Zero-Dose LEARNING HUB

Gavi's Zero-Dose Learning Hub IRMMA Aligned Interventions: Semiannual Update—Uganda

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Gavi The Vaccine Alliance

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THE GENEVA LEARNING FOUNDATION

Gavi Zero-Dose Learning Hub (ZDLH)

Funded by Gavi, the Zero-Dose Learning Hub (ZDLH) serves as the global learning partner and is led by JSI Research & Training Institute, Inc. (JSI) with two consortium partners, The Geneva Learning Foundation (TGLF) and the International Institute of Health Management Research (IIHMR). Together, the consortium enables sharing and learning across four Country Learning Hubs (CLHs) in Bangladesh, Mali, Nigeria, and Uganda to advance the uptake of evidence by synthesizing and disseminating key learnings. The ZDLH also focuses on improving immunization equity and reducing the number of zero-dose (ZD) and under-immunized children globally by facilitating high-quality evidence generation and uptake.

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CONTENTS

ACRONYMS

BeSD	behavioral and social drivers
CBO	community-based organization
CLH	Country Learning Hub
CSO	civil society organization
DLG	District Local Government
DHIS	District Health Information System
DHT	district health team
DTP	diphtheria, tetanus, pertussis [vaccine]
EAF	Equity Acceleration Fund
eCHIS	Electronic Community Health Information System
eJRF	electronic Joint Reporting Form
EPI	Expanded Program on Immunization
FPP	Full Portfolio Planning
HFA	health facility assessment
HPV	human papillomavirus [vaccine]
HSS	Health System Strengthening
IHME	Institute for Health Metrics and Evaluation
IIHMR	International Institute of Health Management Research
IPC	interpersonal communication
IR	implementation research
IRMMA	Identify, Reach, Monitor, Measure, and Advocate
JSI	JSI Research & Training Institute, Inc.
KT	knowledge translation
LC	local council
LGA	local government administration
MOH	Ministry of Health
n/a	not applicable
PIRI	periodic intensification of routine immunization
SPT	Smart Paper Technology
UI	under-immunized

UNEPI	Uganda National Expanded Programme on Immunisation
VHT	village health team
WHO	World Health Organization
WUENIC	WHO/UNICEF Estimates of National Immunization Coverage
ZD	zero-dose
ZDLH	Zero-Dose Learning Hub
ZDLH-X	ZDLH Inter-Country Peer Learning Exchange

UGANDA

Uganda Country Learning Hub

The Zero-Dose Learning Hub (ZDLH), established by Gavi, addresses immunization equity by generating data, evidence, new insights, and learning to better understand the factors influencing implementation and performance of approaches to identify and reach zero-dose (ZD) and under-immunized children and missed communities. The ZDLH consortium is led by JSI Research & Training Institute, Inc. (JSI), in collaboration with The Geneva Learning Foundation and the International Institute of Health Management Research (IIHMR). ZDLH works to address immunization equity through the generation of evidence and learning around effective methods and approaches for identifying and reaching zero-dose and under-immunized (UI) children. Four Country Learning Hubs (CLHs) in Bangladesh, Mali, Nigeria, and Uganda advance the uptake of research and evidence to improve immunization policy and programming, especially at subnational levels. In 2023, Gavi selected the Infectious Disease Research Collaboration as the country learning partner for Uganda, with partners PATH and Makerere University School of Public Health.

