

MOMENTUM

Routine Immunization Transformation and Equity

COVID-19 Vaccination Program in Review

May 2021 – May 2023

KENYA





MOMENTUM Routine Immunization Transformation and Equity

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Contact Information

JSI RESEARCH & TRAINING INSTITUTE, INC.
2733 Crystal Drive, 4th Floor
Arlington, VA 22202, USA
Phone: 703-528-7474
Fax: 703-528-7480
Web: <https://usaidmomentum.org/>

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Acronyms

ACF	Ageing Concern Foundation
CHV	community health volunteer
GOK	Government of Kenya
KHPQS	Kenya Health Partnerships for Quality Service
MOH	ministry of health
NLWG	National Logistics Working Group
NVIP	National Vaccines and Immunization Program
PHC	primary health care
RI	routine immunization
SBC	social and behavior change
TWG	technical working group

Results

Reaching the Unreached: COVID-19 Vaccinations



Supported administration of **79,397 doses of COVID-19 vaccines to older people** through local partner Ageing Concern Foundation.

Strengthening the Health System



Trained **1,840 health workers** (51% women; 49% men) as follows:

- communicating with the community | **353**
- planning and organizing vaccination sessions | **1,148**
- recording and monitoring vaccinations | **339**



Supported Kakamega and Trans Nzoia Counties to enter over **80% of backlogged paper-based vaccination records** into the ChanjoKE system.



Supported vaccination distribution to **113 facilities in Kakamega County** and **60 facilities in Trans Nzoia County**.



Supported Kakamega in its COVID-19 data reporting efforts to become the **fourth-best performing county in Kenya**.

Background

As of May 2023, more than 343,000 COVID-19 cases have been reported in Kenya and 5,688 of those cases ended in deaths.¹ When the first case of COVID-19 was recorded on March 12, 2020,² the Government of Kenya (GOK) enacted strict measures to prevent the spread, and when vaccines were available, it set an ambitious goal to vaccinate 10 million people by the end of December 2021. The government began its official vaccination campaign on March 5, 2021, targeting frontline workers and then older people. By December 31, 2021, the GOK reached its goal, vaccinating 10.1 million people, of which 4.2 million people were fully vaccinated and 5.9 million people were partially vaccinated.³

Despite the success of the initial vaccination program, the GOK had to counter misinformation and disinformation campaigns and fears about dose availability. Community concerns about safety and experience with COVID-19 vaccine shortages and stockouts hindered vaccine demand. The budget for health worker trainings and social behavior change (SBC) efforts was limited.⁴

The second and third phases of Kenya's COVID-19 vaccine deployment plan focused on vaccinating 26 million people by December 31, 2022, by increasing vaccination posts, developing tailored communication campaigns, operationalizing the vaccination digital platform (ChanjoKE), and reaching target populations.

- 1 World Health Organization (WHO). COVID-19 Kenya. <https://covid19.who.int/region/afro/country/ke> Accessed May 9, 2023.
- 2 Kenya News Agency. "Kenya Confirms the First Case of Coronavirus". <https://www.kenyanews.go.ke/kenya-reports-first-coronavirus-case/>. Accessed May 11, 2023.
- 3 MOH Kenya. "KENYA COVID-19 VACCINATION PROGRAM- Daily Situation Report." <https://www.health.go.ke/sites/default/files/2023-05/MINISTRY-OF-HEALTH-KENYA-COVID-19-IMMUNIZATION-STATUS-REPORT-16TH-MAY-2022.pdf>. Accessed May 22, 2023.
- 4 "National COVID-19 Vaccine Deployment Plan, 2021." <http://www.parliament.go.ke/sites/default/files/2021-10/Scan-Third%20Progress%20report%20on%20the%20COVID%20situation%20in%20Kenya-Part2.pdf>. Accessed May 9, 2023.



