USAID Immunization Partners' Meeting

MARCH 18–19, 2024 | WASHINGTON, DC, AND ONLINE

Implementing Partners' Marketplace: Abstracts

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Introduction

From March 18–19, 2024, the United States Agency for International Development (USAID) hosted an Immunization Partners' Meeting convening USAID Missions, implementing partners, and external stakeholders at a critical moment for the global immunization community. Together, attendees discovered and discussed how to fully recover from declines in immunization as a result of COVID-19; build for the future collaboratively; and contribute to global, regional, and country goals for improving immunization coverage, equity, and quality in the context of integrated primary health care.

This booklet contains abstracts submitted by USAID implementing partners for an Innovation and Learning Marketplace that took place during the event. The purpose of this marketplace was to create space for USAID and implementing partners to deepen technical exchange on ongoing and emerging challenges in the immunization field and share innovative ideas, approaches to addressing these challenges and lessons learned.

Themes

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts

Lessons learned from COVID-19 vaccination and how they can be leveraged for stronger immunization and health systems or to prepare for future emergencies

Integration of immunization across the life course with primary health care and other non-health interventions

Immunization service experience for clients, caregivers, and the health workforce and quality of care

Gender and other social determinants of equitable immunization and how programs address them

Broadening the base of support for immunization program operations

Building vaccine confidence, demand, and trust in health systems

Digital health advances

Localization

Other topics

Abbreviations

AFCON	Africa Cup of Nations
AFP	Acute flaccid paralysis
CAG	Community action group
CCRDA	Consortium of Christian Relief and Development Associations
CE	Collective engagement
CGPP	CORE Group Partners Project
CHW	Community health worker
CME	Continuing medical education
CSO	Civil society organization
CV	Community volunteer
DNSCMT	Directorate of Community Health and Traditional Medicine
DRC	Democratic Republic of the Congo
EPI	Expanded Programme on Immunization
HCD	Human-centered design
HPV	Human papillomavirus
HW	Health worker
HZ	Health zone
KII	Key informant interview
LGA	Local government area
MOE	Ministry of Education
MOH	Ministry of Health
NGO	Nongovernmental organization
NLP	Natural language processing
NTP	Nontraditional partner
ODK	Open Data Kit
PHC	Primary health care
PP	Priority population
PHF	Private health facility
PNSC	National Community Health Policy
REC	Reaching Every Child
RECO	*Relais communautaire*
RED	Reaching Every District
RI	Routine immunization
USAID	U.S. Agency for International Development
VCM	Volunteer community mobilizer
VPD	Vaccine preventable disease
WASH	Water, sanitation, and hygiene

SECTION 1

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings)

Immunization Agenda 2030 (IA2030) Country Profiles: Visualizing progress toward global targets and strategic priorities

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INNOVATION

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings); also pertains to "Building vaccine confidence, demand, and trust in health systems" (IA2030 Indicator Strategic Priority 2.2)

Summary:

The IA2030 Country Profiles are an innovative way to present snapshots of immunization performance for leadership to increase attention on IA2030 targets, celebrate achievements, and support renewed commitment and financial investments. Produced for 37 low- and middle-income countries (LMICs) in this pilot round, Country Profiles were designed with technical officers in countries in Africa and Asia to ensure engaging and meaningful visualization styles. They were adapted from the IA2030 scorecard, a publicly available, interactive tool displaying data that enables stakeholders to monitor the status of each indicator in the IA2030 Framework for Action. The scorecard is a collaborative effort coordinated by USAID's MOMENTUM Country and Global Leadership, in partnership with the IA2030 Advocacy and Communication Working Group and Monitoring and Evaluation Working Group.

The IA2030 Framework for Action highlights the need for continual improvements throughout to meet goals such as reducing the number of zero-dose children by 50% and attaining 90% coverage of key vaccines by 2030. Due to COVID-19-related backsliding, such targets remain far away for many LMICs. Countries must raise domestic resources to make strides toward targets and attain program sustainability. The 50th anniversary of the founding of the Expanded Programme on Immunization (EPI), to be celebrated globally in 2024, represents a seminal opportunity for countries to highlight progress and address gaps to foster equitable access to immunization for all.

Key informant interviews (KIIs) with country-level technical and programmatic leaders highlighted visualization gaps on the IA2030 Scorecard, which displays country-level data but does not visualize performance trends. Advocates further emphasized the importance of tailoring materials to country contexts and producing a printable product to be used in policy discussions. The MOMENTUM team held consultations with country-level technical officers, who offered extensive feedback on design and use cases. The following are example quotes:

- "Decision-makers to use the briefs for decision-makers to celebrate wins. We are talking about increasing domestic financing for countries in different transitions modes." – Kenya-based technical officer
- "The brief will help mobilize resources for vaccination." – Côte d'Ivoire-based technical officer
- "It will serve as a call to action to set our eyes beyond COVID catch-up." – Philippines-based technical officer

As a result of this dialogue, the MOMENTUM team changed the design to increase the relevance and accessibility of the visualizations to foster greater uptake of the Country Profiles within governments and advocacy groups. The team was able to add additional countries to the series, based on requests. Further, the technical officers consulted requested regular (e.g., annual) reports like this.

Having access to routine data monitoring, including at the country level, through the IA2030 Scorecard was the vital enabling factor in producing the profiles. Further, having a strong network of technical officers working in-country in collaboration with MOMENTUM enabled us to understand their perspective, including key considerations such as whether governments could alter the design or include different types of data and the need to sensitize governments before the Country Profiles were published online. Data visualization products, including the IA2030 Scorecard and Country Profiles, support three of the four key operational elements integrated in the Framework for Action. These elements—Monitoring and Evaluation, Ownership and Accountability, and Communication and Advocacy—empower and drive actions to advance the implementation of IA2030. The Country Profiles specifically focus the attention of policymakers on core strategies that offer the most high-potential areas for immunization systems strengthening, highlighting where performance is strong and where further actions can close remaining gaps. ■

Innovations used to identify, map, and reach zero-dose children in hard-to-reach and pastoralist communities in Ethiopia

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INNOVATION

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings)

Summary:

More than 1.2 million children in Ethiopia are estimated to be zero-dose, making it one of the highest concentrated countries with zero-dose children. The CGPP has been working in Ethiopia since November 2001 through the Global Polio Eradication Initiative, focusing on hard-to-reach regions, porous borders, and pastoralist communities. In January 2023, CGPP began a zero-dose initiative to identify children, map areas of high zero-dose and under-immunized children, and subsequently vaccinate children using the project's community-based structure.

Between January 25, 2023, and February 11, 2024, 3,219 (1,492 female) children who had not received any vaccinations were identified and immunized from CGPP implementation areas. Eighty percent were from the two regions of Benishangul-Gumuz and Somali, with 1,265 (39%) coming from Benishangul-Gumuz, specifically Metekel Zone, where conflict has continued for the past three years. Two-thirds of the children were identified by trained CGPP volunteers through house-to-house visits.

Despite progress making immunization more accessible to low-income communities over the last two decades, a recent study shows that 25 million children worldwide did not receive one or more doses of lifesaving vaccinations in 2021. Of these children, 18 million have never been vaccinated, leading to high under-5 mortality rates. This group of children, referred to as "zero-dose children," are concentrated in the Sahel and Horn of Africa regions. Over 5.2 million zero-dose children reside across 11 countries. In Ethiopia, more than 1.2 million children are estimated to be zero-dose, making it one of the highest concentrated countries with zero-dose children.

CGPP has been working in Ethiopia since November 2001 with the implementation of the Global Polio Eradication Initiative, focusing on hard-to-reach regions, porous borders, and pastoralist communities. Priority activities include polio supplementary immunization activities, strengthening of routine immunization (RI), community-based surveillance, newborn tracking for polio birth dose, and cross-border activities. The hard-to-reach, mobile communities where CGPP works are often remote, have fragile infrastructures, and are conflict-affected. The population is often undereducated and prone to low polio birth-dose coverage and/or high zero-dose and under-immunized children for both oral polio vaccine and IPV. CGPP has more than

10,000 trained community volunteers (CVs) and health development army leaders (HDALs) who seek out and refer pregnant women, newborns, and immunization defaulters. These volunteers identify and report cases of vaccine-preventable and priority zoonotic diseases and provide social mobilization activities by moving house-to-house.

The project was implemented in 69 woredas in international border areas that are remote and conflict-affected, making it difficult to access immunization service. The project started by orienting the CVs and health extension workers in the project areas. Efforts to reach zero-dose and under-immunized children incorporated two programmatic innovations. First, CGPP created Open Data Kit (ODK) forms to map and geotag geographic pockets of under-immunized and zero-dose children, gathering characteristics of the children and their caregivers. When zero-dose or defaulter children are identified, information is sent to the ODK server and linkages are made to the health facility for vaccination. Geocoding allowed for follow-ups to be made by field officers and CVs. Second, CGPP introduced a referral slip to link those needing immunization to the health center. Referral slips are cards designed with pictures that categorize the children into different groups: newborns, unimmunized (zero-dose), or immunization defaulters. Referral slips also act as a mechanism for tracking and confirming vaccination post-referral. When CVs identified children needing immunizations, they evaluated the reasons behind this lapse and provided caregivers with educational guidance on overcoming these barriers. The CV then issued a referral slip to the caregiver, who brought it to the local health post. At the health post, the referral slip was reviewed by the health extension worker, who assessed underlying issues related to the child's lack of immunization, provided targeted information, administered necessary vaccines to the child, documented the service provided, and placed the referral slip into a box for rotation and future reference.

A total of 3,219 zero-dose children (1,492 female, 1,727 male) were identified, mapped, and vaccinated from CGPP implementation areas between January 25, 2023, and February 11, 2024. The majority of these children, 2,573 (80%), were from two regions: Benishangul-Gumuz (1,536 children) and Somali (1,037 children). A total of 1,265 (39%) came from Metekel Zone, in Benishangul-Gumuz, where conflict has been ongoing for the past three years. Two-thirds of the zero-dose children were identified and reported by CGPP's associated CVs/HDALs, except in Metekel, where only 25% of the children identified were reported by CVs/HDALs due to conflict and inaccessibility.

One key enabling factor for this intervention is the strong partnerships and networks CGPP has established in Ethiopia in 20-plus years of programming. Over the life of the project, CGPP trained and established strong community networks of CVs, who are trusted by their communities for information. CVs were able to build upon an existing linkage with government health extension workers. Additionally, CGPP's experienced staff had technical skills and knowledge of using ODK for mapping, routine data collection, and supportive supervision.

Zero-dose children are susceptible to polio and a variety of other vaccine-preventable diseases (VPDs). Without identifying them adequately providing vaccination, outbreaks of variant poliovirus and other VPDs will continue to contribute to the morbidity and mortality of children under 5, particularly among mobile and hard-to-reach populations. The use of community structures empowers local communities, building upon inherent strengths. Because CVs are well-trained and originate from the communities they serve, they are trusted and well-respected. Additionally, using the ODK platform for data collection for children, caregivers, and geographic mapping has provided key actionable information for CGPP, allowing volunteers to provide tailored education and referrals to the health system. CGPP ensures that the initiative remains viable in the long term. This approach not only addresses the current challenge of zero-dose children but also establishes a resilient framework for future health care interventions. ■

Reaching Every District (RED)/Reaching Every Child (REC) approach adaptation in fragile settings with the support of MOMENTUM Integrated Health Resilience project

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LEARNING

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings)

Summary:
Communities in fragile, conflict, and cross-border settings are often difficult to identify and reach with health care services, including immunization. For the USAID-funded MOMENTUM Integrated Health Resilience project, tailoring to program realities and feasibility in fragile settings is critical to help build resilience. In immunization, we explored revitalization of the RED/REC strategy to help national/subnational health authorities identify and reach more zero-dose and under-immunized children.