ZDLH Technical Assistance

During the period July–December 2023, JSI, as the global learning partner, continued to provide technical assistance and collaborate and co-create with the Uganda Learning Hub. Through a demand-driven approach, JSI provided tailored technical assistance and resources centered on refining the protocol and tools for the UNICEF ZD evaluation and enhancing the strategic planning of CLH activities through monitoring and evaluation methods and effective knowledge translation (KT). The ZDLH emphasized incorporating complexity-aware monitoring techniques, highlighting a shift towards more nuanced, adaptable evaluation methods capable of capturing the intricate dynamics of vaccination outreach and impact. A hands-on technical assistance session in November introduced the Uganda team to outcome mapping, employing the UNICEF ZD evaluation's theory of change as a practical example. This method can be instrumental in clarifying the pathways through which programs can achieve intended outcomes, offering a clear framework for understanding and enhancing program effectiveness. Recognizing the critical role of KT in applying research and evaluation findings to achieve practical action, JSI provided initial guidance and resources to the Uganda Learning Hub, considerations for developing a KT plan. This ongoing support aims to improve the immediate effectiveness of ZD efforts, as well as strengthen the Learning Hub's long-term capacity to adapt and respond to emerging challenges in public health and immunization.

Additional Resources

- Current and previous strategies: Gavi Country Documents—Uganda
- Uganda Zero-Dose Landscape
- ZDLH Semiannual Update (October 2023) (January–June 2023)

- Early Learning from Zero-Dose Practitioners in Nigeria and Uganda: Gavi ZDLH Inter-Country Peer Exchange (ZDLH-X2)

Zero-Dose Context—Country Priorities

Under Uganda's previous Gavi *Health Systems Strengthening (HSS) Strategy* developed in 2016, the country began to focus on pro-equity interventions. These pro-equity approaches prioritized children in specific communities receiving the life course of vaccinations; however, many of the interventions were targeted at the national level, or widely across the district level:

- Identified **priority populations for pro-equity interventions based on proportion of fully vaccinated children** in the districts.
- Integrate the **Reaching Every District, Reaching Every Child strategy** into Expanded Programme on Immunization (EPI): strengthening outreach, microplanning and vaccine supply, especially in priority districts.
- Investments in **new technologies to improve registration and tracking of target population** at the community level (Smart Paper Technology [SPT]) in selected districts.
- Support for **national supportive supervision and cascading mentorship activities** to promote monitoring and performance improvement.
- Conduct **advocacy meetings around immunization at all administrative levels** to sensitize and mobilize around pro-equity interventions.

Gavi approved Uganda's Full Portfolio Plan (FPP) in 2023 and will cover their Gavi strategy for 2024–2028.

Table 1. Grants and Objectives

Grant	Status	Objective
HSS3	Active *Grant years: 2024–2028*	Used for medium- and long-term priorities of the immunization program, including improved access and utilization and reduction of dropout rates across the whole of the country (135 districts and 7 cities). After the Equity Acceleration Fund (EAF) ends, HSS3 will sustain these gains in all districts.
EAF	Active *Grant years: 2024–2028*	Intended to significantly contribute to and accelerate the reduction in ZD children in Uganda, focused on 59 priority areas (52 districts and 7 cities).

Uganda's strategy for 2024–2028 focuses on intensifying efforts to reach children being systematically missed by all vaccinations in Uganda, with the following zero-dose specific objective: "Reduce the proportion of zero-dose children from 3 percent 2022 to 1.5 percent by end of 2025 and 0.5 percent by end of 2028." This small, but important proportion of ZD children in Uganda highlights the need for innovative, targeted approaches for reaching ZD children. Additionally, health workers must also prioritize and target under-immunized children, who represent a larger proportion of the population, for full immunization and other routine primary health care services. Uganda is using the EAF grant to accelerate reduction of ZD, focused on 59 priority areas: 52 districts and seven cities with the largest proportion of ZD children. The strategy focuses on eight equity categories: urban, fishing communities,

nomadic/pastoral communities, refugee hosting districts, religious sects, mountainous areas, conflict-prone areas, and island communities. To identify priority districts and populations, the country triangulated data from Institute for Health Metrics and Evaluation (IHME); measles-rubella surveillance; polio risk analysis; polio campaign zero-dose information; and diphtheria, pertussis, and tetanus (DPT)1 drop-out rates.

