has guidance and readiness assessment tools to support planning.

Session 2: Review of COVID-19 country proposal process, and discussion on research priorities to improve future processes

Philippe Veltsos (Technical Director – Digital Health, PATH)

The objective of this session was to present highlights of an analysis of COVID-19 country investments in digital health and health information systems. This session included a presentation and analysis undertaken by PATH across 311 country COVID-19 vaccine-related funding proposals for World Bank, Gavi, Global Fund, and UNICEF funding. This presentation was followed by a panel discussion.

Panel discussion:

Philippe Veltsos (PATH),
Rob Rosenbaum (Senior Technical Advisor, USAID),
Dr. Tessa Lennemann (GIZ)

Moderator:

Sean Blaschke (Senior Health Specialist, UNICEF HQ)

Key highlights:

- The analysis provided interesting insights, including that 272 of the total 311 of the applications reviewed included digital aspects, a majority of which were related to immunization monitoring systems.
- The panel discussion highlighted that improving coordination will require sustained resources, including on the “system side rather than the symptom side.” Ideally, coordination is strengthened at country level, reducing the need for upstream interventions. Furthermore, a call for greater information sharing and transparency across what is being funded towards greater coordination and reduction of duplicative investments was made.
- There is a need for more cost-effectiveness studies that demonstrate the value of investing in digital health and information systems rather than just focusing on the costs
- Bringing forward some of the good practices during the pandemic, including greater coordination efforts across donors at global level was encouraged – to benefit broader scopes of systems-related investments beyond COVID-19.

Session 3: Assessing & addressing root causes of reporting gaps on key COVID-19 vaccination metrics

Donald Brooks (WHO HQ & CoVDP)

The objectives of this session were to provide an overview of current reporting gaps in key COVID-19 vaccination metrics, as well as provide an overview of an approach taken to identify and address root causes for reporting gaps by WHO AFRO. Donald Brooks summarized analyses pointing to existing gaps in COVID-19 uptake reporting in priority groups, in addition to ongoing challenges related to timeliness of reporting. Despite improvements in reporting seen over time, these gaps persist, and it is important to understand the reasons preventing this reporting.

Dr. Frank Mboussou (COVID-19 Vaccination Data & Monitoring Lead, WHO AFRO)

Dr. Franck Mboussou presented the approach WHO AFRO took to assess COVID-19 vaccination data system gaps and provide support to address these identified gaps across the region. This approach included a rapid assessment of existing data systems for COVID-19 vaccination, which revealed that most countries had set up parallel data systems for monitoring vaccine uptake, and that digital systems were often deployed without a feasibility analysis. They are now aiding the countries with identified reporting gaps via the development of operational plans, which includes the provision of funds, for strengthening COVID-19 vaccination data management. Additionally, they are working with the countries to adjust population size estimates for high priority groups. Questions following this presentation focused on funding flows and the reprogramming of available funds, the need to work on strengthening denominator estimates, clarify target group definitions, and considerations for the use of surveys in addition to administrative data to help fill the gaps in metrics.



Session 4: Exploring need for aggregate or individual reporting systems based on updated COVID-19 vaccination monitoring needs

Jan Grevendonk (WHO HQ),

Dr. Maria Paz Bertoglia (Head of Immunization Program, Ministry of Health, Chile)

Jan Grevendonk gave an overview presentation on aggregate reporting systems and electronic immunization registries (EIRs). He described both the potential advantages of using an EIR and the need to plan well and consider readiness along critical dimensions.

Dr. Maria Bertoglia gave a presentation on the development of the EIR in Chile – a system which existed prior to COVID-19 and successfully integrated COVID-19 vaccination monitoring. It was again used for the registration of mpox vaccines. The strong & clear legal framework and the existence of unique IDs were highlighted as critical success factors. This presentation was followed by a panel discussion that explored the systems used in countries, and their experiences.