From 2022–2023, four country teams (Democratic Republic of the Congo [DRC], Mali, Niger, and South Sudan) supported rapid assessments and stakeholder workshops to document subnational-level RED/REC implementation and immunization program performance. Results showed that, despite different contexts, the countries are engaging in similar adaptations of the RED/REC approach. These adaptations fall under three strategies: 1) Adapt and leverage RED/REC approach in fragile settings; 2) Strengthen subnational health systems and community capacities for service continuity; and 3) Integrate elements of emergency preparedness and response (EPR) planning with immunization microplanning.

Communities in fragile, conflict, and cross-border settings—especially nomadic, refugee, and internally displaced populations—are often difficult to identify and reach regularly with health care services, including immunization. Government services are particularly constrained. To address this challenge, MOMENTUM works closely at subnational level in fragile geographies with public health systems, communities, civil society organizations (CSOs), and international and local partners to identify missed communities/families, with a focus on reaching zero-dose and under-vaccinated children.

RED/REC is a proven approach, with a long history in immunization programming, but needs to be tailored to the challenges of zero-dose and under-immunized children if it is to build resilience in fragile settings. Revitalizing the RED/REC approach can encourage health workers (HWs) and community actors to find new ways to map missed households and tailor their service delivery strategies.

The MOMENTUM team understands the immunization and fragility issues in these subnational geographies and the importance of adapting realistic approaches like RED/REC, which are already familiar and utilized in the country and may just need to be tweaked and further contextualized. From September 2022 to August 2023, MOMENTUM's four country teams (DRC, Mali, Niger, and South Sudan) supported local rapid assessments and stakeholder workshops with colleagues working in these communities to document subnational-level RED/REC implementation and immunization program performance through the lens of "what it may take" to incorporate EPR structures and build in resilience. This process was critical to build from what exists and co-design solutions that can be locally sustained in these fragile settings.

Ongoing process outcomes include:

1. Adaptation and leveraging the RED/REC approach in the fragile settings, including launch of national RED/REC guides with new priorities (integration, reaching second year of life, resilience) and collaborative microplanning with communities' involvement.
2. Strengthening subnational health system and community capacities for service continuity. This includes advocacy to address immunization and other program resource constraints (human, financial, material) including community health worker (CHW) capacity, training, subnational coordination mechanisms, the supply chain, and vaccine availability.
3. Consolidating elements of EPR planning with immunization microplanning, and using RED/REC guidance and promoting inter-community dialogues and cross-sectoral collaboration to increase contingency planning for humanitarian settings.

General considerations that can be applied in countries aiming to build resilience in their respective fragile settings include:

1. Involve communities particularly during local data analysis to help determine target populations for vaccinations (and improve coverage denominators) and identify better service delivery strategies.
2. Microplanning should incorporate considerations of different risk scenarios from available fragility and resilience studies and be ready to respond to different shocks.
3. Empower local problem-solving and implement immunization through a resilience lens using available resources and familiar approaches (like RED/REC).
4. Support learning opportunities for local vaccinators on fundamentals of immunization data analysis and use for local decision-making.

MOMENTUM's support in RED/REC adaptation and revitalization aligns with respective national priorities, local needs, project resources, and other partner contributions in the five countries, including refresher training on microplanning and use of revised guidelines launched in Mali and South Sudan. To improve service continuity in crisis periods, we are collaborating with government partners to add elements of EPR planning to RED/REC microplanning. The project is also exploring: 1) linking immunization service delivery to community-based disease surveillance/response; 2) tailoring annual plans/budgets and data reviews to address local fragilities; 3) advocating for including immunization in humanitarian assessments; and 4) encouraging broader sectoral involvement (including feasible local actions with CHWs, CSOs, and communities) and increasing visibility of subnational findings among national decision-makers. ■

Reaching zero-dose children: Insights from MOMENTUM

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LEARNING

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings)

Summary:
This program brief consolidates insights from four MOMENTUM projects on identifying and reaching zero-dose children. The focus is on generating learning to inform action, engage new partners, and address needs specific to fragile settings. It also shares a list of zero-dose and related resources developed by MOMENTUM awards (Reaching Zero-Dose Children: Insights from MOMENTUM - USAID MOMENTUM).

MOMENTUM is a five-year, $800 million USAID-funded suite of six interrelated projects working collectively to improve maternal, newborn, child health, family planning, and reproductive health services. An important area of attention for the projects is immunization, which saves lives and is a critical part of improving child health. Unfortunately, increases in childhood immunization rates have been severely set back by the COVID-19 pandemic, which strained funding and exacerbated longstanding challenges, such as supply chain disruptions and access to services. MOMENTUM is increasingly focused on identifying and reaching zero-dose children.

This brief provides insights and lessons from four MOMENTUM projects—Country and Global Leadership, Private Healthcare Delivery, Integrated Health Resilience, and Routine Immunization Transformation and Equity—on identifying and reaching zero-dose children. It is organized around three key themes: 1) generating learning to inform action; 2) engaging new partners; and 3) addressing needs in fragile settings.

Specific changes and lessons learned are shared by the four MOMENTUM projects, noting the adaptations needed to address the varied operating contexts. Methods to assess or measure outcomes varied by activity. Those funding, overseeing, or carrying out immunization or child health programs globally may find this information useful to guide their own implementation or adaptation. ■

Through the eyes of the provider: Using photovoice methodology to explore HWs' perspectives on the challenges and solutions to identifying and reaching zero-dose children in Zambia

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Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings)

Summary:

National zero-dose prevalence in Zambia increased from 6% in 2021 to 14% in 2022, with provincial rates in 2022 ranging from 4% (Lusaka) to 18% (Muchinga). This variability underscores the need for a nuanced understanding of contextual factors, including providers' perspectives, that drive zero-dose rates. The MOMENTUM project used photovoice methodology in Central and Muchinga provinces to explore zero-dose drivers by empowering providers to articulate their experiences and proffer solutions through photography and storytelling. Chosen districts were Kagwe and Lavushimanda, with 16 facility-based vaccinators and CHWs trained and sent on a two-week photovoice mission. Participants returned with amazing photos revealing barriers like geographic isolation and infrastructural deficits, along with caregivers' challenges such as travel distance and socio-economic constraints. Proposed solutions include dropout tracing and leveraging faith-based institutions for information dissemination. Dissemination meetings with policymakers are planned to garner political commitment and implement targeted interventions for zero-dose children across Zambia.

Zero-dose children (defined as those who miss the first essential infant vaccination) often embody the structural inequities that deprive marginalized communities of essential health and social services. Zambia has seen recent backsliding in immunization, with national zero-dose prevalence rising from 6% in 2021 to 14% in 2022. Subnationally, zero-dose prevalence varies, ranging from 4% in Lusaka province to 18% in Muchinga province. Such heterogeneity demands a nuanced understanding of the contextual drivers of the problem. Health care providers' perspectives are key, given their critical role in vaccine delivery. Adopting photovoice methodology, MOMENTUM Country and Global Leadership trained 16 providers from Zambia's Central and Muchinga provinces to explore zero-dose drivers in communities, using photos, captions, and stories. MOMENTUM selected photovoice to visually explore barriers along the provider's journey and capture the phenomenon more powerfully than words could. Photovoice, an innovative participatory research methodology combining photography and storytelling, empowers individuals to express their experiences on social issues and drive change. Pictures can evoke emotions, provoke thought, and promote a better understanding of the entrenched obstacles to vaccination service delivery and access.

One urban community in Kagwe district and a rural community in Lavushimanda district were selected. Participants were facility-based vaccinators and community-based HWs serving zero-dose communities. Participants attended a one-day workshop on the study objectives and methods, then received digital cameras for a two-week photovoice mission to capture pictures depicting the barriers they encounter serving zero-dose communities, and solutions to these challenges.

After the missions, participants were guided through photo selection and captioning. KIIs were conducted to further explore their views. Thematic analysis of interview transcripts was triangulated with the images and stories. The photos revealed key service delivery barriers such as geographic isolation of communities, seasonal disruption of access roads, unsheltered outreach posts, infrastructural deficits, and difficult transportation to fishing communities. Pictures also depicted the barriers caregivers face (e.g., long distances, lack of child-care support, socio-economic challenges, and competing priorities). The solutions proffered were dropout tracing, male involvement, and leveraging faith-based institutions for information sharing and sensitization.

Our study was enhanced by the purposeful selection of zero-dose communities that would give insights from providers and caregivers with informative perspectives. We leveraged previous quantitative analysis by the team to identify the provinces and districts with the highest burden and concentration of zero-dose children in Zambia. Partnership between MOMENTUM country and core-funded work made for effective synergy in combining resources and relying on the comparative advantage of the different teams. Participants were able to quickly gain skills in photography from the practical training provided, and they produced impressive and thoughtful images.

The perspectives shared through powerful images and compelling narratives offered a deeper understanding of the caregivers' and providers' journeys and solutions to the challenges that perpetuate zero-dose. The photos and captions are strong advocacy tools that can be used to raise awareness and stimulate dialogue among local and national decision-makers about ways to address underlying social determinants of zero-dose to reduce vaccine inequities. The project will organize dissemination meetings with policymakers to generate political commitment, mobilize technical support, and trigger policy actions to implement targeted interventions to reach zero-dose children in different corners of the country, with the ultimate goal of achieving vaccination equity. ■

Vaccination task shifting to CHWs in security compromised areas

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INNOVATION

Identifying, reaching, monitoring, measuring, and advocating for zero-dose, birth-dose, and under-immunized children across different contexts (e.g., rural, urban, peri-urban, conflict or fragile, cross-border settings)

Summary:

Since 2015, Burkina Faso is facing an unprecedented humanitarian situation negatively affecting the health system (e.g., attacks on infrastructure, closure of health facilities, and withdrawal of HWs). The MOMENTUM Integrated Health Resilience project is working with the Ministry of Health (MOH) to develop and implement an innovative strategy—vaccination task shifting to CHWs—to maintain immunization delivery in security compromised areas.

Under this strategy, skilled CHWs are providing immunization and other services where HWs can't go. From October to December 2023, more than 40,000 doses of vaccines were provided by CHWs, reaching approximately 30,000 children and 600 pregnant women. For DTP1, the contribution of CHWs represents nearly 50% of the district effort.

To roll out successfully, this strategy considers keys enablers like community empowerment, transparency in identification/management of CHWs, different modes of supervision, and permanent availability of vaccines with designated places where they can easily be pulled.

Since 2015, Burkina Faso's security situation has led to mass internal displacement of nearly two million people (CONASUR, April 2022) and has negatively impacted the health system. Attacks on infrastructure, intimidation/kidnapping of HWs, and theft of medicines has led to the closure of several health facilities and withdrawal of HWs. This has restricted access to and delivery of basic health services, including immunization—which trained CHWs can help to address.

In response to this situation, MOMENTUM is working with the MOH to develop CHW capacity with local communities to maintain critical health services, such as immunization delivery, in security compromised areas. Vaccination task shifting confers vaccination delivery skills to CHWs in compromised areas; they also provide other basic health services. A participatory process with targeted communities includes listing closed health facilities, identifying affected villages, and conducting exchange meetings explaining the strategy. Implementation includes:

- Identification/recruitment of CHWs: They must reside in the village and are chosen among CHWs already contracted by the government. If not possible, they are recruited and supported by MOMENTUM.

- Intensive 12-day training: Theory (two days), practice on anatomic models (three days), and hands-on training in a functional health facility (seven days).
- Vaccine supply: From the nearest open health facility, using vaccine carriers.
- Supervision/monitoring: Use of phone (calls, SMS, social media), field visits (when secure), and quarterly meetings at district level.

The vaccination task shifting strategy has been implemented since October 2023 in 56 villages across districts covered by MOMENTUM. Vaccinations conducted by CHWs are recorded in standard EPI tools and transmitted to the district. From October to December 2023, more than 40,000 doses of vaccines were provided by CHWs. Approximately 30,000 children and 600 pregnant women were reached with vaccines (DHIS2).