Project Overview

The MOMENTUM Routine Immunization Transformation and Equity (the project) applies best practices and explores innovations to increase equitable immunization coverage in USAID-supported countries. The project is USAID's flagship technical assistance mechanism for immunization working in 18 countries around the world. It works to build countries' capacity to identify and overcome barriers to reaching zero-dose and under-immunized children and older populations with lifesaving vaccines and other integrated health services, including rebuilding immunization systems adversely affected by the pandemic. It also supports COVID-19 vaccine rollout across countries, with a wide range of circumstances and needs.



USAID provided Congressional Notification 108 and 18 funding through the project in response to challenges the GOK faced in its COVID-19 vaccination deployment strategy. From May 2021 to May 2023, the project worked with a consortium of experts and national leaders to support the three phases of vaccine rollout at the national level and in Kakamega, Nairobi, and Trans Nzoia Counties. In collaboration with local organizations under the Kenya Health Partnerships for Quality Service (KHPQS) initiative, the Ageing Concern Foundation (ACF), and national stakeholders, the project:

- 1 Created and deployed health worker trainings, courses, standard operating procedures, and protocols for multiple vaccines.
- 2 Strengthened planning and management capacity through microplanning and data capture, entry, and analysis.
- 3 Strengthened supply chain management and cold chain storage.
- 4 Conducted in-depth reviews of each vaccination phase, emphasizing use of lessons learned and best practices among stakeholders.
- 5 Increased coordination and collaboration among national and sub-national partners and technical working groups (TWGs).
- 6 Integrated COVID-19 vaccination into routine immunization (RI) and other health services programming.

These activities, while initially focused on COVID-19 vaccination, were designed to strengthen Kenya's vaccination systems and processes, with the ultimate goal of a stronger and more responsive health system that will benefit RI efforts and future pandemic responses.

Technical Areas of Support

TECHNICAL AREAS



Stakeholder and community engagement



Partnerships to increase access to and uptake of COVID-19 vaccines



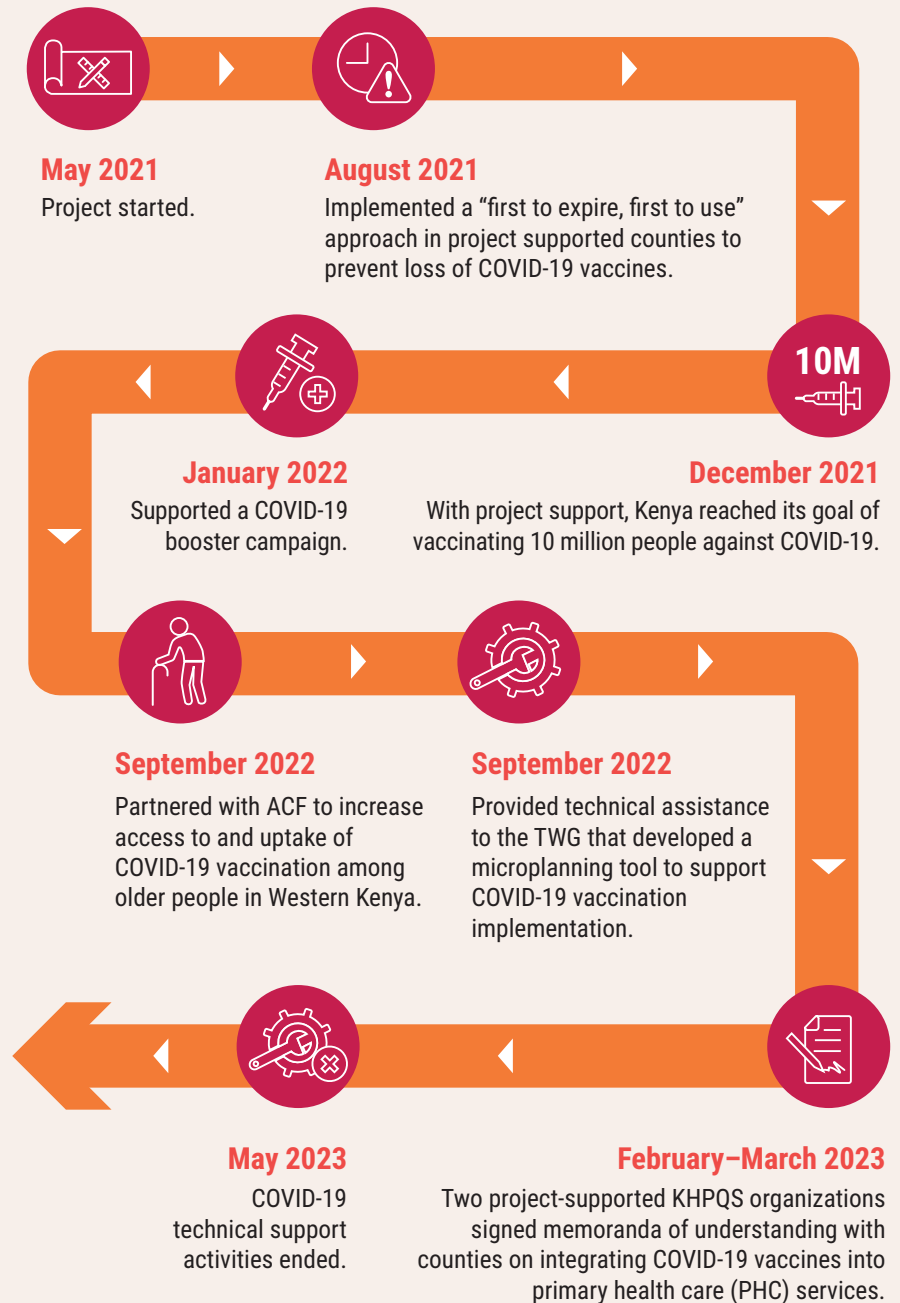
Data review, analysis, and microplanning