The 59 prioritized areas for this strategy are: Bugiri, Buikwe, Buliisa, Butaleja, Buvuma, Buyende, Fort Portal Tourism City, Hoima, Hoima, City, Isingiro, Jinja, Jinja City, Kabarole, Kagadi, Kakumiro, Kampala, Kampala City, Kamuli, Kasanda, Kasese, Kayunga, Kazo, Kibuku, Kikuube, Kitgum, Kotido, Kween, Kyankwanzi, Kyegegwa, Kyenjojo, Lira, Lira City, Luwero, Lwengo, Masindi, Mayuge, Mbale, Mbale City, Mbarara, Mbarara City, Mityana, Moroto, Mpigi, Mubende, Mukono, Nakapiripirit, Nakaseke, Nakasongola, Namayingo, Namutumba, Nebbi, Ntungamo, Nwoya, Oyam, Rakai, Sembabule, Serere, Tororo, and Wakiso.

For a more comprehensive mapping of the context, donor support, policies, and stakeholders, see ZDLH Uganda Zero-Dose Landscape.

Identify

Countries require a clear understanding of who, where, and how many ZD children and communities exist, and why health workers have missed them.

Table 2. Identify Priorities and Activities

***Identify* Priorities in Uganda (EAF application)**	**Uganda Learning Hub *Identify* Activities**
• Community **house-to-house registration** by village health teams (VHTs). • **Geo-mapping** of communities of interest *(Target populations: conflict-affected, fishing communities, mountainous areas, nomadic, refugees, religious sects)*. • **Profile** (who, where, and why) and target communities with ZD children using community structures. • Facilitate **VHTs to track and link** ZD children to health facilities.	• **Rapid assessment** to locate, characterize, and identify barriers for ZD children. • Evaluation of **data capture platforms** for identifying ZD/UI children and missed communities. *(Identify, Monitor, and Measure)* • **Targeted surveys** in three communities to characterize ZD and UI children. • **Implementation research**—evaluation of UNICEF's ZD support, including the use of VHTs for identifying ZD in the community and updated microplans (other interventions to be determined based on EPI priority). *(Identify, Reach)*

Rapid Assessment Methods and Context

The goal of the Learning Hub's rapid assessment was to explore and understand the barriers and facilitators to immunization in Uganda focused on three districts—Wakiso, Kasese, and Mubende. This involved identifying specific challenges and opportunities related to access, delivery, and uptake in diverse environments. The insights gained from this assessment aim to inform targeted strategies and interventions to improve immunization coverage and equity. The approach involved mixed-methods:

- **Secondary data analysis:** The Learning Hub utilized District Health Information System (DHIS) 2 data from July 2022 to June 2023, in collaboration with district biostatisticians, to identify the worst-performing sub-counties based on Reaching Every District/Reaching Every Community/ Reaching Every Child categorization, focusing on access and utilization of vaccines. The team ranked sub-counties based on the proportions of ZD children, with those having the highest proportions selected for further assessment.
- **Consultations and site visits:** Consultations with district health teams (DHTs) were essential for validating the findings from the secondary data analysis. Discussions revolved around reasons for poor performance, considering critical geographies. The Learning Hub conducted visits to health facilities serving the identified critical geographies to pinpoint the worst-performing communities within their catchment areas.
- **Community engagement:** DHTs, local leaders, and village health team coordinators helped carry out the selection of study communities within the identified sub-counties. VHTs played a crucial role in guiding visits to the communities, helping identify caregivers with ZD/UI children, and locating health facilities serving these communities.
- **Primary data collection**: The Uganda Learning Hub used snowball sampling to identify additional caregivers of ZD/UI children, starting from known cases and expanding to find others through referrals. Enumerators conducted 61 interviews with various stakeholders, including VHTs (9), local community leaders (6), health workers (9), and 37 primary caregivers of ZD and UI children aged 18 weeks-23 months across the three selected Learning Hub districts. Learn more about the age cohort selected: Measuring Zero-Dose Children: Reflections on Age Cohort Flexibilities for Targeted Immunization Surveys at the Local Level.