Due to insecurity, indicators decreased in 2023 compared to the same period in 2022 in supported districts (e.g., penta1 fell from 6,391 to 5,563 children vaccinated). However, the CHWs' contribution was 2,750 (over 50%) of the total children vaccinated.

The strategy's success depends on:

- Community empowerment: Collaboration with the population so that the strategy is being implemented by them and for them, including close contact with leaders.
- Transparency in the identification and management of CHWs: The presence of a national community health policy is a plus, and MOMENTUM aligns with those provisions.
- Supervision of CHWs: Although the strategy is conducted in difficult contexts, CHWs need to be regularly monitored remotely by other digital channels and visited during calm periods.
- Vaccine availability: Permanent availability and cold chain for vaccines in secure storage places.

This strategy contributes to strengthening resilience of the health system and the communities in the following ways:

- Absorptive capacities: Strengthening immunization program microplanning (including for vaccine availability and delivery by additional CHW vaccinators).
- Adaptive capacities: Contingency planning and adjusted immunization service delivery to avoid/address vaccination session disruptions. This includes adapting locally led approaches like RED/REC and Missed Opportunities for Vaccination to reach populations most efficiently.
- Transformative capacities: Health emergency preparedness structures at national and subnational levels include immunization services, representatives, and data for local decision-making. This includes more robust financial and procurement mechanisms for continual and emergency vaccine supply and delivery. ■

SECTION 2

Integration of immunization across the life course (i.e., vaccination beyond infancy) with primary health care and other non-health interventions (e.g., early childhood development, nutrition, family planning, water, sanitation, and hygiene [WASH], agriculture, food security)

Adaptive learning to advance behavior change to increase the uptake of COVID-19 vaccines in Serbia, North Macedonia, and Moldova

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INNOVATION

Integration of immunization across the life course (i.e., vaccination beyond infancy) with primary health care (PHC) and other non-health interventions (e.g., early childhood development, nutrition, family planning, WASH, agriculture, food security)

Summary:

In Serbia, North Macedonia, and Moldova, MOMENTUM Routine Immunization Transformation and Equity project focuses on increasing COVID-19 vaccination in priority populations (PPs). Applying behavioral integration, we identified two main priority behaviors: providers recommend the COVID-19 vaccine to pregnant women and people aged 45+ with chronic disease; and these individuals receive the full vaccine course. We used adaptive learning for programmatic changes and to monitor framing of vaccination as essential to a healthy lifestyle.

The project used various methods to inform changes in its continuing medical education (CME) curriculum and activities implemented in collective engagement (CE) workshops. Over four months, 1,035 medical providers with the potential to reach over two million people participated in CME, while 2,023 community members engaged in CE workshops; over half (52%) of them reported speaking with their medical provider about getting vaccinated. The project designed and implemented a dynamic and responsive lifestyle approach, which increased demand for COVID-19 vaccination.

Amid the COVID-19 pandemic, vaccination rates among high-risk target populations (i.e., pregnant women and people 45+ with chronic disease) remained unacceptably low in Serbia, North Macedonia, and Moldova. In an effort to understand and address low vaccination, USAID's MOMENTUM Routine Immunization Transformation and Equity project used a behavioral integration (use of data to identify obstacles to behavior change and factors and stakeholders that affect the behavior) approach to increase COVID-19 vaccine uptake in PPs. This approach was aimed at changing provider behaviors through CME and community behaviors through workshops to embrace COVID-19 vaccination as part of a healthy lifestyle with use of adaptive learning to rapidly identify and adapt program implementation.

Across the three countries, 1,035 medical providers received CME training. Over 99% of participants stated that the training improved their knowledge and understanding of COVID-19 vaccines, healthy lifestyles, and quality client services; 99% also reported feeling confident in applying what they learned through the course. Some 2,023 community members attended CE workshops. Afterward, 52% spoke with their medical provider about COVID-19 vaccination, and 18% discussed vaccination with their partner. Additionally, 8% received the COVID-19 vaccine following the workshop. To continue to adapt and respond to participant needs and understand ongoing barriers to COVID-19 vaccination, the project engaged in several adaptive learning processes. These included after-action reviews, data review sessions, and rapid interviews with health professionals and community members to inform both the CME and CE activities.

In January 2024, we implemented the following rapid changes to the CME program to support changes in provider behavior: created a modular version of the curriculum with optional activities based on time availability; at the request of the MOH, adapted the curriculum to include information on influenza and measles; and created a list of frequently asked questions for CME trainers and CE facilitators. CE workshops were expanded in Serbia to include partners and family members. SMS vaccination reminders in North Macedonia were revised based on CE participant preferences. The project is actively measuring how these adaptations are increasing the practice of recommended behaviors and decision-making.

Strategic collaboration with academia and institutes of public health accelerated the accreditation process for the CME course, which is vital to its sustainability. This collaboration also identified ways to adapt the course to other MOH priorities (e.g., human papillomavirus [HPV] and RI). Our intentional collaboration with local partners facilitated entry into the community and increased access to high-risk target populations who are typically difficult to reach, thereby enabling continuous learning during implementation. Rapid assessments and real-time sharing of findings and experience across countries enabled continuous monitoring of progress on the two priority behaviors and informed pivots as needed. We recommend intentional use of rapid, adaptive learning to other programs.

Applying behavioral integration informed the development of evidence-based, tailored strategies to boost vaccine uptake. Coupled with adaptive learning processes, this approach enabled us to enhance program implementation in response to changing needs. Continuously using adaptive learning, we aim to understand how the new adaptations implemented in the new implementation phase (February–April 2024) will improve two key behaviors: trained CME providers recommend the COVID-19 vaccine to those with chronic disease and pregnant women, and their journeys to complete the full course of vaccination. We plan to report the results of these adaptations in April 2024. ■

"One-stop shops" integrating service delivery for RI and COVID-19 vaccination in hard-to-reach and conflict-affected areas of South Sudan

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INNOVATION

Integration of immunization across the life course (i.e., vaccination beyond infancy) with PHC and other non-health interventions (e.g., early childhood development, nutrition, family planning, WASH, agriculture, food security)

Summary:

Countries with fragile health systems like South Sudan experienced significant impacts on RI during the COVID-19 pandemic. RI for children under 1 year declined due to pandemic-related constraints and was compounded by introduction of the COVID-19 vaccine. When South Sudan reported its first COVID-19 case, the CGPP integrated the COVID-19 response with its ongoing polio eradication activities, leveraging existing infrastructure and human resources. We describe the integration process, results, challenges, and impact of this integration on RI and COVID-19 vaccinations.

Integration efforts prioritized coordination, training of vaccinators and volunteers, development of micro plans, data management, and last-mile vaccine delivery. Integrated service delivery was implemented through "one-stop shop" sessions with RIs for children, COVID-19 vaccinations for adults, and other PHC services.

This approach improved RI coverage among children and COVID-19 vaccination coverage among adults, reduced costs of service delivery, and increased access to more comprehensive health services in hard-to-reach communities.

In South Sudan, access to and uptake of RI was challenging before the COVID-19 pandemic and even more so after. Canceled immunization sessions, movement restrictions, and fear of COVID-19 infection worsened RI coverage. South Sudan also experienced decreased numbers of children routinely vaccinated following the COVID-19 outbreak.

COVID-19 vaccination in South Sudan began in April 2021, but the vaccine was met with skepticism. Myths and misconceptions about COVID-19 and the COVID-19 vaccine, including those about safety, risk, conspiracy theories, and health implications, permeated communities and led to low uptake, especially among women and hard-to-reach and mobile communities.

CGPP had experience with integrated service delivery in its previous efforts to implement interventions related to polio and VPDs alongside those for Ebola virus disease. CGPP leveraged the success of these program-specific integrated efforts to advocate for broader integration of service delivery by capitalizing on the programming and plans of partners working in other

spheres such as nutrition and reproductive health. For COVID-19, CGPP's initial activities included integrated interventions, such as risk communication and community engagement for multiple health topics and community-based surveillance.

The project then added integrated service delivery through fixed vaccination sites, mobile vaccination sites, and mass vaccination campaigns, as explained in this article. When possible, these integrated service delivery sessions offered additional health and nutrition services, including nutrition education and food baskets, health screenings, antenatal care, and treatment of common diseases. County health departments provided these services through coordinated efforts among partner agencies and other NGOs, including CGPP. Partners moved together in convoys to reach underserved populations, which proved to be the most effective strategy in high-security risk areas. Each provided services specific to their area of expertise. These integrated one-stop shops for vaccination saved time and money and increased access for community members, particularly women, who were under-vaccinated in the early days of the vaccine rollout.

Integrated outreach and service delivery resulted in increased access to RI, COVID-19 vaccination, and other health services for children and adults. CGPP partnered with other agencies coordinating with county governments to implement one-stop shops—where both children and adults could access care—that increased the number of access points and made them easier to access by tailoring to a community's needs. Mobile or fixed integrated vaccine options saved families time, money, and effort. Instead of visiting several health clinics or immunization locations, all family members could receive needed treatments at one access point. CGPP's integration, outreach, and fixed vaccination contributed 65.4% (742,399 people) of those fully vaccinated with the COVID-19 vaccine in project areas from April 2021 to March 2023. Intensified outreach and integration of RI with COVID-19 vaccination resulted in 57,356 RIs administered, 23.4% of all RI received in project areas from April to September 2022. COVID-19 vaccinations were delivered at US$4.70 per dose, a cost substantially lower than other reported delivery mechanisms.

Lessons learned, vaccine infrastructure, and community networks that CGPP South Sudan built through polio eradication efforts provided a framework upon which to build COVID-19 vaccination programming. CGPP provided relevant training to the same volunteers, who were already trusted sources of information, equipping them with clear, science-backed, and actionable information about COVID-19 vaccination. Additionally, CGPP's integration efforts were successful because of already-established partnership and strong relationships with actors within the MOH and other international and local NGOs and technical working groups.

Integration of service delivery for RI, COVID-19 vaccination, and other health services through outreach one-stop shops allows for greater access to vital health services and resources in communities that are often not reached. These outreach sessions are positioned in locations that allow for community participation and remove some of the barriers of seeking care. Female caregivers, who often bring children for vaccination, but do not keep up to date with their own care, have more opportunity to address their needs. ■

HPV Plus—Integrating vaccination with adolescent health

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INNOVATION

Integration of immunization across the life course (i.e., vaccination beyond infancy) with PHC and other non-health interventions (e.g., early childhood development, nutrition, family planning, WASH, agriculture, food security).

Summary:
Tanzania has one of the highest incidence of cervical cancer in East Africa and works strategically to address global targets 90-70-90—vaccinate 90% of girls, screen 70% of women, treat 90% with pre/cervical disease. These targets aim to eliminate cervical cancer by 2030. The USAID-funded MOMENTUM Country and Global Leadership technical approach of programmatic implementation in Tanzania aligns with global targets to eliminate cervical cancer. In partnership with Tanzania's MOH, MOMENTUM supports implementation of HPV vaccination services in five regions and Zanzibar. MOMENTUM integrated HPV vaccination with adolescent health services through school-based delivery platforms in Zanzibar to increase efficiency in meeting global cervical cancer elimination targets and IA2030. This innovation describes experience in implementing the HPV vaccination integrated program HPV Plus and demonstrates the impact of this MOMENTUM-supported program in improving HPV vaccination access and coverage against HPV vaccination targets in 11 district councils in Zanzibar, Tanzania.

In Zanzibar, administrative vaccination coverage for HPV1 and HPV2 was 38% and 5%, respectively, in the January–April 2023 reporting period. Low HPV vaccination coverage, lack of integration of HPV vaccine with adolescent health services, and limited collaboration between the MOH and Ministry of Education (MOE) to implement HPV vaccination integrated activities in Zanzibar were cited as reasons to promote opportunities to integrate services for efficiency, access, and coverage of HPV vaccination. To improve coverage and strengthen integration of adolescent-focused services, MOMENTUM supported Zanzibar's MOH in implementing the HPV Plus program using a school-based platform beginning in May 2023.