Panel discussion:

Nassor Mohamed (Senior Technical Officer, John Snow, Inc. JSI),

Dr. Prosper Behumbiize (Program Manager, HISP-Uganda),

Jerry Aziawa (Director of Implementation, HISP West & Central Africa),

Ezinne Onwuekwe (Vaccine Program Coordinator, Africa Centres for Disease Control and Prevention)

Moderator:

Remy Mwamba (UNICEF HQ)

Key highlights:

- Some countries utilized existing systems, often aggregate, but also implemented one or more individual tracker (EIR) systems for COVID-19 vaccination.
- Others started with a tracker approach and switched to an aggregate system when the workload became overwhelming. In these circumstances, the tracker was often parallel to the existing aggregate system.
- Tracker-based systems were often favored because of the need to issue COVID-19 vaccination certificates (e.g.: to support international travel or other regulations), while aggregate reporting was sometimes neglected.
- Most countries were left dealing with multiple overlapping systems, and there is a definite need to think about integration and alignment.
- Coordination was often lacking across partners, particularly seen in the regional context, informal and formal structures.

Session 5: Future of COVID-19 vaccination monitoring systems

Participants split into three working groups to discuss different COVID-19 vaccination monitoring system integration scenarios that are taking place at country-level.

Working group 1: Focus on countries that plan to integrate COVID-19 monitoring into aggregated RHIS

Facilitator: Anh Chu (Technical Officer, Division of Data, Analytics, and Delivery for Impact (DDI), WHO HQ)

Key highlights:

- Routine health information systems (RHIS) systems are already challenged by data quality issues and insufficient human resource capacity. Integration should account for this and rationalize frequency and levels of disaggregation required, given each additional disaggregation increases complexity.
- COVID-19 vaccination has different populations and denominator needs; these should be addressed in more of a bottom-up approach, e.g., the health care worker denominator should be aligned with the national definition.
- Integration with a national system allows for better agreement on data collected (denominators, etc.), which will lead to more efficient use of the data. Most believe that there will be a decrease in reporting frequency to align with existing reporting systems, so there is a need to consider how to manage patient IDs, shifting timing and frequency to routine service delivery.
- There is need for a country-driven strategy towards integration with the support provided in the form of operational guidelines.

Working group 2: Focus on countries that implemented a COVID-19 specific EIR and plan to expand it to cover other parts of the existing RHIS

Facilitator: Jan Grevendonk (WHO HQ), Dr. Carolina Danovaro (Scientist, IVB, WHO HQ)

Key highlights:

- Need to assess completeness and quality of data in COVID-19 vaccination trackers before considering if these systems ready for scale up. EIRs are a longer-term investment, requiring long-term plans and a costed roadmap (one year funding will not be sufficient)

- Readiness is as important as the potential benefits of EIRs. This includes infrastructure aspects, but also governance and legal considerations, and the existence of enabling factors, like a unique national identification number.
- Any registries should also be easily adaptable and could serve useful for the next pandemic.

Working group 3: Leveraging other COVID-19 innovations, including digital interventions and practices deployed during the pandemic

Facilitator: Sean Blaschke (UNICEF HQ), Dr. Carl Leitner (Technical Officer – Country-focused Digital Solutions, Department of Digital Health and Innovation (DHI), WHO HQ)

Key highlights:

- No one-size-fits-all solution exists across countries as it depends on country-specific priorities and context. No single system is “bad” or unsuccessful, as the context/setting is important, and the maturity of the country and its readiness assessment will determine what would hold promise for digital innovations
- SMART guidelines can facilitate standardized scale up of promising innovation (for example: certificates, EIR).
- Need for implementation research in order to gain more evidence around which innovations work is which settings under which contexts.
- Funds and technical assistance will be needed to scale innovations, but countries are in the driver’s seat. Donors or international agencies can invest in health information system building blocks, but only countries can ensure appropriate staffing, governance, and strategies.

Session 6: Priority investments in immunization monitoring systems, incl. COVID-19 systems, over the next 2 years

Anh Chu (WHO HQ),

Rebecca Potter (Technical Lead – Global Health Content, HISP Centre at the University of Oslo (UiO))

This session built on two scenarios from the previous session: 1) countries with COVID-19 vaccine-specific monitoring systems looking to merge COVID-19-related monitoring into RHIS and 2) countries with COVID-19 vaccine-specific registry looking to expand these systems to include additional vaccines. For each scenario, working groups were asked what actions need to be taken over the next 24 months to facilitate each “brand” of integration.

