CLINTON HEALTH ACCESS INITIATIVE

Early approaches to integrate COVID-19 vaccines into routine immunization systems and/or primary healthcare services

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Introduction

Over 13.5 billion doses of the COVID-19 vaccine have been administered globally since 2021. Of this figure, 32.9 percent of people in low-income and middle-income countries, compared to nearly 71 percent of the world's population, have received at least one dose of the vaccine.[1]

The COVID-19 landscape has shifted significantly since the immediate urgency of the pandemic has receded, and the WHO announced that COVID-19 no longer constitutes a public health emergency of international concern[2]. Ministries of Health have shifted priorities to routine immunization and other essential services deprioritized during the COVID-19 pandemic. While the COVID-19 vaccine supply has stabilized, the risk perception of the disease and demand for COVID-19 vaccines globally remains low. Additionally, SARS-CoV-2 is evolving, and the severity of the resulting disease is expected to reduce over time as immunity increases. Recent World Health Organization (WHO) Strategic Advisory Group of Experts on Immunization (SAGE) Guidance[3,4] recommends a simplified single-dose regimen for COVID-19 vaccination. This recommendation intends to improve acceptance and uptake of the vaccine, providing adequate protection for people since they have existing immunity from prior infection, or being vaccinated at least once.

Given this context, many countries have begun efforts to integrate COVID-19 vaccinations within existing routine immunization (RI) systems and/or primary healthcare (PHC) services.[5] These integration efforts aim to achieve and sustain COVID-19 vaccine coverage, especially amongst high-risk populations such as the elderly, people living with HIV and pre-existing comorbidities.[6]

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[1] Statistics and Research: Coronavirus (COVID-19) Vaccinations, Our World in Data, Accessed April 2024 (https://ourworldindata.org/covid-vaccinations)

[2] Statement on the fifteenth meeting of the IHR (2005) Emergency Committee on the COVID-19 pandemic, 5 May 2023. In: WHO [website]. Geneva: World Health Organization (https://www.who.int/news/item/05-05-2023-statement-on-the-fifteenth-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-coronavirus-disease-(COVID-19)-pandemic)

[3] WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines, 10 November 2023. In: WHO [website]. Geneva: World Health Organization (https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.1).

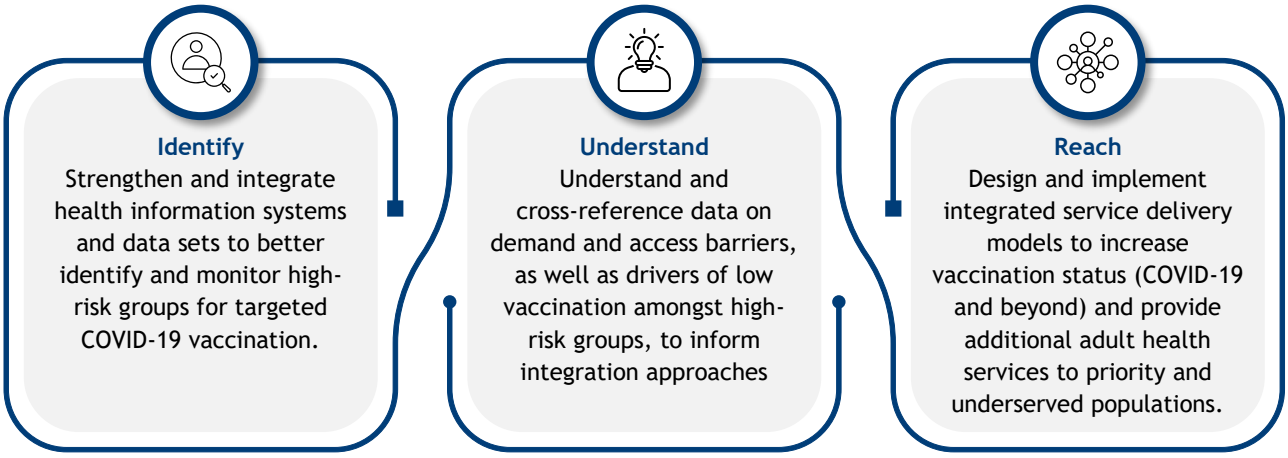
[4] Increasing COVID-19 vaccination uptake: An update on messaging, delivery strategies and policy recommendations, 1 December 2023. In: WHO [website]. Geneva: World Health Organization (https://www.who.int/publications/m/item/increasing-COVID-19-vaccination-uptake)

[5] The WHO defines COVID-19 integration as "The partial or full adoption of COVID-19 vaccination into national immunization programme services, PHC and any other relevant health services with the overall aim of improving programme efficiency and sustainability, enhancing demand and improving user satisfaction, achieving and maintaining satisfactory coverage, and addressing inequities."