MOMENTUM supported scaling up HPV vaccination integrated services in Zanzibar in five regions to improve access and coverage of HPV vaccination. Following results obtained through human-centered design (HCD) activities, MOMENTUM capacitated the MOH to implement the HPV Plus approach that incorporates HPV/adolescent health education, nutrition assessment, and vision screening, alongside HPV vaccination in schools, health facilities, and community outreach. These services target boys and girls ages 10–14 years. For optimal integration, MOMENTUM supported advocacy meetings, development of tools, capacity-building of teachers and HCWs from 183 facilities, and outreach services, and engaged the MOE as well as a multidisciplinary team of experts. The learning from this intervention contributes to strengthening school/facility HPV vaccination program linkage, promotes access of HPV integrated services, increases coverage, and advocates for scaling up.

In Zanzibar, high acceptability of the HPV Plus model and enhanced capacity of HCWs, school health coordinators, and supervisors on delivery of services were demonstrated. HPV1 and HPV 2 vaccination coverage improved from 38% and 5% in April 2023 to 94% and 76% in December 2023. A total of 16,723 girls and boys received integrated education on HPV. The outcome of this intervention was measured by the number of adolescent girls—educated, vaccinated, received nutritional/visual screening—and the number of referrals from screenings. Key lessons: integration promotes program efficiency. Key success factors include: engagement of the MOE, strong leadership, resource mobilization, and availability of tools.

Political support, MOH and MOE commitment, availability of resources, capacity-building efforts, and designing an effective monitoring system were enabling factors that positively influenced these results. Government and MOE engagement provided an enabling policy working environment. Engagement of a multidisciplinary team of experts on immunization, adolescent sexual health, and ophthalmology, along with building the capacity of HCWs, provided a positive platform to deliver HPV vaccination services according to standards. Supported outreach services contributed to reaching the target population. Strengthened HPV Plus data management enhanced proper documentation. Reaching out-of-school adolescents and HIV-positive populations is critical through the engagement of community leaders and using HIV clinics.

Implementation of HPV vaccination integrated services and reinforcement of sustainability through RI will contribute to strengthening immunization systems to achieve impact goals. The experience in Zanzibar provides an example of how HPV vaccination can be integrated with RI delivery strategies and demonstrates the opportunity for scaling up these efforts to ensure that adolescents receive comprehensive care. HPV Plus models should be implemented in all service delivery platforms (school, facility, or community), considering operationalization costs tailored to the particular adolescent's health. The HPV Plus model has the potential to improve access to HPV vaccination, contribute toward the elimination of cervical cancer, and enhance broader adolescent health outcomes aligning with IA2030. ■

SECTION 3

Lessons learned from COVID-19 vaccination and how they can be leveraged for stronger immunization and health systems or to prepare for future emergencies

Applying lessons for the future of COVID-19 vaccination integration and equitably reaching PPs: Qualitative findings from nine countries

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LEARNING

Lessons learned from COVID-19 vaccination and how they can be leveraged for stronger immunization and health systems or to prepare for future emergencies

Summary:

Given reductions in resources, countries are looking to routinize COVID-19 vaccination into health systems while continuing to reach those at highest risk. The USAID's Health System Strengthening Accelerator conducted a qualitative assessment to examine COVID-19 vaccination delivery strategies for PPs in three countries and partnered with the MOMENTUM Routine Immunization Transformation and Equity project to assess the integration of COVID-19 vaccination within routine services in eight countries. Results show that countries used multiple strategies to reach PPs during the pandemic. Although there is a perception that outreach, mobile strategies, and catch-up campaigns were most effective in reaching PPs, few disaggregated data exist to substantiate this perception. Collaboration with community leaders, coordination with other disease control programs, social media management, and integration—particularly of service delivery, logistics, and data systems—will be key to reaching PPs. Countries can leverage COVID-19 resourcing to develop integrated service delivery modalities and strengthen communication, collaboration, and governance.

As reported cases have waned and the World Health Organization declared the end of COVID-19 as a public health emergency, COVID-19 vaccination efforts have shifted globally. Given reductions in resources, countries are looking to routinize COVID-19 vaccination into their immunization programs and overall health systems while continuing to reach those at highest risk. Integration—with other essential health services and at the health system level (e.g., governance, management, supply chain, information systems, financing, and service delivery)—has been identified as a key strategy for ensuring long-term sustainability of COVID-19 vaccination at the country level.

USAID's Health System Strengthening Accelerator conducted a qualitative assessment to examine COVID-19 vaccination delivery strategies for PPs in three countries (Ethiopia, Nigeria, and Togo) and partnered with USAID's MOMENTUM Routine Immunization Transformation and Equity project to examine COVID-19 integration, specifically, in eight countries (Benin, Ethiopia, Ghana, India, Kenya, Liberia, Mozambique, and Nigeria). In each country, the projects conducted 16 to 24 KIIs with national and subnational government stakeholders and partners and two to three focus group discussions with HWs.

Researchers aimed to understand challenges and strategies for reaching priority groups, the extent of current and future integration, the cost components of various delivery strategies, and lessons learned. The findings will be used to inform national and local governments in decision-making and developing policies and guidance around COVID-19 vaccination.

Assessment countries combined multiple COVID-19 vaccination delivery strategies to reach PPs. Although they perceive that outreach, mobile strategies, and catch-up campaigns were most effective, little disaggregated data exist to substantiate this perception, and given their higher costs, these strategies may not be sustainable. Collaboration with community leaders, coordination with other disease control programs, social media management, and integration—especially service delivery, data systems, and logistics—are seen as key to reaching PPs moving forward. Countries are at varying stages in their path to integration, including establishment of national policies. Considerations include balancing human resource constraints and longer-term feasibility.

Many countries are no longer prioritizing COVID-19 vaccination efforts within the larger context of country health priorities. While integration within routine services is of interest as a mechanism of sustaining COVID-19 vaccination, countries may place more emphasis on understanding how COVID-19 integration can help them achieve their broader immunization and health goals, such as using COVID-19 resources to strengthen immunization and health systems or using COVID-19 integration as a test case for integrated preventive PHC platforms. Ensuring consistent supply and resourcing demand for COVID-19 vaccination have also been noted as challenges that impede progress.

The findings and learnings will be shared with countries to inform and guide their decision-making processes around integration and strategies for reaching PPs. The learnings will also be used to help other countries with similar contexts understand some of the key considerations for integration, with the aim of improving coverage, particularly among high-risk groups, for maximum public health impact. The lessons learned from this assessment will also inform planning and preparedness for future public health emergencies and the strengthening of a life course approach to immunization, benefiting from the investments and processes that were established for COVID-19. ■

From pandemic peril to public health promise: A case of Madagascar's journey from COVID-19 vaccine rollout to full commitment to RI in private health facilities (PHFs)

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LEARNING

Lessons learned from COVID-19 vaccination and how they can be leveraged for stronger immunization and health systems or to prepare for future emergencies

Summary:
Private and faith-based health facilities play a significant role in promoting public health in Madagascar. Although they represent approximately 25% (948/3,795) of the total number of health facilities in the country, according to official data from the MOH, they contribute far more than this proportion in the delivery of health care. Private clinics often provide more accessible medical services to those who can afford it, thereby reducing pressure on public facilities. Their flexibility and ability to respond quickly to the changing needs of the population have been essential, especially during the COVID-19 pandemic, where they have contributed to vaccine distribution with the support of USAID's MOMENTUM Country and Global Leadership. Engaging PHFs in routine vaccination will further strengthen collective immunity and the resilience of Madagascar's health care system.

Background

At the COVID-19 pandemic's onset, PHFs, both for-profit and non-profit (including faith-based), were notably absent from national vaccination efforts, despite their potential contributions. This oversight was a missed opportunity to use their resources and expertise in vaccination campaigns and health care challenges. The pandemic's widespread impact underscored the necessity for inclusive collaboration across all health care sectors. Recognizing PHFs' potentially pivotal role in extending vaccination coverage and improving public health services, there was a growing acknowledgment of the need to integrate them into national vaccination initiatives. This shift emphasized the importance of fostering partnerships between public and private sectors to optimize health care delivery.

Engaging the private sector

In 2022, MOMENTUM, in collaboration with the MOH, initiated support for 100 PHFs to administer COVID-19 vaccinations. Selection involved consultation with regional and district MOH representatives, considering criteria such as proximity to other vaccination sites, attendance rates, personnel availability, and willingness to participate. The project emphasized provider capacity-strengthening, equipment provision, PHF promotion, and logistical support for vaccine availability. Support for data reporting within the national system was also prioritized.

Outcomes

Overall, 100 MOMENTUM-supported PHFs and 25 other PHFs provided regular COVID-19 vaccination services. More than 110,000 individuals have been fully vaccinated through the PHFs. In the region of Fitovavy, in 12 months, PHFs provided 75% of all the vaccinations carried out in that region.

Faith-based facilities, which comprise just over half (55%) of the PHFs administering COVID-19 vaccines, demonstrate exceptional efficiency, contributing to 70% of the overall PHF vaccination efforts. Similarly, rural-based facilities surpass their urban counterparts in reach. Over 70% of the results are attributed to outreach strategies, highlighting the effectiveness of community-based approaches, and the willingness of PHFs to use them, in reaching underserved populations. This data underscores the significant impact of faith-based organizations in rural health care settings in vaccination efforts, emphasizing the importance of tailored approaches to address diverse health care needs across different settings.

Follow-up and conclusions

After the initial year, the focus shifted toward integrating COVID-19 vaccination into RI. Building from the experiences of these facilities, MOMENTUM aims to establish a national framework to recognize and integrate private health care contributions across public health endeavors.

Based on what we have learned from these 100 PHFs, the MOH and MOMENTUM will work on national guidelines and a framework to better engage private providers in all immunization services. It is important to bring together all private health care providers to help with RI and other public health issues. The goal is to ensure that everyone's efforts count to improve health for everyone in the country. ■

SECTION 4

Immunization service experience for clients, caregivers, and the health workforce and quality of care

Addressing the "human element" of service experience to improve demand and uptake for vaccination with clients and communities

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INNOVATION

Immunization service experience for clients, caregivers, and the health workforce and quality of care

Summary:

For decades, immunization services have focused on supply and delivery, with insufficient attention paid to the socio-behavioral considerations that improve confidence, acceptance, use, and demand. The COVID-19 pandemic and a spotlight on immunization inequity have emphasized the critical role trust, demand, and quality play in vaccination uptake. Immunization service experience plays an important role in establishing trust and confidence in the health system and influences clients' use—or nonuse—of immunization services. This session discusses innovations from Nepal and Ghana to address socio-behavioral issues influencing vaccination. In Nepal, we used the Journey to Health and Immunization to identify barriers to vaccination for urban poor communities and co-designed tailored strategies with HWs and communities to address those barriers. In Ghana, we used HCD to strengthen the COVID-19 vaccination microplanning process, bringing together communities and HWs to design localized action plans to address barriers and improve COVID-19 vaccine uptake.

In 2023, an estimated 20 million children missed out on completing their vaccinations. The question is: Why? While numerous issues are at play, one important reason is the experience that communities and individuals have when interacting with their health system and service providers. This experience can create a lasting impression and result in clients avoiding or refusing

services, notably if the experience is negative. JSI has implemented a number of programs across the globe and at community levels in countries focused on strengthening the immunization service experience to improve trust in services and increase vaccination coverage.