Supply chain planning and systems strengthening



Equip and inform: training of health workers



Reaching Underserved and Priority Populations

Stakeholder and community engagement

During the early COVID-19 vaccination campaigns the country focused on vaccinating the most people as quickly as possible, and did not take time to understand reasons that certain populations were hesitant or resistant to vaccination. This left out a critical step in reaching underserved and priority populations.

Engaging stakeholders at national and county levels helped the project understand COVID-19 vaccination-related priorities and how COVID-19 vaccination would affect routine health services. The project supported national-level coordination with county health management teams to ensure their needs were being met and that the national response was cohesive and equitable. Non-priority populations were included in the second phase of the national vaccination campaign to use vaccines that were close to expiring, which called for additional and new tailored outreach strategies.

The project conducted a COVID-19 vaccine demand analysis, which found that people were hesitant to get vaccinated because of myths and misconceptions; had barriers to physically accessing vaccines; were afraid of adverse events following vaccination; and had competing priorities, including work. The project used this information, in addition to vaccination data review, to support coordination efforts among partners and tailor SBC campaigns to assuage citizens vaccination hesitation.

The project discovered that young people's vaccination rates were lagging. In each supported county, the project engaged key stakeholders to strategize how to reach these populations through messaging and innovative outreach strategies. In Trans Nzoia, the project worked with the Ministry of Education to support vaccination efforts for 15–17-year-olds. They identified two main barriers to vaccination uptake: physical access (inability to attend normal vaccination sessions due to work hours); and misinformation on social media. To overcome these barriers, the project employed youth representatives to lead vaccination efforts at sporting events and offered vaccination at work places. The project also consulted people with disabilities, who pointed out barriers to accessing health facilities and in SBC materials.

In Kakamega, the project worked with the National Vaccines and Immunization Program (NVIP) to offer vaccination at high schools and inform teachers, parents, and students about the vaccine and upcoming campaigns. Vaccination uptake at boarding schools was a particular challenge, so the project worked with parent associations to bring health workers to provide education on COVID-19 during parent days and talk with school officials about the importance of vaccination.