[6] WHO SAGE Roadmap for prioritizing uses of COVID-19 vaccines, 10 November 2023. In: WHO [website]. Geneva: World Health Organization (https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.1).

The benefits of integration are wide-ranging. They include increased efficiencies, program performance and sustainability, demand, access to health services, and improved service user outcomes and experiences.[7] It is also an opportunity to accelerate efforts towards primary healthcare integration. Investments in COVID-19 vaccination triggered by the pandemic have accelerated integration initiatives and broader immunization and health systems strengthening and pandemic preparedness activities. However, the degree to which countries have integrated COVID-19 vaccinations into existing health programs varies widely. Similarly, the integration approach employed by these countries and the levels of success of these integration efforts have been heterogeneous. These integration approaches offer a platform and opportunity to garner insights aligned with Gavi's 2024-25 COVID-19 learning agenda, focused on understanding, and improving RI and COVID-19 immunization strategies and contributions to pandemic prevention, preparedness, and response (PPPR).

Through support from the Rockefeller Foundation, the Clinton Health Access Initiative (CHAI) is partnering with ministries of health in Cambodia, Honduras, Ghana, Lesotho, and Uganda to use data-driven approaches to integrate COVID-19 vaccinations into RI/PHC and increase access and uptake of COVID-19 vaccinations amongst high-risk populations. CHAI's strategy has been threefold:

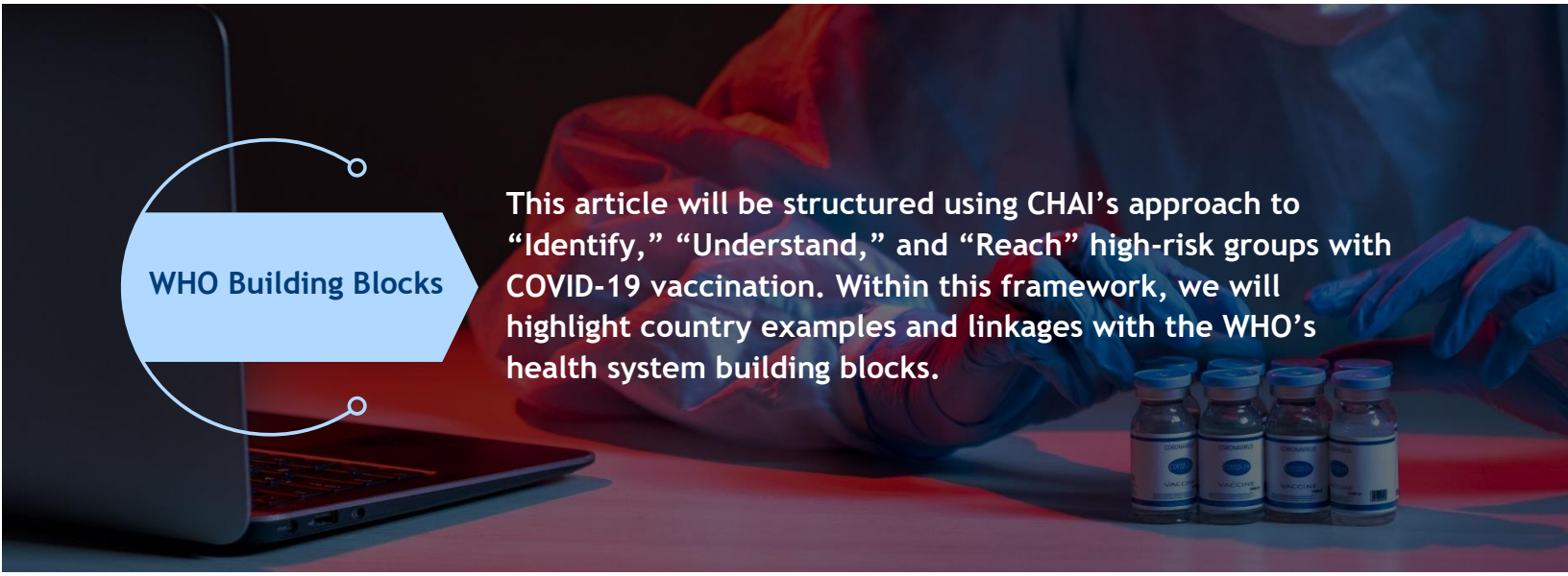


This article seeks to spotlight early experiences, successes, challenges, and learnings from these five countries in their journey towards integrating COVID-19 into RI/PHC. It builds on existing knowledge and resources[8] published by partners such as WHO, UNICEF, and Gavi. It also aims to provide tangible examples of countries that have integrated COVID-19 vaccination into existing health systems. It highlights how these experiences support and sustain countries' national integration efforts, considering decreasing public demand, funding, and political momentum. In addition, it shares how global guidance and support informs countries' implementation and integration approaches.