Working group 1: Countries planning to integrate COVID-19 monitoring into aggregated RHIS

Facilitator: Anh Chu (WHO HQ)

Key highlights:

- Within the next six months, countries should conduct a situation analysis of what is available & possible within the existing RHIS, what is in the COVID-19 vaccines-specific system (often an EIR) and identify what modifications are required to support the monitoring of COVID-19 vaccination implementation.
- Within the next 12 months, take stock of the current capacity of the workforce and begin to restructure and train staff accordingly. Additionally, countries should map and align common denominators and identify/add the population data required to support COVID-19 vaccination.
- Within the next 24 months, countries should aim to integrate the microplanning in RHIS and promote its use across all programs in the RHIS

Working group 2: Countries that implemented a COVID-19 vaccination-specific registry and plan to expand it to cover other parts of the existing health information system

Facilitator: Dr. Carolina Danovaro (WHO HQ)

Key highlights:

- Assess the fiscal landscape to ensure that countries can sustain these investments long-term
- Determine if there is adequate human resource capacity to manage these systems following transition of emergency COVID-19 specific roles, including the relevant skillset required to maintain the system.
- Assess the maturity of existing immunization monitoring system to determine what is available and what is lacking in some countries.
- At global level, identify the use-case for countries and the amount of funding and time that will be needed, which will inform the economic investment case.

Overview: Day 3

Session 1: Adjustments needed to COVID-19 vaccination monitoring in light of state of monitoring systems

Laura Crow (Gavi)

Laura Crow highlighted four key considerations with regards to the linkages between updated monitoring needs (as expressed on day 1) and the state of monitoring systems (as expressed on day 2). These points were as follows:

1. There is not a significant need for adjustments to existing systems in-country, as well as no urgent need to push for nominal level registries across countries, in order to meet current COVID-19 vaccination monitoring needs.
2. Further guidance to countries is required, in particular for systematically & routinely strengthening population denominator estimates. Financial support may be required in order to improve and systematize these estimates.
3. There is a need to engage further on the monitoring and minimum dataset needs for stock and wastage given current system capacities, including to identify what use cases exist for these data regional and global levels.
4. Decision-making support may be needed to help countries in navigating the reprogramming of their existing COVID-19 vaccination-related funds. This must also include reflection on how the immunization community better advocates with Ministries of Health to invest in foundational aspects of their systems (i.e.: not necessarily always “new” digital investments).



Session 2: Future of COVID-19 vaccination monitoring with existing immunization monitoring & reporting processes (i.e., regional, and global)

This panel of global and regional colleagues discussed plans for the way forward with regards to COVID-19 vaccination monitoring and its interplay with existing immunization monitoring processes.

Panel discussion:

Laure Dumolard (Technical Officer, IVB, WHO HQ),

Shoshanna Goldin (Technical Officer, Health Emergencies Program (WHE), WHO HQ),

Jordi Dorrell Pique (Expert – Vaccine Preventable Diseases, European Centre for Disease Prevention and Control (CDC)),

Glenda Gonzales (COVID-19 Vaccination Monitoring & Evaluation Lead, WHO WPRO),

Martha Velandia (Advisor – Immunization, WHO Pan American Health Organization (PAHO))

Moderator:

Marta Gacic-Dobo (WHO HQ)

Key highlights:

- Laure Dumolard presented an overview on current immunization reporting via the annual data collection process through the WHO-UNICEF electronic Joint Reporting Form (eJRF) and the nascent quarterly month-disaggregated coverage data collection.
 - Regarding monthly data collection, participants highlighted the challenges countries face in its timely collection, data quality and data governance. Additionally, there were questions posed as to the specific use-case for this data moving forward.
- Shoshana Goldin presented an overview of influenza vaccine coverage reporting, highlighting challenges unique to influenza that include: the lag in reporting due to seasonality, varying priority of program at the country/regional level, and issues with establishing the denominator.
- Glenda Gonzales presented an overview of COVID-19 vaccination monitoring in the Western Pacific Region, where the region now plans to shift from weekly to monthly and quarterly reporting. Additionally, as the region prepares for integration with routine immunization, they are also working to identify key indicators and conduct trainings for data managers who will be submitting both COVID-19 and routine data.
- Jordi Borrell Pique presented an overview of COVID-19 vaccination monitoring across European Union / European Region Member States, where they conducted a survey at the end of 2022 to assess the ongoing COVID-19 vaccination monitoring to support revision and optimization of monitoring in the region. As a result of this survey, EURO plans to shift to quarterly reporting and identified some countries that plan to integrate COVID-19-related monitoring into broader systems. Where countries currently have non-routine reporting system in place for COVID-19 monitoring, some countries responded that they plan to integrate this system with seasonal influenza only.
- Dr. Martha Velandia presented an overview of COVID-19 vaccination monitoring in the Americas Region where a combination of weekly reporting and monthly reporting through the eJRF are utilized to enable regional monitoring. For 2023, the region plans to continue with monthly eJRF reporting, as well as with their weekly monitoring, however, the region will no longer publish the weekly data and move towards reporting bi-weekly and monthly publication as the pandemic evolves.