To improve the immunization service experience, JSI developed a toolkit, with Demand Hub partners, to advance this area of applied behavioral science. We incorporated this toolkit with immunization program implementation that considers both the health care provider and the caregiver, and the factors that influence providers' abilities to ensure person-centered, high-quality care. For example, in Nepal we used the toolkit, participatory processes, rapid inquiry, and HCD to identify barriers and facilitators to vaccination uptake and co-created context-specific solutions with community members, caregivers, and HWs in urban poor communities. In Ghana, we applied HCD to COVID-19 vaccination microplanning, bringing together communities and HWs to identify social and behavioral drivers of vaccine uptake and design community-based interventions to improve COVID-19 vaccination demand and coverage.

In Nepal, tailored infection prevention and control training focused on communication to migrant populations and home visits to provide education and vaccination services resulted in clients' participation in vaccination services. In Ghana, HCD microplanning resulted in the development of subdistrict action plans implemented by both HWs and community members. In a five-day campaign conducted during program implementation and based on this updated microplanning, Ga South achieved 96.2% coverage of the target population, with the three program districts contributing to 80.5% of those vaccinated. Although many factors affect coverage, the behavioral and service experience orientation clearly resulted in greater demand and acceptance.

In Nepal, JSI supported establishment of a behavioral science center—a partnership between Kathmandu University, UNICEF, the government of Nepal, and JSI to strengthen capacity in-country to design and implement social and behavior change programming. The direct link to the MOH meant research and evidence were applied directly to programming. This can be replicated in other countries. In Ghana, strong engagement from regional leadership and a commitment to using HCD and improving service experience resulted in greater support for implementation of action plans at the subdistrict level. With leadership championing the work, HWs and communities felt better supported and recognized for their efforts.

These programs demonstrate the importance of focusing on immunization service experience and applying HCD and behavioral insights to programing to ensure HWs can provide high-quality care and reliable services. Improving the service experience also creates positive, lasting relationships between communities and the health system. To address some of today's most pressing challenges (e.g., reducing high dropout rates, reaching zero-dose communities and individuals, and improving the scale and coverage of HPV and malaria vaccines), we need to design evidence-based, tailored programming to build trust and accountability of the health system and ensure a life-long commitment to health. ■

SECTION 5

Gender and other social determinants of equitable immunization and how programs address them

Building on men's passion for football to inspire vaccine uptake

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INNOVATION

Gender and other social determinants of equitable immunization and how programs address them

Summary:

The 2023–2024 Africa Cup of Nations (AFCON) offers an opportunity to reach millions with messages about confidence in and uptake of COVID-19 vaccine and RI. Leveraging the enormous popularity of AFCON can build a social norm around COVID-19 vaccination.

Designers, led by the USAID-funded Breakthrough ACTION project, were faced with challenges including reaching an audience of primarily men who traditionally do not engage in health issues and rarely seek vaccination. Challenges were overcome by including diverse voices in the design, listening to what men care about, using humor, and not reinforcing negative gender norms around men as family "protectors."

We implemented the campaign in four countries and included TV and radio spots, posters/billboards, social media posts, and community-based watch parties where vaccinations were offered. Data are still being collected and analyzed to assess impact; preliminary findings indicate it was well received and resonated in the countries with men and women.

We faced a unique challenge of leveraging the excitement around the AFCON tournament to create a multi-country campaign to increase vaccine uptake among those most vulnerable to COVID-19 and among children who needed RI. Although men are the primary AFCON fans, they were not commonly the focus of COVID-19 messages and, in this context, often consider it to be the mother's role to manage the health needs of families. We were intentional about not reinforcing negative gender norms about men being "protectors" and sole decision-makers in the home, and used humor to attract attention during the month-long tournament.

The campaign design was based on key insights derived from listening to men, framing the messages in a humorous way (such as in this video: https://www.youtube.com/watch?v=7mkflFe8seo) and positioning the family as the centerpiece. Learnings that influenced the design included that men show their passion around sports, but do not necessarily channel that same emotion to their families, and that men who are involved with their families' health are not celebrated. We used the AFCON campaign to celebrate men who get involved with their families' vaccination and encourage men to "bring the passion home." We refined the concepts, and pre-tested and iterated them based on feedback from football fans in all four intervention countries using WhatsApp groups and face-to-face mechanisms.

Several lessons were learned: It is possible to reframe vaccination as something fathers and mothers will want to contribute to because it shows love for their family and is worthy of celebrating. Men can be motivated to support loved ones to get vaccinated even if they are not being asked to get vaccinated. Sports are a great way to reach men and their families, as well as shift gender norms if done in a way that is respectful to the realities men face and with humor. Reaction to the campaign was overwhelmingly positive, based on social media and community watch party events.

Diverse voices are essential to designing effective social behavior change campaigns. We created an enabling environment for a myriad of perspectives to shape the campaign by inviting representatives from government, football associations, sportscasters, creative agencies, and Breakthrough ACTION to participate in the design workshop. Additionally, there were gender experts present who were vigilant about making sure the overall approach, messages, and images promoted positive gender norms and did not reinforce negative ones, especially in the context of football.

Reaching immunization goals requires vaccination to be seen as a routine part of taking care of one's health and needs to engage the whole family. Getting men engaged with their families' health and taking an active role in vaccination has been challenging, given that this is often seen as a woman's role. Campaigns such as AFCON can reposition men's role in encouraging and facilitating vaccination as something men can be proud of and excited about. In addition, the success of multi-country campaigns indicates that resources could be pulled to create regional campaigns that will resonate far and wide. ■

Conducting and utilizing findings from the CGPP gender analysis in Nigeria for programmatic shifts

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LEARNING

Gender and other social determinants of equitable immunization and how programs address them

Summary:

The CGPP conducted a gender analysis in Katsina and Borno States, Nigeria, to ascertain gender-related barriers and opportunities related to immunization efforts. The study revealed challenges, such as institutional inadequacies, difficulties reaching rural areas, and resource shortages in health care facilities. Although women primarily lead polio eradication efforts in communities, more significant male engagement is needed to address incidents of noncompliance, as these are often initiated by men.

In Katsina State, the analysis found that social norms hinder women from reporting acute flaccid paralysis (AFP), indicating a gender-specific barrier. Gender-blind policies that supported limited male participation, along with poor communication strategies, were contributing factors to vaccine hesitancy. Despite emphasizing program achievements in addressing gender gaps in childhood immunization, the summary focuses on critical enabling factors for success, including collaborating with stakeholders and responding to local situations. The summary emphasizes the importance of strengthening immunization systems.

Since Nigeria is home to 30% of the world's unimmunized children, understanding the impact of gender on poor health outcomes is essential. The gender analysis employed a mixed-methods design to understand the gender norms and context and investigate gender gaps in Katsina and Borno States. As a result of the analysis, a detailed gender strategy was developed, focusing on collaboration, gender-sensitive policies, and community-centered solutions.

The gender analysis was guided by the USAID Automated Directive System 205 framework, which includes five domains for gender analysis: laws, policies, and institutional practices; cultural norms and beliefs; gender roles, responsibilities, and time use; access to and control over assets and resources; and patterns of power and decision-making.

These domains led to our study of gender gaps in our program. We used a mixed-methods approach, using both primary and secondary data. The study included a desk review, household surveys, focus group discussions, and KIIs. Primary data collection took place in 12 purposefully selected villages in Borno and Katsina, with a total of 1,328 respondents (46% male, 54% female) participating in at least one form of primary data collection. The Kobo Collect App was used for the mobile collection and analysis of quantitative data, while qualitative data from KIIs and focus group discussions were manually examined. Findings from the gender analysis were used to develop a gender strategy that included tweaks and interventions to address gender-based barriers and enabling factors to immunization.

To bring positive changes based on what we've learned, we created a detailed gender strategy. This plan involves collaborating with faith-based groups and providing gender equality training to volunteer community mobilizers (VCMs), male peer educators, program staff, and other stakeholders such as the Ministry of Women's Affairs. Through empowerment training, we aim to strengthen our VCMs and engage key community figures for support. Giving priority to VCMs, we plan to organize training sessions on encouraging the reporting of AFP and conduct the GALS catalyst training as a way of empowering our VCMs across the focal states.

Through collaborative efforts, our focus is on adjusting cultural norms rather than changing a community's culture. These strategies will directly address issues identified in the gender analysis, enhancing our program's overall success. This learning-driven approach will seamlessly integrate gender equality strategies into our program, ensuring lasting improvements grounded in gender-informed insights.

The findings from the CGPP Nigeria gender analysis will promote significant modifications in our approach to immunization, most notably the development of a comprehensive gender strategy. This initiative will promote collaborative, gender-sensitive, and community-centered polio and immunization programming. The project expects gender-sensitive programming shifts will create greater community trust, awareness, and engagement, moving focal communities further on the continuum of gender equality. CGPP will continue to develop new efforts to support the all-female cadre of VCMs. It is expected that these efforts will not only lead to more empowered CVs, but will also contribute to better community engagement and education, and improved case identification. The ongoing monitoring of community participation, AFP reporting rates, and overall vaccination policy efficacy will demonstrate our commitment to long-term positive impact. Lessons learned also highlight the importance of collaborative, gender-sensitive approaches for long-term improvement.

Effective collaboration with government agencies, faith-based groups, and partners has been crucial to our positive outcomes. This collaboration ensures the smooth execution of our activities, especially in resolving VCM issues, emphasizing good communication and collaboration. Encouraging VCMs to report AFP cases with community-expected rewards is vital. Remaining open to adjusting plans based on results of gender analysis demonstrates our commitment to understanding and respecting local cultures. Our overarching goal is to enhance the effectiveness and relevance of our efforts. The establishment of a feedback system enables VCMs to share insights, fostering continuous improvement and community involvement. We advise others to prioritize collaborative approaches, tailored incentives, cultural sensitivity, and feedback mechanisms for success.

The gender analysis will be shared with the polio National Emergency Operations Centre, which is the national coordinating body for polio eradication. Addressing gender concerns will improve program performance, reduce disparities, increase community involvement, and help in aligning with immunization targets. Insights from this learning will serve as a roadmap that will offer practical knowledge for similar challenges in diverse contexts. ■

SECTION 6

Broadening the base of support for immunization program operations

Building community ownership of immunization through innovative partnerships

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INNOVATION

Broadening the base of support for immunization program operations [this would include innovative partnerships and domestic resource mobilization]

Summary:
In DRC and Mozambique, MOMENTUM Routine Immunization Transformation and Equity connected nontraditional partners (NTPs) with government EPI managers to increase demand and uptake of COVID-19 vaccines and RI to address obstacles to equitable coverage.

In DRC, partners participated in co-creation workshops on immunization and local needs with health zone (HZ) managers or national EPI staff. Each partner developed work plans and signed MOUs with the relevant HZ central office. Mozambique conducted a mapping exercise and invited potential stakeholders to partner with the EPI.

With project and EPI assistance, these new partners organized constituent discussions, followed by optional onsite vaccination. This approach substantially increased COVID-19 vaccination coverage, and identified zero-dose and under-immunized children for vaccination. Partners meet regularly with local health officials to discuss needs and progress, along with potential solutions.

These partnerships in both countries foster community ownership of immunization as a path toward sustainability.

The NTPs include religious, civil society, and women's organizations; business associations; an organization of people with disabilities; and others. Their engagement began in the context of the massive effort to increase uptake of COVID-19 vaccine in the face of rampant rumors, disinformation, access issues, fear of novel vaccines, and a decline in RI uptake due to the epidemic. The spread of mis- and disinformation exacerbated hesitancy among the general public, as well as among HWs and political and religious leaders who influence vaccine demand. Distrust spread to RI. The project recognized that working through organizations representing a wide variety of groups would help spread reliable information tailored to constituents' concerns and increase trust in and access to routine and COVID-19 vaccines.