[7] Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF), 2022. Licence: CC BY-NC-SA 3.0 IGO.

[8] The article will build on COVDP's Country experiences with COVID-19 vaccination: Mainstreaming & integration with immunization program services and PHC published in November 2022, the COVID-19 Vaccination Response: Country experiences, best practices, and lessons published in July 2023, country examples of integration of COVID-19 outlined in the WHO/UNICEF's Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care guidance document, published in 2023 and WHO's Global Compendium of Knowledge on COVID-19.

This is the first part of a two-part article focused on early approaches, findings, and lessons learned on COVID-19 integration in the five focus countries. Part 2 (aimed to be published in early 2025) will focus on country integration journeys, including outcomes, achievements, and challenges of implemented approaches.



Identify

Strengthen and integrate health information systems and data sets to better identify and monitor high-risk groups for targeted COVID-19 vaccination

Health Information Systems

The roll-out of the COVID-19 vaccine led to the creation of diverse and often fragmented data management and reporting systems for monitoring COVID-19 vaccination rates and informing vaccine deployment operational planning. Countries rapidly designed, expanded, and/or adapted data systems to report vaccination data for target groups such as health workers, older adults, and those with co-morbidities, which were not typically included in routine immunization programs. Many countries chose to create new systems, while others strengthened existing data systems to monitor the progress of the COVID-19 vaccine program effectively. The effectiveness of these systems depends on the initial design of the COVID-19 data management and reporting systems and existing vaccination data management infrastructure for routine immunization.

In addition, many countries have leveraged geospatial technologies to improve COVID-19 vaccine microplanning to ensure equitable and targeted access to COVID-19 vaccination services. While using geospatial technologies for vaccine microplanning is not particularly new, integrating data sets targeting populations such as older adults and those with co-morbidities was a unique aspect of the COVID-19 vaccine rollout.

CHAI has supported initiatives to strengthen and integrate health information systems and data sets to better identify and monitor high-risk groups for targeted COVID-19 vaccination. Examples and lessons learned are illustrated below:

Strengthening and integrating health information systems in Honduras
Context
Despite significant efforts and investments in Honduras, several challenges persist in creating a comprehensive universal vaccine management and reporting system, including for COVID-19 vaccines, and ensuring provision of accurate and timely information on vaccine availability, coverage by area, and population. Honduras operates different systems for collecting and/or storing vaccination data in Honduras, with data collection conducted using a mix of paper-based forms and Excel files from health facilities and vaccine posts. While DHIS2 was initially used for collecting individualized COVID-19 vaccine data, challenges related to the lack of integrated

systems, standard operating procedures, and clear guidance on information flows led to backlogged data and long data entry delays. Given the challenges faced by and across multiple vaccination data systems, including poor data quality, Honduras is developing one all-encompassing new vaccine management system called MisVacunas. The system is currently in progress and has significant potential to integrate all nominal vaccination data in one system reducing duplication and increasing efficiency.

To improve the country's ability to respond to these challenges, CHAI is working with the Ministry of Health to achieve the following:

- Strengthen capacity on usage of data systems
- Strengthening data usage by implementing an integrated information system (MisVacunas) to handle dashboards that integrate immunization program data from existing systems.
- Bolster sustainability through the development of standard operating procedures (SOPs) and documentation to ensure a sustainable transition and more fluid implementation of future modules.

An assessment of the health secretariat's digital infrastructure has been completed with the aim to propose, develop, and implement standard operating procedures for adequately maintaining the digital ecosystem, including data security, management of technological resources and backing up, monitoring, accessing, and restoring the secretariat's information systems' databases. CHAI has also developed strategies for the Ministry to optimize available resources and avoid redundancies by configuring servers to make it easy to enter and manage data without duplications. These documents and guidelines should increase the security, confidentiality, and availability of health information. In addition, they will enhance performance in systems development, ensuring the proper functioning of databases. To facilitate the sustainable use of these data systems, technical and human resources teams support the Health Informatics Unit (UGI) to address data and information requests and access information in a timely manner to enhance decision-making. This work has been used by the Ministry of Health's Vaccine Technical Working Group to inform the development of a national roadmap for digital health transformation for 2024-2028 in Honduras.