Determinants of Vaccination in Uganda

The 2019 Global Burden of Disease study found that approximately 20 percent of deaths among children under five in Uganda were caused by illness that may have been vaccine-preventable, including measles, meningitis, whooping cough, and some lower-respiratory infections (IHME 2020). Mother's education, birth order, and where a child lives are significant predictors of whether a child will receive the measles, Bacille Calmette-Guérin, or Penta1 vaccine in Uganda. Children of mothers with no or only primary level education are more likely to be ZD than those whose mother received secondary or higher education. Additionally, children who are born sixth or after in their household are more likely to be ZD than those born before them. Finally, a child's geographic location is an important predictor of ZD status. Among the regions of the country, a greater proportion of ZD children are found in Greater Kampala (7.8 percent) and the East Central Region (6.9 percent) than in the southwest (2.7 percent) and the mountains (2.1 percent). According to IHME estimates, nearly half of ZD children in Uganda live in just 24 percent of districts. In addition to disparities in ZD status between geographic locations, there are disparities between ethnic groups. Of the 20 major ethnic groups in the country, the Banyole, at 15.2 percent, has the highest proportion of ZD children, followed by the Batoro, at 8.6 percent). Children in the Bafumbira and Acholi groups are least likely to be ZD, with a prevalence of 0.5 and 0.9 percent, respectively. The Banyole group lives primarily in rural areas of Eastern Uganda and largely relies on subsistence farming and small-scale businesses. A 2019 qualitative study of health care access in a district with a majority Banyole population found that a lack of affordable transportation, roads inaccessible to motorized vehicles, and poor service at health facilities were challenges to accessing services (Rahimi et al. 2019). Both the Batoro and Bafumbira groups are found in the Southwestern Sub-Region of Uganda, with the Batoro living near Lake Albert and the Bafumbira near the border of

Rwanda. The Acholi are located in the Northern Region of the country. **Learn more:** Uganda Zero-Dose Landscape.

Zero-Dose Rapid Assessment Results

Data analysis, synthesis, and rapid assessment report development is ongoing. Preliminary review of the rapid assessment results confirm a complex interplay of determinants affecting vaccination uptake. Key barriers identified include:

- **Limited physical access to immunization services:** Geographic challenges, including long distances to health facilities, impassable roads during the rainy season, and the unfavorable location of static and outreach service points, hinder access to vaccination services. Additionally, the frequency and duration of immunization sessions are often insufficient to meet community needs, partly due to limited funding and resources.
- **Inadequate client-centered services and hidden costs for vaccination:** Clients report long waiting times and poor health worker attitudes. Although services are supposed to be free, caregivers in some districts reported both public and private health facilities charging them for immunization cards and services, creating a financial barrier.
- **Vaccine stockouts:** Vaccine stockouts discourage caregivers from returning to health facilities for vaccinations.
- **Fear of adverse events following immunization and multiple injections:** Experiences or hearsay regarding adverse events following immunization can instill fear and hesitation among caregivers, deterring them from vaccinating their children. The practice of administering multiple vaccine doses in a single session, especially for children who have missed previous doses, can intimidate caregivers and discourage them from completing the vaccination schedule.
- **Gender dynamics:** Gender-related issues, such as lack of spousal support and domestic conflicts over vaccination, impact caregivers' ability to seek services for their children. Competing priorities such as household chores and daily activities also play a role.
- **Myths, misconceptions, and religious beliefs:** Misconceptions about vaccine quality, myths surrounding the effects of vaccines, and religious prohibitions contribute to vaccine hesitancy and refusal.
- **Inadequate knowledge:** Limited awareness among caregivers about the immunization schedule and the importance of vaccines beyond the commonly known diseases (e.g., measles and polio) reduces the perceived need for complete immunization.