The project engaged KHPQS organizations to hold virtual sensitization meetings on what was needed for vaccination rollout and partners' roles in supporting it. The project led supportive supervision activities focused on strengthening the capacity of health care workers from KHPQS organizations, provided technical assistance to several partners on how to conduct COVID-19 vaccination microplanning, and sought feedback on how to improve vaccination efforts. Many of the recommendations focused on using the ChanjoKE system to monitor vaccination status and ensuring that each health facility had ChanjoKE access to upload data. The project took a broad view of its supportive supervision visits and recommendations, looking not just at COVID-19 vaccine implementation, but also at



how organizations and facilities were supporting broader immunization goals. Thanks to this, two KHPQS organizations signed memoranda of understanding with supporting counties to integrate COVID-19 vaccines into their PHC services.



Partnerships to increase access to and uptake of COVID-19 vaccines

During the first two years of the pandemic, Kenya had an overall COVID-19 case fatality rate of 1.7 percent. Among older people, the rate was 7.4 percent, more than four times the overall rate. Despite the fact that older people are more likely to contract and die from COVID-19, myths and misconceptions about the vaccine and mobility and access barriers led to low uptake in this population. When the GOK introduced the vaccine in March 2021, older people were included in the priority group for vaccination, but by December 2022, only 12 percent of them were vaccinated.

The project began a partnership with the ACF to understand concerns of older people and increase their access to and uptake of COVID-19 vaccines in Western Kenya. In partnership with the county and sub-county health management teams, ACF trained community health volunteers (CHVs) and health care workers on COVID-19 vaccination and strategies for reaching older people.

The national COVID-19 vaccination campaign relied on static vaccination sites and creating awareness through mobile phone reminders, TV and radio ads, and social media, none of which are effective for reaching older people, especially those who live in rural areas and can't reach the sites due to mobility problems and/or lack a person to accompany them. Even those who could get to static sites were unable to wait in the long vaccination lines.

In response to these barriers, ACF began door-to-door vaccination campaigns for older people through CHVs, which had been an effective strategy for many other health services. Yet during monthly review meetings with CHVs, ACF learned that older people did not trust the CHVs and that the campaigns were costly, time consuming, and not reaching many people. The project shifted to large vaccination and other health service events in central places during holiday celebrations. It used community leaders to address older people's concerns about vaccination and bring them to the events, which it also hosted at older people's association centers. Similar to other SBC campaigns, ACF held community sensitization meetings at churches, funerals, market places, and chiefs' barazas (a meeting at which the local chief delivers a message from the government to community leaders and members).

“People told us that if we go for the COVID-19 vaccine, we will die. We got scared because we did not want to die early. We were even told that the injection spreads the virus and people like my husband who suffer from chronic diseases, shouldn't be vaccinated because the vaccine will kill them. Out of fear, my husband and I refused to be vaccinated.

Prisca, a 72-year-old in Kakamega County. Prisca and her husband decided to get vaccinated after talking with a project-trained CHV.

While central vaccination events were more successful, they posed new challenges related to transportation and wait times. In response, ACF began providing motorbikes to transport older people and offered refreshments during vaccination events. At the beginning of the campaigns, health facilities experienced vaccination stockouts, leading ACF to work closely with health personnel to estimate required stock and streamline the vaccine pipeline, which eliminated stockouts.

ACF trained health workers to dispel myths and misconceptions about the vaccine and the importance of vaccination. They also partnered with local banks to organize COVID-19 vaccination sessions when older people came to collect their retirement wages; a successful non-health partnership approach.

From October 2022 to March 2023, ACF supported the administration of 79,397 doses of the COVID-19 vaccine to older people at 720 outreach vaccination sites.



Collaboration with non-traditional partners, targeted vaccination outreaches, strategic engagement with community stakeholders, and engagement with CHVs all contributed to increased vaccination for older people. These lessons can be applied to broader life-course immunization efforts (e.g., human papillomavirus and influenza vaccination).