To complement this work, CHAI has been working closely with Data.Fi to transfer knowledge of the COVID-19 data use methodology and dashboards developed by Data.Fi to facilitate periodic data review and informed decision making in the most underserved regions of the country such as Gracias a Dios and Colón. Over 75 percent of health workers in these two regions have been trained to use the information dashboards for COVID-19 vaccination data review and decision-making. The collaboration between CHAI and Data.Fi is an essential step towards unifying the efforts of the different cooperating partners in the country and allowing for the optimization of resources. It also provides an opportunity for collaboration on data governance, interoperability, digital health strategy, paving the way for integrating parallel immunization programming.

Early lessons learned

- **Honduras has a limited budget for technology resources, which has a direct impact on the operation of information systems and efficiency of the UGI.** The development of a national roadmap for digital health transformation, with defined costs, endeavors to support relevant authorities to manage the appropriate resources to keep the information systems operational.
- **The availability of guidelines and directives for critical tasks supporting information systems is key to increasing the efficiency of the Honduran Health Informatics Unit.** This is especially important in the context of existing shortage and high turnover of human resources. More broadly, the lack of appropriate documentation to ensure the sustainability of health information systems using local resources was a significant challenge for Honduras, and the lessons learned in strengthening documentation presents an opportunity to inform regional strategies.

Next Steps

In 2024, CHAI will conduct training workshops to help health units consistently standardize and use situation room processes, procedures, and operational guidelines. Additionally, CHAI will focus on extending this methodology beyond COVID-19 vaccines to encompass all vaccines within the national schedule. The development of priority operating procedures to maintain these systems will be prioritized, as well as the active participation of and engagement in the technical working group alongside other agencies such as PAHO (Pan-American Health Organization), IDB (Inter-American Development Bank), Global Fund, and others to develop the national digital health roadmap.

Strengthening and integrating health information data sets in Ghana

Context

To support identification and implement targeted COVID-19 vaccine delivery to high-risk groups, including persons with underlying medical conditions and older people (adults aged 60+), CHAI supported the Ghana Health Service in analyzing and triangulating regional and district-level data using GIS to select four priority regions (Bono East, Eastern, Volta and Western) and four priority districts within the selected regions for implementation based on high prevalence of people living with HIV (PLHIV) and incidence of people living with NCDs (diabetes and hypertension), low COVID-19 vaccination coverage, and large numbers of elderly (>60 years) population. CHAI gathered geospatial data, including the location of health facilities, administrative boundaries, and associated attribute data such as prevalence and distribution of older people (above 60 years), 2021 census population, HIV and NCDs disease prevalence, and COVID-19 vaccination coverage data from the Ghana Statistical Service (GSS) and relevant programs. The data was compiled into a database and analyzed using the open-source GIS tool QGIS.

To optimize the placement of COVID-19 vaccine delivery services, CHAI supported regional health directorates in the targeted regions in selecting 12 priority facilities with the availability of ART,

diabetes, hypertension, and/or COVID-19 vaccination services. CHAI also analyzed accessibility in the prioritized districts using settlement and population estimates from GRID3 and WorldPop datasets.

Concurrently, CHAI has been collaborating with the EPI and other partners (e.g., PATH, WHO, CDC) to build the capacity of Ghana Health Service staff and Health Information Officers at the regional level on geo-enabled digital microplanning. Partners have been supporting the EPI in updating the curriculum and training manuals on geo-enabled digital microplanning where necessary to inform targeted vaccine delivery. Drawing on WHO and GRID3 resources, the Ghanaian geo-enabled Digital Micro Planning (gDMP) Handbook for vaccine delivery has been accepted by the EPI and all in-country partners as the main GIS manual for digital microplanning in the country. It will be used for all future training.

Early lessons learned

- **Close collaboration with multiple Ministry of Health departments needed to effectively access and integrate health information data sets.** CHAI worked closely with multiple departments within the Ministry of Health beyond the EPI, such as the National AIDS/STI Control Program (NACP) and the National Non-Communicable Disease Control Program (NCDCP) to gain access to disease prevalence data, and hence inform regional and district-level prioritization.
- **Incomplete disaggregated COVID-19 coverage data created difficulties in understanding coverage among high-risk groups.** Data on COVID-19 vaccination is currently captured using a COVID-19 vaccination e-tracker, which is then reported on DHIMS2. As paper-based forms were used during the vaccination campaigns, certain fields (such as the chronic disease section) were often missing, leading to incomplete disaggregated COVID-19 coverage data. There was a need to triangulate general COVID-19 vaccination coverage data reported in DHIMS2 and the prevalence of diseases (from programmatic reports) in selecting the regions and districts of focus.
- **Continuous supportive supervision needed to effectively build capacity in geo-enabled digital microplanning for vaccine delivery.** Stakeholders involved with the geo-enabled digital microplanning for vaccine delivery training noted that a one-time 5- day training is not sufficient to build adequate capacity in the use of GIS to enhance microplanning for vaccine delivery. Continuous supportive supervision is necessary for trained staff to effectively apply geospatial analysis in their various workstreams to enhance vaccine delivery at sub national levels.