Identify Interventions

Based on the review of the 2023 FPP narrative and Gavi support detail, Gavi-supported ZD *Identify* interventions in Uganda include community house-to-house registration (all priority districts), defaulter tracking by VHTs (all priority districts), and geo-mapping in focus areas including conflict-prone regions, fishing communities, mountainous areas, nomadic communities, refugee settlements, and communities with religious sects, targeting a cross-section of vulnerable populations across 59 districts and cities. In conflict-prone areas, practitioners targeted districts including Moroto, Kotido, and Nakapiripirit for geo-mapping, as well as fishing communities in districts including Kasese and Lira, and mountainous regions such as Kabarole and Ntungamo. Interventions include the identification and mapping of nomadic

populations in numerous districts, including Kasese and Luwero, and addressing the needs of refugee settlements and other refugee-related challenges in areas like Isingiro and Kampala. **Learn more:** Annex 1. Gavi-Supported Zero-Dose Interventions in Uganda.

Emerging Lessons and Learnings: Identify

The insights from the Learning Hub emphasize the critical role of VHTs and the necessity of an efficient data management system for improving immunization coverage, particularly targeting ZD/UI children. Key learnings to date include:

- **Definition of ZD:** The definition varies across stakeholders in Uganda, and this lack of standardization may lead to conflicting ZD data. There's need to harmonize the definition of zero-dose at the national and subnational level to allow uniform understanding and reporting.
- **VHTs as essential agents:** Village Health Teams are pivotal in the grassroots identification of ZD and UI within communities. Their involvement is crucial for the effective targeting and outreach of immunization programs, however, as volunteers their impact is limited.
- **Opportunity costs/hidden costs of vaccination:** Demand side interventions that address hidden and other opportunity costs for caregivers and children to reach immunization services are needed for impact.
- **Need for a robust data system:** There's an imperative need for a data capture and management system that operates at the community level. This system should be capable of collecting data on ZD and UI children and facilitating the real-time utilization of this data across all health system levels to inform actions and decisions.
- **Clustering of ZD/UI children:** Observations indicate that households with one ZD child often have other children who are either ZD or under-immunized. This clustering suggests that targeted interventions at the household level could be an effective strategy for addressing gaps in immunization coverage.
- **Dynamic nature of ZD burden:** The burden of ZD children is fluid and requires continuous monitoring and assessment. Health interventions need to be adaptable and responsive to changing circumstances and data to effectively reach ZD. Outreach efforts are an important component in Uganda service delivery, but are also highly unstable and rely on mini-campaign style activities such as Child Health Days. Irregular

Box 1. ZDLH-X Experience

In September 2023, the Zero-Dose Learning Hub's Learning Innovation Unit, held its second inter-country peer learning exchange (ZDLH-X) focused on ZD and UI children and missed-community challenges in Nigeria and Uganda. The session provided an opportunity for national and sub-national practitioners from the two countries to share their experiences and learn from each other, and to strengthen networking within and across countries.

ZDLH conducted an analysis of pre-event questionnaire data. Participants from Uganda were more likely to identify inadequate immunization awareness, cultural beliefs or misconceptions; limited or inconsistent access to healthcare providers; lack of transportation; informal settlements and urban poor, seasonal or transient populations; orphans and vulnerable children, and religious minorities as the most important issues underlying ZD challenges.

Learn more: Early Learning from Zero-Dose Practitioners in Nigeria and Uganda: Gavi ZDLH Inter-Country Peer Exchange (ZDLH-X2)

outreach efforts are a key barrier to reaching ZD children. Outreach activities are dependent on the availability of funds, whether in routine immunizations, campaigns, or special outreach efforts. It is critical to strengthen and better resource routine immunization.

These learnings underline the importance of community-level engagement, data-driven decision-making, and the adaptability of health systems in improving immunization coverage. Future reports will detail emerging learnings and recommendations.

Reach

After identification, the next step is to develop and implement targeted strategies that respond to the identified barriers. Reaching ZD children and missed communities requires addressing both supply side and demand side barriers.