Strengthening Health Systems Management

Data review, analysis, and microplanning

Strengthening health systems and using data to make decisions was critical to ensuring smart COVID-19 vaccine distribution and continued access to regular and emergency health services. As vaccine roll out began, the project coordinated with the NVIP to conduct supervisory activities and facilitate COVID-19 data sharing among partners and stakeholders.

One of the project's major efforts in this area was coordinating and participating in national- and district- level performance review meetings on COVID-19 vaccination. These meetings provided important information on progress toward vaccination targets, if activities needed to shift, priority populations that were being missed, and which government systems and processes needed additional support. The project also used these meetings to discuss and strengthen processes related to RI and other health services. At each meeting, the involvement and integration of COVID-19 vaccination into RI and other health services was mentioned as the main lesson and best practice. Based on this, the project supported the integration of COVID-19 vaccinations into existing health services, such as integrating COVID-19 vaccines into existing RI outreach campaigns.

Vaccination data reporting was a tremendous undertaking for county health teams. The GOK developed the ChanjoKE online database, which gives counties access to data on all vaccine recipients and sends automated reminders to people to receive their second doses. The system also has built-in controls to authenticate people in different stages of vaccination. For example, it was able to track health care workers' practice license numbers to ensure they were vaccinated during the first vaccination phase. Before ChanjoKE, most counties collected COVID-19 vaccination data via paper records. The project trained health workers on the new system and provided internet service bundles to support data collection and upload, greatly increasing data quality and use throughout the counties. In Kakamega, for example, reporting numbers went from less than 20 percent and to over 45 percent, leading to its removal from a list of counties that the MOH had flagged for low data reporting and becoming the fourth-best performing county in Kenya by October 2022. In Kakamega and Trans Nzoia counties, the project supported health



Vicky Maiyo, JSI Research and Training Institute, Inc.

Facilitated data and performance review meetings in Kakamega (4), Nairobi (2), and Trans Nzoia (2).

workers to enter over 80% of the backlogged paper-based vaccination records into the ChanjoKE system. This system can be used to send SMS reminders about RI schedules, and the skills learned from data quality trainings will also help improve RI data collection.

Additionally, the project facilitated performance and data review meetings in each county to analyze vaccination trends on a village level, identify pockets of unvaccinated individuals, and develop microplans to conduct outreach activities in those areas. The focus on COVID-19 data review, analysis, and microplanning has already benefited RI efforts. Facilities planned targeted outreaches and supervisors used data to inform their supportive supervision efforts. In Nairobi, the project adapted an Excel-based RI

reporting tool for COVID-19 vaccinations, which led to its quick adoption since health workers were used to using it. This same tool was further modified when boosters were introduced to ensure continued accurate reporting.

The project supported the NVIP and counties to focus on microplans to reach priority populations and underserved areas. The project supported the development of training materials and the revision of the microplanning tool for COVID-19 vaccination and trained trainers on its use. The project cascaded this training to all nine regions in Kenya. Health workers and CHVs developed microplans for each health facility catchment area in which the project was able to show the unvaccinated population by age and desired coverage and the specific vaccination strategy to be used for each. In August 2022, prior to the microplanning training, 34 percent of adults and 9 percent of teens were fully vaccinated. In just three months after the microplanning training, by December 2022, the number of fully vaccinated adults increased to 37 percent and 10 percent of teens. This training is critical for future vaccination campaigns.

Supply chain planning and systems strengthening

The project worked with the National Logistics Working Group (NLWG) to support supply chain planning and system strengthening because vaccination campaign staff had a large number of expiring vaccines that they lacked support to administer in time. In addition, counties had cold chain capacity challenges and were unable to store as much

supply as was being sent from the national level. In Kakamega, the project worked with the sub-county health management team across 113 facilities, to adjust schedules so that vaccines were delivered to facilities on an as-needed basis. In Trans Nzoia, the project supported vaccine distribution in 60 facilities. Adherence to this model will prevent future overordering and wasting of COVID-19 vaccines.