Next Steps

Over the next year, CHAI will provide supportive supervision to district officers in developing geo-enabled digital micro-plans for targeted vaccine delivery to high-risk groups. The Ghana Health Service has expressed strong interest in using geospatial data and analysis to support evidence-based decision-making and other health programs beyond vaccine delivery.

Understand

Understand and cross-reference data on demand and access barriers, as well as drivers of low vaccination amongst high-risk groups, to inform integration approaches.

While crucial barriers to reaching high-risk populations have been theorized, they were not adequately understood in the initial rush to maximize COVID-19 vaccine coverage. Now that overall vaccination rates in many LMICs have slowed significantly, there is a need to understand barriers to COVID-19 vaccination amongst priority groups to shape effective vaccination approaches accordingly. In Uganda, CHAI worked with the Ministry of Health to undertake an assessment to establish barriers to access and demand for COVID-19 vaccination uptake amongst the elderly population (50 years and above). Findings and results are outlined below:

Understanding barriers and drivers of low COVID-19 vaccine uptake amongst the elderly in Uganda
Context
Despite being at higher risk of morbidity and mortality from COVID-19, older people in Uganda have particularly low coverage rates. By the end of 2023, COVID-19 vaccination uptake among older people (50 years and above) stood at 54 percent as per administrative data, compared with the national average of 59 percent. In addition, 26 districts had COVID-19 coverage among older people at 25 percent or below. The perception of low COVID-19 risk, vaccination myths, and misconceptions are hypothesized to contribute to the stagnating sub-optimal uptake. In addition, the inadequate number of vaccination service points that target the elderly is believed to contribute to this figure. Several evaluations have been conducted in-country to better understand barriers to COVID-19 uptake. However, none provided a context-specific focus on older people to establish the underlying drivers of low uptake amongst this priority sub-population. To address this information gap, the Ministry of Health, with support from CHAI, conducted an assessment in September 2023. Eight study districts were selected based on the lowest reported coverage of COVID-19 vaccination uptake among older people. Questionnaires were adopted and modified from the WHO's Behavioural and Social Drivers (BeSD) vaccination toolkit. Over 1000 elderly individuals (who were not vaccinated or partially vaccinated) were interviewed to

understand the key barriers experienced and perceived by respondents. Selected district. District Health Officers (DHOs) and health facility EPI Focal persons or In-charges of the three highest-volume Health Centre (HC) IIIs in each of the selected districts were also interviewed to establish supply-side barriers to vaccination of older people.

Result

The assessment uncovered important factors affecting the uptake of COVID-19 vaccination amongst older people. Of the elderly persons interviewed, 603 (52 percent) were unvaccinated, and 550 (48 percent) were partially vaccinated. The most significant barriers to COVID-19 vaccination identified amongst the unvaccinated elderly respondents (n=603) in the selected districts included:

- Long distances to the health facilities
- Physical limitations
- Long waiting times
- Being turned away from vaccination services
- Inconvenient facility opening times
- Other factors included fear of side effects, limited information on vaccination, vaccine stock-outs, and religious beliefs.

At least 78 percent of elderly respondents were willing to get vaccinated if the vaccine was available, and 70 percent very much or moderately trusted the COVID-19 vaccine, signifying a missed opportunity to drive up uptake by bringing vaccinations closer to this priority group. Of the 22 percent of elderly respondents not willing to get vaccinated, 72 percent were females, and 80 percent had never been vaccinated. Reasons provided not to get vaccinated included exacerbation of existing underlying conditions and lack of trust in the safety of the vaccine.

District and facility-level stakeholders identified outreach as the best modality for reaching older people for vaccination. Community health workers, such as village health teams, were noted as important mobilizers to reach the unvaccinated older people. There were also high levels of trust in community leaders on issues of health communication. Stock-outs of COVID-19 vaccines at the health facility were also noted as a significant challenge. In addition, the assessment showed that COVID-19 vaccination is, to some extent, already integrated with routine immunization in some districts and health facilities. However, it is not being fully implemented due to human and resource constraints and a lack of an implementation framework.

Next steps

As a result of this assessment, the key recommended strategies for reaching and increasing uptake amongst unvaccinated older people included: (i) strengthening vaccine logistics, supply, and cold chain management; (ii) improving support for community outreaches; (iii) reinforcing awareness raising; (iv) conducting mass vaccination campaigns and (v) tracking of unvaccinated elderly. The results of the bottleneck assessment have been shared with regional and national service delivery technical working groups. In addition, the assessment has provided important lessons on building platforms and service delivery approaches for reaching adult populations. For example, the findings have been used to inform approaches that could be leveraged to reach the adult population with other vital vaccinations, e.g., yellow fever.