Session 3: Convening outcomes & next steps

Donald Brooks (WHO HQ & CoVDP)

Donald Brooks synthesized the key outcomes and next steps coming out of the three-day meeting (refer to “OUTCOME STATEMENT” included below).

Closing remarks

Dr. Derrick Sim (Acting Managing Director, Office of the COVAX Facility, Gavi)

Derrick Sim closed the meeting by reminding us of the many uncertainties created by the COVID-19 pandemic and essentiality of data in addressing these. Generating near real-time data to enable decision making and progress monitoring was a monumental achievement. Additionally, the level of collaboration and data sharing that occurred highlighted the importance of system compatibility and that we should not let this momentum slip. Going forward, it is now also imperative to engage in trade-off conversations regarding the minimum dataset and identify what data is needed to inform decision making as the pandemic continues to evolve. And we need to continue to challenge ourselves to ensure our investments are helping build towards more resilient systems for the future, that can serve both routine immunization and future pandemic needs.

Marta Gacic-Dobo (WHO HQ)

Marta Gacic-Dobo closed the convening by thanking all of those who attended both in-person and virtually, as well as a special thanks to the steering committee, administrative support, and the meeting co-chairs. Marta also noted that the formal meeting report and action points will be circulated to the participants in the coming weeks.

Annex 1: Agenda

1.0 Day 1

Day 1 of the convening will focus on how COVID-19 vaccination is monitored.

Session title	Format	Speaker	Time (CET)
Arrival & coffee			08h30-09h00
Welcome & opening remarks	Plenary	O'BRIEN, Kate; SCHREIBER, Benjamin	09h00-09h30
COVID-19 vaccination monitoring in 2023 and beyond	Plenary	BROOKS, Donald	09h30-10h00
<ul style="list-style-type: none"> Overview presentation of where we are and where we are coming from on COVID-19 vaccination monitoring, including a presentation of the convening's objectives 			
COVID-19 vaccine program objectives in 2023/2024 and foreseen monitoring needs	Panel & discussion	LINDSTRAND, Ann; SCHREIBER, Benjamin; GUILLON, Quentin	10h00-11h00
<ul style="list-style-type: none"> Panel discussion on organizational priorities with regards to the COVID-19 vaccine program for 2023 and looking forward to 2024 		Moderator: CRAW, Laura	
Coffee			11h00-11h15
Monitoring COVID-19 vaccination in the face of evolving policy & strategy recommendations			11h15-12h45
<ul style="list-style-type: none"> Overview presentation on current COVID-19 vaccination SAGE policy recommendations and WHO strategy, including questions to be discussed at March 2023 SAGE meeting Working group session on future COVID-19 vaccination monitoring needs & recommendations based on plausible policy / strategy scenarios <ul style="list-style-type: none"> Topic 1 – Boosting and priming scenarios Topic 2 – Priority population scenarios Topic 3 – Product disaggregated reporting Readout from working groups 	Plenary	CERNUSCHI, Tania	
	Working groups	Facilitators: Topic 1: CRAW, Laura Topic 2: BROOKS, Donald Topic 3: GERMANN, Ashley	
	Plenary		
Lunch			12h45-13h45
Reassessing the minimum core and optional dataset for regional and global monitoring			13h45-15h45
<ul style="list-style-type: none"> Overview presentation on development & evolution of the minimum dataset for COVID-19 vaccination monitoring Working group session to design the minimum core and optional data for COVID-19 vaccination monitoring in 2023 and 2024, covering the following thematic areas: 1) uptake/coverage; 2) policy, service delivery & safety, and 3) stock & wastage. <ul style="list-style-type: none"> Both indicators to be collected & their frequency are to be discussed, justifying each with a global- / regional-level use case Readout from working groups 	Plenary	BROOKS, Donald	
	Working groups	Facilitators: Topic 1: GACIC-DOBO, Marta Group 2: BROOKS, Donald Group 3: CRAW, Laura	
	Plenary		
Coffee			15h45-16h00