With the NLWG, the project increased vaccination visibility throughout the GOK and county level using a COVID-19 stock situation two-page report. The monthly report summarized vaccines received and distributed, stock at risk of expiration, and expiration dates. The project used this information to develop rapid vaccination plans where stock was expiring and supported the NVIP cold chain team with planning tools. The project also developed a stock management tool that was used in health facilities in Kakamega, Trans Nzoia, and Nairobi Counties to show how many doses of each vaccine were used, stock balances, and who was vaccinated each day. All of this was done through an Excel spreadsheet that was also used as a backup measure when ChanjoKE service was interrupted. The project also supported the NVIP with proper removal and disposal of expired vaccines.

The project printed dynamic labels for COVID-19 vaccines (6,800 vials) and rotavirus vaccines (2,500 vials). These labels indicate new expiry dates of frozen vaccines that have been thawed and were used to manually update the expiration date as the vaccine moved from one storage temperature to another; critical for shelf-life management.

In its final months, the project supported the MOH monitoring and evaluation program and NVIP to conduct a second COVID-19 vaccine post-introduction evaluation in eight counties. The purpose of the evaluation was to determine the progress on vaccination rollout; document best practices adopted in the rollout of multiple COVID-19 vaccines, strengthening RI programs as part of PHC, and effect of the COVID-19 vaccination on RI; and identify opportunities and recommendations to integrate COVID-19 vaccination and other PHC programs.

Lessons identified included the importance of political commitment to ensure vaccine availability, facilitate multisectoral coordination, and approve use of existing infrastructure; the need for coordinated public education campaigns to overcome vaccine hesitancy; that integration of COVID-19 vaccines into immunization and essential health services requires financial investment and collaboration; and that human resources must be optimized to meet the needs of integration.

The project also supported the NVIP to develop a rapid assessment tool to assess the readiness of the health system to integrate COVID-19 vaccination into routine essential services. The tool was piloted in four counties to inform its design.



Improving the Health Workforce



Equip and inform: training of health workers

When the project began working with the GOK to implement its national COVID-19 vaccination strategy, there were multiple unknowns. The GOK knew there were five vaccines coming into the country (Pfizer, Moderna, J&J, Sinopharm, and AstraZeneca), but given delays in the global supply chain, it did not know when or how many of each type it would receive, nor the various storage requirements.



While preparing for a mass vaccination effort, the project's initial engagement focused on supporting multiple vaccine scenarios.

This included:



Developing training and reference materials for each type of vaccine.



Materials and plans for health workers on vaccine administration.



Multiple standard operating procedures for vaccine logistics and storage.



Various SBC activities and sensitization efforts.

All of this was done through the national-level Task Force Training and Logistics TWG, which comprises people who support combined trainings for vaccine handling, management, and administration.

This work was vital in later vaccination phases as various vaccines required different cold chain protocols. The support the project provided to the TWG was not just important for COVID-19 vaccination introduction, but also for long-term health systems strengthening to integrate COVID-19 vaccinations into RI and PHC protocols and processes.

The project helped develop refresher course materials on COVID-19 vaccination and worked with the TWG and other partners to incorporate refresher training on rotavirus vaccine and the PCV-10 switch into COVID-19 vaccination trainings. These materials were used to train trainers and cascaded to all counties throughout the country. As the project shifted to providing technical support to KHPQS organizations, it facilitated training-of-trainers for KHPQS staff on microplanning, integrating COVID-19 services with RI and PHC services, and delivering vaccination messages to populations with low literacy. These training-of-trainers continue to benefit the health system, as more and more workers are upskilled and provided refresher training. In addition to the training-of-trainers work, the project also trained 1,840 health workers on how to communicate with the community, plan and organize vaccination sessions, and record and monitor vaccinations.