The findings have also been utilized to further make a case for and inform integrated immunization services delivery in line with Uganda's national COVID-19 integration strategy, developed and rolled out in 2023. This strategy outlines five key pillars of integration, including 1) service delivery, 2) demand generation, 3) logistics and cold chain, 4) data management and surveillance, and 5) leadership and governance. The strategy guides that all static and outreach routine vaccination sites should incorporate COVID-19 vaccination, with the target priority groups including elderly, persons with co-morbidities and health workers, in line with WHO's SAGE guidance. Gavi CDS3 funding supports the implementation of Uganda's COVID-19 integration strategy. The interventions under the Rockefeller grant will be complemented by Gavi CDS3 and partner-specific funds whose focus is on strengthening immunization health systems and integration.

Reach

Design and implement integrated service delivery models to increase vaccination status (COVID-19 and beyond) and provide additional adult health services to priority and underserved populations.

Service delivery approaches to reach target populations with COVID-19 vaccination varied significantly from country to country. Most countries used a combination of approaches such as mass campaigns, fixed-site vaccination, and outreaches[9]. To reach priority population groups beyond those traditionally reached through routine immunization, vaccine delivery approaches needed to be adapted to address the unique challenges they face in accessing vaccination services. As countries shift from vertical COVID-19 programs to integrated service delivery, they are exploring different models of delivering COVID-19 vaccination services, leveraging the opportunity to provide additional adult health services to high-risk groups. CHAI has been supporting several innovative integrated service delivery approaches across different countries at national and subnational levels to increase the uptake of COVID-19 vaccination and other adult health services in priority populations. Examples and lessons learned are illustrated below:

Integrated COVID-19 vaccination and non-communicable disease screening in Cambodia

Service Delivery Model

Building on a previous pilot integrating NCD screening and COVID-19 vaccinations delivered through mass vaccination campaigns, CHAI supported the scale-up of an integrated COVID-19 vaccination and NCD screening (diabetes and hypertension) model across eight health facilities in two focal provinces, Kampot and Takeo, Pilot sites chosen differed in patient volumes, facility type and geographic setting to enable comparison across different settings. CHAI worked closely with the Department of Preventive Medicine (DPM), the National Immunization Program (NIP) and the two focal Provincial Health Departments (PHD) in Takeo and Kampot to design and implement the fixed site model to improve outcomes of both services for adults ≥40 years old. As of December 2023, the preliminary implementation data indicated that 6625 adults 40 and above attending eight health facilities received NCD Screening (27.35 percent of all adults ≥40 attending health facilities)

[9] Nabia S, Wonodi CB, Vilajeliu A, Sussman S, Olson K, Cooke R, Udayakumar K, Twose C, Ezeanya N, Adefarrell AA, Lindstrand A. Experiences, Enablers, and Challenges in Service Delivery and Integration of COVID-19 Vaccines: A Rapid Systematic Review. Vaccines (Basel). 2023 May 11;11(5):974. doi: 10.3390/vaccines11050974. PMID: 37243078; PMCID: PMC10222130.

and 60 received COVID-19 booster doses (0.91 percent of all adults ≥40 attending health facilities). With primary and first booster dose coverage already high in Cambodia, uptake for further COVID-19 booster doses have been slow given perceived lower severity of the disease and general vaccine fatigue among the population.

Digital Registration Tool

In addition, CHAI developed and tested a digital registration tool using the Dimagi CommCare mobile app. Community health workers, known as village health support group (VHSG) in Cambodia, use it to systematically identify under-vaccinated and at-risk populations living with NCD comorbidities. Prior to developing the digital tool, CHAI conducted an assessment amongst VHSGs and HCWs (>30 respondents) to understand capacity for the use of digital tools for data collection. The assessment found that despite the majority of VHSGs and HCWs being older adults (more than half were aged 41-60 years old, and a third were 60+ years old), they showed high capability and appetite for digital tools to support access to health services. In addition, 90 percent of respondents had access to a smart phone and there was high internet connectivity at the participating health centers. CHAI supported the PHD/Operational Districts to train 144 VHSGs and 47 HCWs on use of the digital tool. By the end of 2023, VHSG had digitally registered 9,000 patient records of adults ≥40 years eligible for NCD screening/COVID-19 vaccination. The project leveraged the Gavi CDS3 funding for community data collection of unvaccinated and under-vaccinated populations in 2023 and effectively digitized the process for the first time.