Monitoring integration of COVID-19 vaccination into national immunization programs			16h00-17h00
<ul style="list-style-type: none"> Overview presentation on current integration guidance and country examples Panel discussion on integration approaches (“best practices”, if available) by thematic area, linking with possible indicators to monitor such integration. Thematic areas to include: 1) Policy & strategy, 2) stock management/LMIS, 3) data collection tools & systems/HMIS, and 4) service delivery 	<p>Plenary</p> <p>Panel & discussion</p>	<p>LINDSTRAND, Ann</p> <p>KONE, Souleymane; GREVENDONK, Jan; ADAMS, Hilary Moderator: CHANG-BLANC, Diana</p>	

2.0 Day 2

Day 2 of the convening will focus on how immunization monitoring systems are being strengthening & supported to meet COVID-19 vaccination monitoring needs

Session title	Format	Speaker	Timing
Arrival & coffee			08h30-09h00
Readout from Day 1	Plenary	CRAW, Laura	09h00-09h15
Financing made available for and investments made to immunization monitoring / data system strengthening	Plenary	BLASCHKE, Sean; CHREIBER, Benjamin; CRAW, Laura	09h15-09h50
Review of COVID-19 country proposal process, and discussion on research priorities to improve future processes	Plenary	BLASCHKE, Sean; VELTSOS, Philippe; ROSENBAUM, Rob; LENNEMANN, Tessa	09h50-10h30
Coffee			10h30-10h45
Assessing & addressing root causes of reporting gaps on key COVID-19 vaccination metrics			10h45-11h30
<ul style="list-style-type: none"> Overview presentation on global reporting gaps on select COVID-19 vaccination metrics Presentation on WHO AFRO approach to and learnings from assessing COVID-19 data system gaps and providing support to address identified gaps <ul style="list-style-type: none"> Question for the audience: Is a similar approach useful in other regions? Is there value in standardizing the way forward on assessing remaining data gaps as related to COVID-19? 	<p>Plenary</p> <p>Plenary</p>	<p>BROOKS, Donald</p> <p>MBOUSSOU, Franck</p>	
Exploring need for aggregate or individual reporting systems based on updated COVID-19 vaccination monitoring needs			11h30-12h30
<ul style="list-style-type: none"> Overview presentation on aggregate/individual system characteristics, including considerations for traditional system “maturity” required for transition from aggregate to individual Panel discussion with country representatives to explore which choices were made for Covid 19 monitoring in their countries. <ul style="list-style-type: none"> Integrated, parallel, aggregate, or individual recording? What benefits and challenges were linked to the systems they put in place (data availability, frequency, timeliness, quality, data use, ...?). What are the plans for integration? 	<p>Plenary</p> <p>Panel & discussion</p>	<p>GREVENDONK, Jan</p> <p>Moderator: MWAMBA Remy MOHAMED Nassor; AZIAWA Jerry; BEHUMBIIZE Prosper; ONWUEKWE Ezinne; PAZ BERTOGLIA Maria</p>	
Lunch			12h30-13h30