The project developed a six-step engagement approach: 1) Map potential NTPs; 2) Conduct semi-structured interviews to find out more about potential partners and their communities; 3) Select NTPs to participate based on the locality's unmet needs and potential partners' experience, presence, and commitment to immunization; 4) Develop an action plan and sign a memorandum of understanding between the partner and provincial, local, or national health authorities; 5) Establish a community-level committee to oversee NTP activities; and 6) Implement and monitor action plans monthly, adjusting as necessary.

In DRC, 152 NTPs signed commitments with HZs in project-supported provinces. In eight months, NTPs raised $28,821 for various activities, such as radio broadcasts, training, coordination, outreach, and community-based polio surveillance. NTPs have helped increase vaccination rates among children and pregnant women, and vaccinated 175,520 adults against COVID-19. Coordination meetings and supportive supervision visits assess progress. In Kasai-Central and Haut Katanga's Kapolowe HZ, NTPs continue to support HZs after the withdrawal of the USAID's MOMENTUM Routine Immunization Transformation and Equity initiative.

In Mozambique, mapping identified private sector companies in Zambezia and Nampula provinces to help ensure sustainable support for transportation for mobile brigades. In three provinces, the partnership reduced hesitancy, increased COVID-19 vaccination demand at member businesses and surrounding communities, and increased access through workplace vaccination. A survey explored each NTP's role and achievements.

"Helping NTPs see the value of immunization for themselves, their constituents, and their communities—and their potential role—opens the door to their participation in and ownership of immunization. It helps shift the paradigm from one where partners receive funds to support immunization to one where they mobilize local resources.

Challenges in DRC included selection of partners whose objectives weren't initially aligned, finding ways to keep partners engaged, and getting the MOH/HZ to officially recognize the contributions of NTPs. The project has overcome these obstacles, with donors and implementing partners adopting the project's NTP approach, and the government is expanding the approach nationwide.

Interest in the approach is considerable. In DRC, the project trained Integrated Health Program and Breakthrough Action teams from 15 provinces to implement it. The MOH is extending the approach nationwide. NTPs are helping HZs to meet other maternal and child health needs. In areas the project no longer supports, NTPs continue to support immunization.

In Mozambique, provincial and district EPI are involved in all partnership discussions and are part of the implementation process to guarantee sustainability and value. Since private sector partners plan long term, continuous dialogue and curation of professional relationships with corporate social responsibility departments help guarantee sustainability and contribution to immunization goals. ■

Mobilizing domestic resources to improve Guinea's immunization program

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INNOVATION

Broadening the base of support for immunization program operations [this would include innovative partnerships and domestic resource mobilization]

Summary:
Since the Ebola outbreaks in 2014–2016 and the COVID-19 pandemic, Guinea has made little progress in improving RI coverage. The most recent Gavi data for Guinea show that as of 2022, only 47% of children had received three doses of the diphtheria-tetanus-pertussis vaccine (DTP3) and 38% of children were zero-dose. From 2019–2023, the USAID-funded Health Systems Strengthening Accelerator project ("Accelerator") worked with Guinea's EPI and local immunization stakeholders to strengthen Guinea's immunization program by identifying systemic barriers and determining solutions to overcoming these barriers. Through the Accelerator's consultation with the EPI and other key immunization stakeholders, insufficient funding for immunization was identified as a challenge. To support the EPI's efforts to identify alternative methods to financing immunization services, the Accelerator supported the EPI and other local stakeholders in implementing community funds to finance immunization services through domestic resource mobilization.

The 2014–2016 Ebola epidemic and the COVID-19 pandemic in Guinea highlighted the fragility of Guinea's health system and further delayed efforts to improve Guinea's low RI coverage. Despite efforts from the EPI, MOH, and other partners, Guinea's RI coverage has remained low due to a series of systems-level barriers, including the need for better financing of Guinea's immunization program. Health expenditure in Guinea dropped from 4.07% in 2019 to 3.95% in 2023, and financing for immunization services depends heavily on funding from external partners. This reliance on external funding has resulted in funding gaps that Guinea's EPI has struggled to fill despite efforts to mobilize sufficient resources from alternative sources.

The Accelerator began country engagement in Guinea by completing a landscaping exercise to identify the root causes of Guinea's low immunization coverage through consultations with Guinean stakeholders. Consultations revealed insufficient funding for Guinea's immunization program and highlighted the need to identify alternative sources for financing of the EPI's annual activities. In response to the stakeholders' identified needs, the Accelerator facilitated local resource mobilization workshops in three districts—Télimélé, Boffa, and Forécariah—where participants were trained on identifying priority funding needs (e.g., transportation to provide immunization services in hard-to-reach areas) and how to advocate for increased financial contributions from public and private sources.

During the workshop, financial contributions and commitments to provide monthly donations were secured from some private businesses and religious leaders. The Accelerator and EPI provided additional follow-up support in Télimélé and Forécariah to ensure accountability and sustainability for any mobilized resources. The Accelerator and EPI worked with district officials, who had participated in the initial resource mobilization workshops, to establish a community fund for immunization managed by a committee of local elected officials, civil society members, and health officials. Funds collected from local business and local governments are deposited into this fund. The Accelerator and EPI drafted management guidelines for the fund, which were reviewed and validated by the newly appointed committee officials. Resources from the community fund are earmarked to finance immunization and health-related activities in each district.

Stakeholders from the regions of Kindia and Dubreka noted that expected funding for health services often does not reach the health district level, resulting in a lack of payments for CHWs and EPI agents and frequent stock-outs of supplies. Identifying alternative and innovative funding sources, such as domestic resource mobilization, can support Guinea's immunization program in covering funding gaps at the local level to reduce barriers to providing services (e.g., transportation costs and supplies).

Strengthening Guinea's immunization financing and covering funding gaps are crucial steps to improving low RI coverage. By identifying innovative and alternative approaches to financing through domestic resource mobilization efforts, health centers are able to invest in district- and community-level financial needs such as implementing the advanced immunization strategy to improve outreach services to remote areas, investing in health center structural improvements, and improving training of health personnel including CHWs and community mobilizers (relais communautaires, or RECOs) on immunization services. ■

Mobilizing support and domestic resources to achieve high, equitable immunization coverage in Jigawa State, Nigeria using a co-created capacity-building approach for health budgeting and planning

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INNOVATION

Broadening the base of support for immunization program operations [this would include innovative partnerships and domestic resource mobilization]

Summary:

Insufficient financing is a root cause of entrenched obstacles to high, equitable immunization coverage. In Jigawa State, Nigeria, MOMENTUM Routine Immunization Transformation and Equity ("the project") is undertaking an innovative capacity-building approach co-created with key government stakeholders to mobilize domestic resources for RI at local government area (LGA) level and increase domestic financial ownership of RI services.

Through the co-creation process, stakeholders determined technical support needed, relevant health personnel, expected outcomes, and key partners from other ministries to engage in implementation. Beginning in March 2024, the project will strengthen capacity of local health managers through activities synchronized with the state budget cycle, enabling state-level officials to support LGAs in budget preparation/negotiation, and fostering prioritization of RI in LGA and state budgets. This approach, aligned with local financial structures, presents a replicable, adaptable model for decentralized countries grappling with insufficient financing as a barrier to achieving immunization goals.

A key entrenched obstacle to reaching zero-dose children and missed communities in Jigawa State, Nigeria, is inadequate financial resources at the LGA level to cover operational costs of delivering RI services. A root cause of this challenge is limited capacity at this administrative level to ensure that resource needs and gaps identified in microplans are incorporated into annual budgets and then funded. Specifically, LGA staff may lack essential skills, awareness of the budget cycle and process, and confidence to effectively communicate RI financial needs to local non-health actors involved in resource allocation.

The project is working with health and non-health government actors in Jigawa State to develop and implement a tailored capacity-building approach for health officials from two LGAs to mobilize resources for RI. Co-created with key government officials from the state and LGA levels, local champions, and CSOs, this approach aims to establish a government-led intervention, ensuring both sustainability and scalability. Traditional interventions, such as training health care workers, are often constrained by insufficient operational costs to deliver services in remote areas. This innovation specifically addresses

that constraint. With technical assistance, training, mentorship, and coaching activities aligned with the state budget cycle, LGA health managers are expected to become empowered to engage in and influence the annual budgeting process mobilizing local resources for RI services.

The co-creation approach has successfully garnered government support and active participation during the formulation and implementation phases, triggering conversations at different government levels and across sectors on the need to change the predominantly donor-driven nature of RI services in Jigawa State. Anticipated outcomes include: LGA health managers will be able to draft compelling fund request memos and track budget allocations; there will be collaboration with other ministries; and partnership with state-level ministries and government agencies will allow state-level officials to assist LGAs with budget preparation and negotiation, enhancing the prioritization of RI in both LGA and state budgets.

Allowing government stakeholders to co-create solutions and fostering a partnership between health and non-health institutions has laid a robust foundation for the activity. It enabled the engagement of key government officials at the state and LGA levels, enhancing RI visibility in the health resource allocation discussions. Understanding the health financing landscape and identifying key stakeholders for budget allocation proved essential in mobilizing domestic resources. The challenge lies in sustaining and scaling capacity-building for officials with high turnover. To address this, programs must ensure government-led efforts, proposing an iterative approach to adapt the plan to changing contexts and aim for institutionalization.

This innovation offers an effective model for mobilizing domestic resources for RI services at subnational levels of government, making it adaptable and scalable for highly decentralized countries where insufficient financing is an obstacle to achieving immunization goals. Through a co-created capacity-building approach with health and non-health government stakeholders, an effective and sustainable plan can be developed to enhance local health managers' skills. This enables health managers to participate in the annual budgeting and planning process and advocate with key government officials for funding to reach hard-to-reach areas—thereby advancing equity in immunization and increasing domestic financial ownership of RI services. ■

Strengthening community health and immunization integration in Guinea

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LEARNING

Broadening the base of support for immunization program operations [this would include innovative partnerships and domestic resource mobilization]

Summary:
Despite efforts by the Government of Guinea and its partners, the country has made little progress in improving RI coverage over the past 10 years. From 2019–2023, the USAID-funded Health Systems Strengthening Accelerator project ("Accelerator") facilitated a co-creation process to support Guinea's MOH to implement the National Community Health Policy (PNSC). Guinea's EPI considers community engagement key to improving immunization coverage; however, there is a lack of explicit strategies to ensure immunization coverage is strengthened via the PNSC. Through the Accelerator's consultation with the EPI and stakeholders, poor coordination between the EPI and Directorate of Community Health and Traditional Medicine (DNSCMT) was identified as a barrier to integrating community health and immunization. To improve coordination/communication between the EPI and DNSCMT and strengthen integration of community health and immunization, the Accelerator supported the EPI and local stakeholders in implementing community-level immunization activities.

The 2014–2016 Ebola epidemic and the COVID-19 pandemic in Guinea highlighted the fragility of the country's health system. The government has since committed to strengthening the health system through the PNSC, which was launched in 2018 in response to longstanding health system challenges and which aims to improve health outcomes at community level, in part through provision of preventive, curative, and referral services. Despite efforts from the EPI, MOH, and other partners, Guinea's RI coverage has remained low due to a series of systems-level barriers. Most recent data from Gavi show that only 47% of children had received three doses of diphtheria-tetanus-pertussis vaccine (DTP3) and 38% of children were zero-dose as of 2022 in Guinea. Guinea's EPI has identified the need to integrate community health and immunization as a means to improve RI coverage; however, there is a lack of strategies to ensure Guinea's immunization coverage is strengthened via the PNSC.

The Accelerator began country engagement in Guinea by completing a landscaping exercise to identify the root causes of Guinea's low immunization coverage through consultations with Guinean stakeholders. Consultations revealed the underutilization of CHWs for the identification and referral of underimmunized and zero-dose children and the need to improve coordination and communication between the EPI and DNSCMT to better integrate Guinea's community health and immunization programing. In response to the stakeholders' identified needs, the Accelerator launched several community-

based immunization activities, including capacity-building and social mobilization workshops with local government officials and CSOs, and organized a coordination committee between the EPI, DNSCMT, and the National Health Promotion Service (SNPS). Through monthly convenings, the committee ensures coordination between the three participating entities in monitoring implementation of community-based immunization activities by CHWs and community mobilizers (relais communautaires, or RECOs).