Early lessons learned

- **The digital registration tool was an effective method for collecting community data to link eligible adults to service delivery.** VHSGs play a critical role in ensuring community outreach and program accessibility, particularly for adults over 40 years residing in remote areas with limited access to health facilities. Enhancing the ability of VHSGs to improve immunization/NCD screening program reach through digital means is a valuable learning for all Cambodia programs, as the VHSG is a cross-cutting actor for public health programs.
- During project implementation, CHAI observed the **importance of continuous and effective communication between HCWs and VHSGs for successful implementation.** HCWs created group channels on the Telegram messaging app or communicated by phone call to VHSGs to share important health information/content on NCD/COVID-19 vaccination, service delivery updates and follow up. The collaboration with HCWs strengthens VHSGs ability to disseminate information on available services, such as immunization campaigns and NCD screenings.
- **Slow uptake of the COVID-19 vaccine booster dose indicates very low demand for COVID-19 vaccines.** There is a need to work with HC/OD/PHD staff to understand reasons for low service uptake and encourage HCWs and VHSG to disseminate health education information, especially where high risk/missed communities have been identified for COVID-19 vaccination.
- **Incentivize VHSGs and HCWs to conduct community registration and health education drives.** The World Bank funded Health Equity and Quality Improvement Project Phase 2 project (H-EQIP2) aims to increase the number of facilities delivering NCD services across Cambodia through training support, provision of NCD screening commodities/supplies and health worker incentives. Delays in H-EQIP2 implementation highlighted the **importance of incentives for**

VHSGs to conduct community registration and health education efforts and for HCWs to conduct increased service delivery. As HCWs and VHSGs are aware of and anticipate receipt of an incentive for patients registered and screened for NCDs, there is some hesitation to increase screening and treatment in the absence of the H-EQIP2 incentive. This was evidenced in the data that showed only 27 percent of adults eligible for NCD screening were in fact screened. This underscores the importance of adequate resource allocation for the both components of the integrated COVID-19 vaccination and NCD screening model to enable program success.

Next Steps

Leveraging learnings from implementation of the integrated COVID-19 vaccination and NCD screening model and the digital tool for VHSG community registration and follow up, CHAI will identify adaptations required to the existing model for greater scalability and sustainability to the whole country. CHAI will work closely with national and sub-national stakeholders to address challenges with service delivery uptake and data collection and reporting. The project also aims to leverage the operationalization of H-EQIP2 in 2024 in Takeo and Kampot to assess implementation of the model in the context of H-EQIP2 resourcing.

Integration of COVID-19 vaccination at the point of care in Lesotho

Service Delivery Model

CHAI, alongside other partners such as UNICEF and WHO have been supporting the Ministry of Health, Lesotho to achieve its target of reducing missed opportunities and increasing COVID-19 vaccine coverage rate. The Ministry of Health aims to achieve this by prioritizing high-risk populations and integrating its COVID-19 vaccination program into PHC services like ART, ANC, and NCD. With input from national and district level stakeholders, the Ministry of Health is currently finalizing its national COVID-19 integration guidelines. The EPI and other key partners will use these guidelines to implement standardized and streamlined COVID-19 vaccination integration activities, in line with global guidance and recommendations for integrated service delivery of COVID-19 vaccines. The guidelines propose two main service delivery models which account for the needs of target groups and facility characteristics, including facility size, capacity and volume, workforce, and logistical considerations. CHAI worked with the COVID-19 vaccine service delivery working group and partners to select the determinants that would guide the selection between the two models. With guidance from CHAI and this working group, districts will be supported to choose a service delivery model that aligns with their context.

1. **One-Stop Model**: COVID-19 vaccination is provided at the earliest point of contact, typically at one point adjacent to triage, following screening. This model has been designed for high-volume health facilities (generally urban-based hospitals and filter clinics). The objective of proposing to place the vaccination next to the triage center is to ensure that people who are eligible for the COVID-19 vaccine are screened and provided with services before they can access additional services with the health facility.

2. **Supermarket Model**: COVID-19 vaccination is provided not only at the first point of contact (triage), but also within various departments within the health facility such as ANC Clinics, ART Clinics, Men's Clinics, and Adolescent Corner. This model has been designed for low- and mid-volume health facilities where there is sufficient health workforce to cover expanded demand. It is also well suited for health facilities with low vaccine coverage across primary series and booster series. Once a patient has been screened at the triage center, they can proceed to the clinics where services are requested, which will enable them to access the COVID-19 vaccines at the point of care.