Future of COVID-19 vaccination monitoring systems	Working groups	Facilitators: Group 1: CHU, Anh	13h30-14h45
<ul style="list-style-type: none"> • Group 1: Focus on countries that plan to integrate COVID-19 monitoring into aggregated Routine Health Information Systems. What are the challenges and opportunities? Considerations: <ul style="list-style-type: none"> • Different age / target group, denominators • What are the required disaggregations? Minimum versus ideal level of detail? • Will health staff be able to ascertain the status of the vaccinee for all these disaggregations? • Will this result in a loss of information available through COVID-19-specific systems? Will integration mean that detail is lost, or countries get less timely or frequent reporting? • Would COVID-19 be recorded on an integrated home-based record? If so, adult vaccines or also childhood? 			
<ul style="list-style-type: none"> • Group 2: Focus on countries that implemented a COVID-19-specific registry and plan to expand it to cover other parts of the existing health information system. What are the challenges and opportunities? Considerations: <ul style="list-style-type: none"> • Evaluation of how well the registry approach worked for COVID-19. Did these achieve timely and complete reporting? What were the challenges? Were registries able to produce more detailed information at the country level? Were they useful to help with defaulter tracking, continuity of care, issuance of certificates, or any other benefits? • What will be gained from this kind of “upgrade”? For COVID-19? For other vaccine programmes? Would this best focus on adult or also childhood vaccination? • What challenges can be foreseen to scale these registries up? • Review readiness assessment. What (kind of) countries would be ready to take this step? 		Group 2: GREVENDONK, Jan / DANOVARO, Carolina	
<ul style="list-style-type: none"> • Group 3: Leveraging other COVID-19 innovations, including digital interventions and practices deployed during the pandemic. <ul style="list-style-type: none"> • Vaccination certificates • Logistics management, including information systems • Real-time campaign monitoring 		Group 3: BLASCHKE, Sean; LEITNER, Carl	
Coffee			14h45-15h00
Readout from ‘Future of COVID-19 vaccination monitoring systems’ working groups	Plenary	Rapporteur from each Working Group	15h00-16h00
Priority investments in immunization monitoring systems, incl. COVID-19 systems, over the next 2 years			16h00-17h30
<ul style="list-style-type: none"> • Overview presentation • Working group session to discuss top priority investments for immunization monitoring system strengthening in LIC/LMICs over next 2 years, with the following considerations: <ul style="list-style-type: none"> • Relevance of adjusting COVID-19 vaccination data system investments to uptake levels • Prioritizing investments to shortest- (now to 6 months) and short-terms (6 months – 2 years) 	Plenary Working groups	CHU, Anh; POTTER, Rebecca Facilitators: CHU, Anh; BLASCHKE, Sean; POTTER, Rebecca DANOVARO, Carolina	

3.0 Day 3

Day 3 of the convening will focus on bridging Days 1 and 2, ensuring COVID-19 vaccination monitoring needs are matched with immunization monitoring system capacities.

Session title	Format	Speaker	Timing
Arrival & coffee			08h30-09h00
Readout from Day 2	Plenary	BLASCHKE, Sean / GREVENDONK, Jan / CHU, Anh	09h00-9h15
Adjustments needed to COVID-19 vaccination monitoring in light of state of monitoring systems	Plenary & discussion	CRAW, Laura	09h15-09h45
Future of COVID-19 vaccination monitoring with existing immunization monitoring & reporting processes (i.e., regional, and global)	Panel & discussion	GACIC-DOBO, Marta DUMOLARD, Laure; BORREL PIQUE, Jordi; GONZALEZ, Glenda; VELANDIA, Martha; GOLDIN, Shoshanna	09h45-11h15
<ul style="list-style-type: none"> Panel of global and regional colleagues discussing plans for way forward with regards to COVID-19 vaccination monitoring and its interplay with existing immunization monitoring processes, including: <ul style="list-style-type: none"> Integration of COVID-19 into annual Joint Reporting Form exercise & overview of nascent monthly routine administration data collection processes Overview of influenza vaccine monitoring & possible synergies with Possible combination of influenza & COVID-19 monthly reporting in Europe Plans for region-level system integration in WHO Western Pacific Region Plans for region-level system integration in WHO Region for the Americas 			
Coffee			11h15-11h30
Convening outcomes & next steps	Plenary & discussion	BROOKS, Donald	11h30-12h15
<ul style="list-style-type: none"> Overview presentation of draft COVID-19 Vaccination Data & Monitoring Transition plan, including possible need for updated guidance resources 			
Closing remarks		SIM, Derrick; GACIC-DOBO, Marta	12h15-12h45
Lunch			12h45-13h45