Following the Accelerator's organization of the coordination committee, the EPI, DNSCMT, and National Health Promotion Service now harmonize their annual operational plans to minimize duplication and keep each other informed on their specific interventions and identify collaborative opportunities. The Accelerator's capacity-building efforts with local government officials and CSOs from Forécariah and Dubréka led to an increase in their involvement in immunization activities at the community level, including leading educational sessions on dispelling vaccine misinformation and communication campaigns to promote the benefits of immunization and address vaccine hesitancy.

Guinea's EPI has stressed the need to better integrate immunization into the PNSC as part of the EPI's efforts to increase low RI coverage and to align itself with Gavi's five-year strategy, "Gavi 5.0," to ensure equitable and sustainable use of vaccines by 2025. However, poor coordination, resource and funding flow challenges, and other systemic barriers are challenges to integrating community health and immunization in Guinea, underscoring the importance of navigating these challenges through a systems approach.

It is necessary to create sustainable mechanisms to strengthen coordination between the different community health programs of Guinea's MOH to achieve adequate and equitable immunization coverage. Empowering and strengthening the capacity of local change agents, such as local government officials and CSOs, allows for their more sustainable involvement in raising awareness of the importance of immunization at the community level. Advocating for the involvement of CHWs and RECOs in immunization services supports Guinea in reaching the last mile to reduce cases of under-immunized and zero-dose children. Learnings from the Accelerator's systems-level and co-creative approaches can be applicable to different country contexts who face similar systems barriers to improving immunization coverage. ■

SECTION 7

Building vaccine confidence, demand, and trust in health systems

Building vaccine confidence, demand, and trust through community action groups (CAGs) in CGPP implementation areas of India

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INNOVATION

Building vaccine confidence, demand, and trust in health systems

Summary:
COVID-19 lockdowns disrupted health care delivery and impeded access to basic services, including immunization. Health care workers and individual influencers faced challenges in reaching families. Rampant myths and misconceptions about COVID-19 permeated CGPP's focal communities. CGPP formed CAGs to address community needs, provide information about COVID-19-appropriate behaviors (CABs) and vaccination, increase demand for childhood immunization for polio and other VPDs, and dispel myths and misconceptions.

By promoting CABs, CAGs played a crucial role in advocating for vaccination. They were integral to achieving high coverage of COVID-19 vaccination and maintaining high coverage of polio supplementary immunization activities (SIAs) and RI during the pandemic. Members of CAGs shared responsibilities, enhancing local ownership. An external assessment found the CAG model to be sustainable and replicable, emphasizing its diverse composition and collaborative approach. The model could also be used to collaboratively address community-level issues related to immunization, child health, and other emerging public health challenges.

Globally, the COVID-19 pandemic led to 14.3 million zero-dose children and outbreaks of diseases, such as measles and diphtheria, affecting marginalized groups disproportionately. Overcoming these challenges requires sustained community engagement, where CAGs can play a crucial role in enhancing trust in immunization programs and achieving universal vaccination coverage.

Initially, CGPP India supported social mobilization for polio and RI by community mobilization coordinators and local influencers. The emergence of the COVID-19 pandemic coincided with the disengagement of community mobilization coordinators in April 2020 through CGPP's transition plan. COVID-19 lockdowns impeded access to PHC, immunization, and daily needs for many communities. Mandatory quarantine, isolation, and labeling of households added to the mental trauma and stigmatization of the affected families. Health care workers encountered resistance to tasks, such as testing for COVID-19, and communities became skeptical or scared to attend RI sessions. Influencers also faced difficulties in social mobilization. To overcome these challenges, CGPP shifted from the strategy of engaging individual influencers to instead having groups of influencers be part of CAGs working together for positive health behavior change in focal communities.

CGPP India formed 863 CAGs, made up of 6,960 members including polio influencers, ration dealers, community leaders, and others with influence, who assisted their communities during the COVID-19 crisis. CGPP staff oriented the CAGs and facilitated the process of assisting community members in need. CAG members raised community awareness about CABs. When the COVID-19 vaccine was rolled out, CAGs played a critical role in mobilizing individuals resistant to vaccination. Some CAG members got vaccinated first and became role models for others in the community. They also supported vaccinators in managing crowds and ensuring that CABs were followed at the vaccination sites. Further, the CGPP engaged CAGs to promote polio and RI. CAGs helped in boosting caregivers' confidence in vaccine safety at RI session sites.

CAG members helped promote COVID-19-appropriate behaviors, including COVID-19 vaccination, and contributed to achieving high vaccination coverage. In addition, they helped with sustaining high coverage (≈100%) of polio SIAs and RI (full immunization coverage>80%) during the peak period of the pandemic. CGPP India replicated the CAG approach for vaccinating zero-dose children in high-priority health sub-centers from the CGPP's project districts. Within one year, the interventions, including the deployment of mobilizers from these sub-centers, contributed to vaccinating more than 26,000 zero-dose children and reducing their percentage from 10% to 1% in CGPP project areas.

An external assessment found that the engagement of CAGs is a sustainable and replicable approach because of their composition, representation of different departments, and commitment to doing good for society (ADRA India, 2024). CAGs facilitate the sharing of responsibilities and accountability among group members and are a trusted source of information within communities.

Forming informal groups of members with diverse skills and representing or associated with different networks/departments provides an avenue to collaboratively address community-level issues related to immunization or any other public health challenges. In a new setting, the selection and sustaining motivation of group members would be key to success.

The COVID-19 pandemic disrupted immunization services and resulted in 14.3 million zero-dose children in 2022, causing measles and diphtheria outbreaks (UNICEF, 2023). Moreover, 35 countries face outbreaks of circulating vaccine-derived poliovirus (GPEI, 2024). Zero-dose children often come from marginalized groups such as migrants, refugees, and minorities. Building confidence among these populations and regaining momentum for immunization recovery requires a sustained community-engagement approach. CAGs have shown the ability to enhance community engagement and support frontline workers for social mobilization and bridging gaps between communities and immunization systems. Greater community engagement will build trust in immunization programs and help ensure that every child is vaccinated. ■

Building vaccine confidence in faith communities through innovative promising practices

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INNOVATION

Building vaccine confidence, demand, and trust in health systems

Summary:
Local faith actors (LFAs) offer opportunities to increase demand for vaccination and address vaccine hesitancy, and play a critical role in fighting misconceptions and promoting healthy behaviors. Religious factors are the third most frequently cited reason for vaccine hesitancy globally, so LFAs are essential in immunization planning and rollout. Through MOMENTUM Country and Global Leadership, qualitative studies conducted in four countries identified 15 promising practices for engaging LFAs to increase acceptability, uptake, and coverage of COVID-19 immunization—ranging from high-level governance approaches to community-level interventions. Six promising practices were selected for the vaccine promotion toolkit, focusing on open dialogue through key stakeholders in India and Sierra Leone. Approximately 50 key stakeholders from each country utilized the toolkit in their communities. They reached over 3,000 and 20,000 people with toolkit messages in India and Sierra Leone, respectively. This highlights the importance of LFAs in increasing vaccination uptake, coverage, and equity within their communities.

Religious factors are the third most frequently cited reason for vaccine hesitancy globally; however, few official religious texts explicitly reject immunization and views on vaccines vary within religious groups. Qualitative studies identified numerous promising practices for engaging LFAs in promoting immunizations that may be adapted and/or scaled in similar contexts to encourage vaccine acceptance. The identified practices are innovative, extending beyond so-called sermon guides, the traditional intervention used to engage LFAs as health and development actors. Six of these promising practices are included in the vaccine promotion toolkit utilized in India and Sierra Leone.

Through KIIs and country-level research in Sierra Leone, Ghana, Uganda, and Indonesia, 15 promising practices were identified for engaging LFAs that may increase the acceptability, uptake, and coverage of COVID-19 immunization. These practices range from high-level governance approaches to grassroots-level community interventions. Six of the practices were included in the vaccine promotion toolkit; they are practical (e.g., including examples, specific steps, guides) and applicable to a variety of engagements and environments. The six practices featured are: 1) Theological dimensions of vaccination; 2) Guidance for holding discussions on vaccination; 3) Social media messaging; 4) Guide for holding inter-faith discussion forums on vaccine promotion; 5) Guide for harmonized inter-faith vaccine campaigns; and 6) Guide for engaging faith-based scientific technical bodies.

MOMENTUM disseminated the vaccine promotion toolkit, focused on engagement with faith communities, by way of dialogue and sharing, through key stakeholders in India and Sierra Leone. Approximately 50 key stakeholders from each country utilized the toolkit in their communities. They reached over 3,000 and 20,000 in person with toolkit messages in India and Sierra Leone, respectively. Many more were reached through messages shared over radio, social media, and WhatsApp. Both countries held closing ceremonies, during which stakeholders shared their experiences, completed a pulse poll learning exercise, and received a certificate recognizing them as vaccine ambassadors.

Also in India and Sierra Leone, ongoing immunization campaigns made the toolkit timely and relevant. In Sierra Leone, Section 1 of the toolkit (theological dimensions) was the most popular and the toolkit was used mostly in local COVID-19 vaccine efforts. In India, Section 3 (social media) was the most popular and the toolkit was frequently used to support local polio campaigns. In addition, many of the stakeholders implementing the toolkit in their communities were involved in its initial development, which supported buy-in and collaboration.

With over 84% of the world's population belonging to a major religion, LFAs are outsized influencers of community values, attitudes, and behavior. The qualitative study to identify promising practices in four countries noted that there is unprecedented zeal for COVID-19 vaccination among LFAs that may be tapped to boost COVID-19 immunization, as well as to reach future immunization goals. Regardless of whether vaccine hesitancy stems from religious convictions, widespread myths and misinformation, or cogent beliefs and fears, LFAs play a critical role in vaccination uptake, coverage, and equity within their communities. ■

SECTION 8

Digital health advances (e.g., immunization records, defaulter tracking/reminders, hotlines, use of direct deposit, and mobile money)

Preliminary learnings from the development of an AI WhatsApp chatbot to raise understanding, awareness, and access to RI services in India

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INNOVATION

Digital health advances (e.g., immunization records, defaulter tracking/reminders, hotlines, use of direct deposit, and mobile money)

Summary:

The MOMENTUM Routine Immunization Transformation and Equity project's India program is developing a chatbot to deliver information to community members via WhatsApp to increase access to and utilization of high-quality RI services. Through AI, users can access and interact with trusted information, and identify vaccination sites, using natural language (in either English or Hindi, with potential for expansion). The chatbot has been trained using technical guidelines and other trusted content to deliver clear, understandable, and shareable responses.

We focused on lessons learned and model training, along with feedback from user testing and co-designed activities. The chatbot will not officially launch until early April, but we will share key takeaways from design and development work, focusing on safety and privacy concerns related to AI. We also included a live demo of an early proof of concept and an updated pre-launch version of the chatbot that users will be able to interact with.

Background

Chatbots have long been used in low-resource settings as powerful public health tools to deliver educational content, collect data, and interact with larger digital systems. India's high rate of WhatsApp usage and its mature digital health ecosystem suggest an enabling environment for chatbot-based interventions. In addition, recent advances in both the power of natural language processing (NLP) and the accessibility and ease of use (and implementation) of the most advanced NLP and tools presented an opportunity to deliver trusted, personalized immunization content at scale.

Progress to date

The project's digital health and engineering team began with a proof of concept that used open-source software to connect WhatsApp's business platform to OpenAI where a purpose-built AI assistant was trained on a simple, validated document of frequently asked questions.