To achieve alignment across relevant stakeholders, the MoH, EPI, and implementing partners held several meetings to determine the country's readiness for integration using the UNICEF-WHO's COVID-19 Integration Readiness Checklist. Discussions ensured common understanding by all stakeholders of achievements, work that is underway, and areas requiring special attention. The meetings also led to the development of a comprehensive roadmap, workplan, and responsibility chart for the development and implementation of service delivery models and guidelines in line with global recommendations.

In addition, as a result of advocacy from CHAI and partners, a COVID-19 Vaccination Integration Working Group has been established by the Ministry of Health. The COVID-19 Integration TWG enables effective coordination and alignment between stakeholders on COVID-19 integration activities, acts as a body to advocate and consult with relevant government bodies, and regularly monitors the progress of integration activities for learning purposes.

Early lessons learned

- **Positioning the COVID-19 integration work under the ambit of pandemic preparedness and response through immunization has maintained MoH's interest in the work.** This positioning has also provided the additional benefit that should the country experience an epidemic or pandemic in the future that requires a response through immunization, there would be guidelines and a system already in place. Furthermore, there would be existing strategies and policies for the integration of other adult vaccines into PHC services. This will minimize missed opportunities for vaccinations, as traditionally, immunization has been for the under-5 cohort.
- **Integration guideline development should consider the additional time required to sensitize and generate buy-in from non-traditional partners.** In responding to the COVID-19 pandemic, multiple stakeholders were instrumental in supporting the government to respond to and introduce the COVID-19 vaccine. This required sensitization of all stakeholders, including non-traditional EPI partners, who required effective onboarding of the country's immunization program.

Next Steps

Following the finalization and validation of COVID-19 integration guidelines, districts will be capacitated to select service delivery models for their respective facilities. In addition, a COVID-19 integration monitoring, evaluation, and learning (MEL) framework will be developed to monitor progress effectively. The EPI, supported by CHAI, will train healthcare workers in 40 health facilities across four districts on workflow optimization models and service delivery adaptations required for integrated service delivery.

Conclusion

This article highlights early approaches, findings, and learnings on integrating COVID-19 vaccination in five focus countries (Cambodia, Honduras, Ghana, Lesotho, and Uganda). It also delineates ways countries aim to identify, understand, and reach high-risk populations to inform and implement integrated approaches. Across all countries, integrating COVID-19 vaccination into RI/PHC services is critical to ensure the sustainability of COVID-19 vaccination, especially amongst high-risk populations. It is essential to align and leverage complementary COVID-19 vaccination integration investments such as Gavi CDS3 to maintain momentum with integration activities and health system strengthening. Integrated COVID-19 vaccination programming also provides the opportunity for countries to build platforms and service delivery approaches to reach adult populations, which will be critical for a life course approach to immunization. It also allows countries to test innovative ways to integrate other services and reach high-risk groups. Lastly, efforts to increase access to and uptake of the COVID-19 vaccine through integrated approaches provide the opportunity to generate lessons and approaches on pandemic preparedness and for broader health systems strengthening.

Over the next year, CHAI will continue supporting the five focal countries in their journey towards integrating COVID-19 into RI/PHC programs. The second article in the series, to be published in early 2025, will focus on the outcomes and achievements of implemented integration approaches and the development of countries' integration journeys.

Resources, tools, and guidance on optimizing COVID-19 vaccination and integration:

Resources	Description	Source/Author
Considerations for integrating COVID-19 vaccination into immunization programmes and primary health care for 2022 and beyond	Establishes global principles and overall framework for COVID-19 integration, supporting countries to define national objectives for integrating COVID-19 vaccination. Includes a checklist for countries to conduct a situation analysis and identify gaps in line with the WHO's health system building blocks	WHO/UNICEF

Resources	Description	Source/Author
COVID-19 Integration: Country Introduction Materials	This page provides support to countries developing and implementing COVID-19 vaccine integration in alignment with WHO and UNICEF guidance. An overview of the support package is provided below focusing on: • What is C-19 integration? • Why is C-19 integration important? • How can C-19 integration look like? • Which support is available to countries for C-19 integration? • What are examples of country best practices integrating COVID-19 vaccination into broader health systems? • FAQs	WHO/UNICEF
Operational Framework for Demand Promotion - Integration	Operational Framework for Demand Promotion - Integration of COVID-19 vaccination into routine immunization and primary health care	WHO/UNICEF
COVID-19 Delivery Support (CDS) - Third Funding Window Guidelines	Gavi CDS3 Programme Funding Guidelines	Gavi

Acknowledgments

CHAI would like to extend its gratitude and appreciation to Ministry of Health counterparts and health partners in Cambodia, Honduras, Ghana, Lesotho, and Uganda. We would also like to thank colleagues from Gavi and WHO, including the WHO regional and country offices, for contributing to this article. This work was made possible through funding from the Rockefeller Foundation.