Lessons Learned



Continuous coordination, reflection, and adaptation increases reach

- Be open to programming adaptations and quickly pivoting to reach more people. For example, there was continued low uptake of the COVID-19 vaccine in Kakamega and Trans Nzoia, even with CHV outreach. Once the project understood community needs and reasons for hesitation, it included county administrators in outreach activities, which substantially increased the number of people who got vaccinated.
- Pause and reflect meetings led by ACF and project staff for CHVs and community members yielded insights to adapt activities and improve program efficacy.
- Strong partnerships are essential. The project worked with a variety of non-traditional partners (ACF, motorcycle associations, farmworkers) to vaccinate priority populations.
- Once the GOK eased COVID-19 restrictions, citizens perceived the risk to be low, which led to a drop in vaccine uptake. When counties analyzed which groups were most likely to drop off for vaccinations, they identified *boda boda* (local private transport van) drivers and farmers. The project adjusted its model to offer vaccination services at boda boda huts and farms so workers could get vaccinated at work and not have to take time off.



Tailored SBC and community engagement to adapt messaging builds trust and increases vaccine uptake

- Increased funding for community engagement activities helped ensure vaccine campaign success.
- Data analysis during performance review meetings showed that priority populations were being missed for vaccination efforts, and vaccine hesitancy was different among each group. Tailoring SBC activities and engaging trusted partners for each population group promoted messaging (e.g., local professional associations talked with health workers, doctors and nurses talked to their patients with comorbidities).



Review and analysis of timely and reliable data helps to identify areas for improvement

- Analyzing facility-level data helped the project and partners identify people who were being missed with outreach efforts and refine strategies to improve effectiveness.
- Use of up-to-date data was a critical component of microplanning efforts and supported successful surge vaccination campaigns.



Strategies for integrating COVID-19 vaccinations into routine services are needed for longer-term delivery

- Short, intense vaccination campaigns tax the workforce (e.g., COVID-19 campaign fatigue) and are not sustainable for the long term.
- COVID-19 vaccine introduction greatly disrupted health services. Health workers and facility managers in Kakamega and Trans Nzoia Counties asked that COVID-19 vaccines be integrated into their RI workflow so they could offer vaccinations to parents attending well-child visits. This not only supported vaccine introduction and uptake, it contributed to long-term integration considerations.
- Through the integration of COVID-19 vaccination updates and training modules with RI trainings, health workers could attend fewer trainings.

A Way Forward

The project's approach to supporting COVID-19 vaccination was designed to have a lasting benefit on Kenya's health systems and structures. With its adaptive learning style, the project reached priority populations with COVID-19 vaccinations and provided a model for counties and the national government to engage stakeholders in vaccination efforts. The project strengthened access to and use of data systems, and trained county management and health facility teams on the importance of accurate reporting and use of microplanning. This is likely to have benefits beyond COVID-19 vaccines as administrators and health officials are already using these skills to reach populations that miss RI.

Throughout its duration, the project participated in and facilitated multiple review meetings for COVID-19 mass vaccination campaigns. A best practice that emerged repeatedly for cost effectiveness, uptake, and human resource capacity was integrating

COVID-19 vaccinations into RI and other health services. The project's work on integrated refresher training courses reinforced the health system and allowed health workers to share experiences and lessons learned from COVID-19 vaccination that can be applied to RI services. Project-developed COVID-19 vaccination tools, such as the stock management report, can now be used for RI and other time-sensitive supplies.

Readers can find additional information about MOMENTUM Routine Immunization Transformation and Equity's work in Kenya at the following website:

MOMENTUM website: <https://usaidmomentum.org/where-we-work/kenya/>



Joel Muliwa, Management Systems International



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- FOSTER INNOVATIVE PROBLEM SOLVING
- BUILD CAPACITY OF COUNTRIES' HEALTH AND COMMUNITY PROMOTION & EDUCATION

Building on proven approaches, the project works with countries to explore innovations, foster adaptive leadership, and integrate social and behavior change at all levels.

Joel Muliwa, Management Systems International

JSI RESEARCH & TRAINING INSTITUTE, INC.

2733 Crystal Drive, 4th Floor
 Arlington, VA 22202, USA
 Phone: 703-528-7474
 Fax: 703-528-7480

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