Additional features are being added in anticipation of end-user validation and user acceptance testing, including guided input flows, button-based rule logic, and location-based search that allows users to find immunization service delivery locations based on their current location.

The team prioritized safety and privacy throughout the development process, including the development of rigorous safety and validation protocols to guide both internal and end-user testing and evaluation activities.

Working prototypes suggest that the traditional, hybrid chatbot architectures translate well with the addition of AI and NLP functionality. We also expect to share results from upcoming performance and security testing.

Internal safety testing has also been encouraging, with narrow, highly specified parameters pulling from Ministry of Health and Family Welfare resources proving successful in preventing the generation of responses not based on technically sound training material. For example, the chatbot will not answer questions about COVID-19 immunization, given that it has only been trained on a RI knowledge base.

Future work

We are currently preparing for initial user testing and plan to share takeaways and results on usability, accuracy, user satisfaction, and sentiment analysis.

We believe that WhatsApp's ubiquity in India, paired with the chatbot's capacity to understand, interpret, and respond to inquiries made with natural language, will increase engagement and utilization to expand access to verified, trusted immunization information.

Our hope is that outputs from co-design activities support the hypothesis that the addition of natural language allows users to benefit from the value brought by previous generations of chatbots, but with an easier and more natural way of interacting that encourages higher levels of utilization and engagement.

We believe that tools such as NLP and generative AI have the potential to greatly expand the delivery and reach of accurate, personalized, and engaging immunization information using modalities that end users are already comfortable with. We also acknowledge the risks and threats posed by this technology, and aim to provide an early example of its use in a safe and responsible way to strengthen immunization systems, build capacity, and, ultimately, advance immunization goals. ■

SECTION 9

Localization

Leveraging partnerships and localization for sustainable polio eradication: Lessons from CGPP Ethiopia

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INNOVATION

Localization

Summary:

The CGPP Ethiopia provides financial and technical support for strengthening partner country efforts to eradicate polio and strengthen surveillance and immunization systems. CGPP collaborates with local civil society, implementers, nongovernmental organizations (NGOs), government, and United Nations agencies to foster innovation, local problem-solving, and sustainability of polio eradication and immunization. The CGPP secretariat is hosted by the Consortium of Christian Relief and Development Associations (CCRDA), a local consortium of NGOs. Additionally, CGPP maintains strong partnerships with five international private voluntary organizations and implements through four local NGOs. These partnerships are instrumental in ensuring a comprehensive and effective strategy for polio eradication and other health care initiatives.

This submission shares experiences of CGPP and CCRDA, identifies the strengths and challenges of this localized partnership, and shows how this partnership has led to a robust consortium for polio eradication, immunization surveillance, and global health security interventions.

Recognizing the power of local consortia, CCRDA, with more than 460 local and international NGOs in Ethiopia, provides fertile ground for collaboration. The localized context of CCRDA enables CGPP to engage effectively in polio eradication, immunization surveillance, and global health security interventions up to the community level by tapping into a diverse network of faith-based, community-based, local, and international NGOs in hard-to-reach and underserved communities in the country.

The collaboration between CGPP and CCRDA empowers CGPP to strategically choose implementing partners from the CCRDA consortium, considering their geographic and programmatic strengths. This selection process has consistently yielded success in executing joint initiatives. Notably, these initiatives include projects funded by prominent organizations such as the Global Fund, Gavi Civil Society Organization Support Fund, Gavi Health Systems Strengthening through the MOH, Bill & Melinda Gates Foundation, United Nations Foundation, and Sabin Institute.

The successful implementation of these projects stands as a testament to the effectiveness of the partnerships, highlights the synergy achieved through thoughtful collaboration, and results in the successful execution of initiatives that contribute significantly to the shared goals of polio eradication, increased immunization, and disease surveillance and response programs. This strategic and results-driven approach underscores the importance of well-coordinated partnerships in achieving impactful and sustainable outcomes in maternal and child health.

The successful collaboration between CGPP and CCRDA stands as an exemplary model for building strong consortia. CCRDA receives direct funding as a local entity to manage CGPP's work in Ethiopia. CGPP has conducted local capacity-building through a clear framework that includes organizational, technical, business development, and policy/advocacy capacity, not only improving project implementation and organizational outcomes, but also setting local organizations up for future success. The lessons learned extend beyond the specific initiatives, showcasing the importance of leveraging diverse networks and effectively using platforms for resource mobilization in the realm of public health. CGPP and CCRDA jointly focus on building the capacities of local NGOs within their polio eradication platforms. Currently, over 58% of CGPP's consortium members are local NGOs, covering 66% of the geographical implementation areas. Although local partners contribute to a larger geographic coverage, the cost of implementation is lower. The increased engagement of local NGOs has been beneficial for CGPP Ethiopia, capitalizing on the cost advantages as local organizations have lower operational costs than international partners. This emphasis on local engagement enhances the effectiveness and sustainability of CGPP interventions.

International and local NGOs are paired for mentoring and capacity-building through this collaboration. CCRDA's strong finance and administration system along with its NGO consortium network enable it to access both national and global funding mechanisms. This financially benefits CGPP in accessing funding sources for its programs. In addition, CCRDA prioritizes building the capacities of local NGOs, aligning with the global movement toward localization, and strengthening the overall effectiveness of the programmatic work.

CCRDA and its local partners are strategically positioned to foster close collaboration with community members. This ensures project sustainability and community ownership, aligning with the principles of effective development projects. Community engagement and ownership are vital factors contributing to the long-term success and impact of CGPP's interventions.

The lessons learned underscore the considerable potential for success in seamlessly integrating interventions through robust collaborations. The engagement of a local partner promotes local ownership and sustainability, empowering local populations to achieve immunization goals. This experience stands as a valuable guide for other public health initiatives aiming to establish resilient consortia, optimizing resource access, and executing effective interventions across diverse contexts. Forging successful partnerships that contribute meaningfully to the advancement of public health goals is possible, and CGPP's collaboration provides a blueprint for navigating the complexities of collaborative efforts even beyond polio and immunization. ■

Localizing COVID-19 vaccination: Empowering community partnerships in India

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LEARNING

Localization

Summary:

The MOMENTUM Routine Immunization Transformation and Equity project supported the Government of India's COVID-19 vaccination campaign, developing localized solutions to reach under-served and priority populations. The project collaborated with 26 local CSOs to support state and local health system authorities to generate demand for the COVID-19 vaccine in 18 states. By distributing 57% of its funding to local CSOs, the project leveraged strong community connections and established trust with the CSOs, while augmenting their immunization expertise, monitoring and evaluation systems, and management and training abilities.

The project's iterative and adaptive implementation approach supplemented the capacity of local partners. The local CSOs used customized communication campaigns, musical jingles in local languages, festivals, and other innovative education strategies. The project accommodated community needs, such as organizing night meetings, using sign language in gatherings, and employing mobile vaccination units, camel carts, and other hyper-localized strategies for education and administration.

Background

The Government of India launched a monumental COVID-19 vaccine campaign, first prioritizing high-risk groups such as health care workers, frontline personnel, and the elderly population, then expanding to the broader population. Challenges included difficulty in identifying vulnerable groups, access to remote areas, shortage of health care professionals, vaccine hesitancy, and misinformation. Addressing these challenges required an agile approach, including highly localized strategies and partnering with CSOs with an understanding of the remote communities.

MOMENTUM Routine Immunization Transformation and Equity approach

The project used a three-tiered implementation model that involved collaboration with government actors, community members, and CSOs as a framework for extending the vaccination campaign to hard-to-reach and priority populations. The project identified support areas with the government, including service delivery, data use, demand generation, and supply chain management, and mapped 18 states with lower vaccination coverage rates. Local CSOs were a critical element for reaching these populations. More than 100 CSOs applied and the project selected 26 CSOs, chosen for their local experience, presence in target geographies, understanding of local issues, valid legal certification, administrative compliance, and prior USAID experience.

Outcomes

With CSOs leading implementation, the project supported the administration of ~15.6 million COVID-19 vaccine doses, ~6 million of which were received by vulnerable groups and 49% of which were received by women. The project also reached ~56.1 million individuals with COVID-19 vaccination messaging. The local CSO partnerships allowed the project to reach 298 low-coverage districts, over a third of all districts in India, in a matter of months. The engagement model was highly effective, and used community assets, such as meeting places, schools, and transportation depots, as vaccination sites to improve uptake and mitigate last-mile service delivery challenges.

Success factors

The principle of localization is a foundational aspect of the project as local actors and communities highlighted gaps in outreach. Local CSOs contributed their deep knowledge of focus populations to allow for rapid adaptation over the course of the pandemic. The project acted as a bridge between the government and the local CSOs to share knowledge, update technical information, maintain monitoring data, and ultimately foster communication between various stakeholders. Strategic collaborations with local government and civil society, along with the active involvement and support of the communities themselves, provided increased pathways for equitable vaccination.

Conclusion

By prioritizing local CSOs and partners, the project strengthened local systems, establishing these local CSOs as leaders for further health initiatives. Led by the localization approach, the project embraced multi-level, solution-oriented collaboration with local, community, and government stakeholders. This partnership with government and CSOs was instrumental in covering a wide geographical area with customized strategies; harnessing local knowledge, capacities, and relationships; and establishing a partnership for future collaborations. Putting local CSOs in the lead to design tailored strategies for hard-to-reach populations can strengthen the reach of RI to achieve equitable immunization coverage. ■

SECTION 10

Other topics

When a toolkit is not enough: A review on what is needed to promote the use and uptake of immunization-related resources

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INNOVATION

Promoting use and uptake of immunization-related resources

Summary:
Although practice-based insights are sometimes shared in reviews or reports, this learning has not been consolidated into comprehensive guidance for resource implementation. This guidance and associated peer-reviewed article describes the output of a collaborative activity between two MOMENTUM projects to conduct a targeted narrative review and synthesis and KIIs to identify practice-based learning. The review article, available at https://doi.org/10.9745/GHSP-D-23-00343, focused on identifying characteristics and factors that promote the uptake and use of immunization-related resources as well as practical strategies that resource users can employ to evaluate existing resources and promote resource use. The guidance document, Factors Associated with Uptake and Use of Immunization Toolkits and Guidance, is available at https://usaidmomentum.org/resource/factors-associated-with-uptake-and-use-of-immunization-toolkits-and-guidance/.

Toolkits, guidance, and capacity-building materials designed to help end users (e.g., program managers, policymakers, and relevant stakeholders) develop, design, and implement RI programs and sustain high and equitable coverage can be challenging to implement—requiring staffing, finances, infrastructure, and capacity-building. Additionally, for a resource to be implemented successfully, critical elements at the national, subnational, local, and facility levels must be in place to support their implementation. However, resources are often not designed with information or strategies to support their facilitation, adoption, or implementation in practice.

Recognizing the know-do gap in immunization-related resource implementation, the MOMENTUM Routine Immunization Transformation and Equity project partnered with MOMENTUM Knowledge Accelerator's Measurement, Adaptive Learning, and Knowledge Management Lab (MAKLab) to identify common barriers and best practices when implementing immunization and related resources. MAKLab conducted a desk review of relevant gray and published literature and conducted KIIs to identify known facilitators and barriers to the uptake and use of immunization-related resources. The analysis primarily focused on implementation of immunization-related resources, but non-immunization resources were considered if the type of resource, user, or use was similar to the immunization context. Findings from the desk review and interviews were synthesized into a list of factors associated with uptake and use of immunization-related toolkits and guidance.

These resources have been used by myriad stakeholders across MOMENTUM projects. Outcomes were measured by standard follow-up with collaborators and periodic surveys.

Enabling conditions is a consideration in the guidance developed but did not inform the development of this review and subsequent guidance.

Practitioners seeking to prepare for or improve uptake and use of resources can use these tables to inform the development of new resources or improve existing resources. Findings should be viewed as a starting point and can be adapted in accordance with project needs and/or augmented with additional practice-based insights. ■

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