Table 3. Reach Priorities and Activities

***Reach* Priorities in Uganda (HSS, EAF application)**	**Uganda Learning Hub *Reach* Activities**
• Equip public and private facilities with **adequate supply chain** *(Target population: urban/peri-urban populations).* • Deploy **tailored demand generation** activities through local government, religious groups, and civil society organizations (CSOs) *(Target population: conflict-affected).* • Integrated **Child Health Days**. • Deploy **targeted strategies by population**: targeted outreach efforts, periodic intensification of routine immunization (PIRI), integration of animal and human vaccination, use of community criers *(Target population: conflict-affected, fishing communities, mountainous areas, nomadic, refugees, religious sects).*	• **Health facility assessment** to contextualize ZD within service availability. • **Implementation research** (interventions to be determined based on EPI priority)**.**

Reach Interventions

Based on review of the 2023 FPP narrative and Gavi support detail, Gavi-supported Reach interventions in Uganda target a broad range of activities to improve immunization coverage. These include engaging local stakeholders, using e-cash systems, and prioritizing communities for demand interventions. Specific strategies include enhancing cold chain facilities, securing vaccination sessions, and leveraging partnerships for integrated efforts across diverse areas such as refugee settlements, urban centers, conflict zones, fishing communities, islands, mountainous regions, and pastoral areas. In conflict-prone areas like Moroto and Kotido, the focus is on securing vaccination campaigns and collaborating with organizations such as the Red Cross. Mobile vaccination teams target remote island and mountainous regions, safety equipment for health workers, and community engagement to boost vaccine uptake. Urban and peri-urban settings, like Kampala and Mbarara, see efforts to integrate immunization services across public and private sectors, support for mobile units, and updates to health facility microplans. For unique challenges in refugee settlements and communities with vaccination-resistant religious sects,

strategies include targeted outreach and integrating immunization with other essential services. **Learn more:** Annex 1. Gavi-Supported Zero-Dose Interventions in Uganda.

Implementation Research

One of the Learning Hub's objectives is to evaluate the efficacy and implementation of interventions aimed at reducing the incidence of ZD children. The bulk of the CLH's implementation activities will follow implementation of the HSS/EAF activities, work that will begin in September 2024, but the CLH has already initiated implementation research on a UNICEF pilot. The goal of UNICEF's ZD support in Uganda is to bolster the EPI's ability to identify ZD children and to enhance targeted demand and awareness efforts. The Learning Hub plans to evaluate UNICEF's ZD support through implementation research (IR) in two districts—examining the effectiveness, feasibility, and scalability of the approaches UNICEF has implemented to:

- Assess the reach, adoption, implementation, and maintenance of the ZD support by UNICEF from 2022 to 2024 in Wakiso and Kamuli Districts.
- Estimate the number and the proportion of ZD and UI children identified and reached through house-to-house registration of children and defaulter tracing supported by UNICEF from 2022 to 2024 in Wakiso and Kamuli Districts.
- Identify and document the challenges and enablers of implementation of the UNICEF ZD support from 2022 to 2024 in Wakiso and Kamuli Districts.

By evaluating the effectiveness and feasibility of UNICEF's approaches, the Learning Hub aims to identify strategies that practitioners can scale up within Uganda, or adapt and replicate in other contexts facing similar challenges. The IR intends to provide robust evidence to inform policy and programmatic decisions, ensuring that interventions are based on what works, can be efficiently implemented, and are sustainable over the long term. Key stakeholders from Uganda National Expanded Programme on Immunisation (UNEPI) were actively involved in choosing the intervention, which was selected for evaluation due to its targeted approach to identifying and reaching ZD and UI children. Significant interest from prominent EPI stakeholders, including UNEPI supported this choice. Additionally, the insights gained from this pilot are expected to inform several important initiatives: the planned expansion of the intervention to Kasese and Tororo Districts, the implementation of similar strategies under the Equity Accelerator Fund, and the development of national ZD guidelines.

Emerging Lessons and Learnings: Reach

Emerging lessons highlight nuanced challenges in increasing immunization uptake, emphasizing the need for context-specific solutions and identifying critical geographies.

- **Limited awareness:** Caregivers have limited awareness about other vaccine-preventable diseases beyond those most commonly known. There is a need to increase awareness among the general population about the immunizable diseases on the country's immunization schedule.
- **Context-specific barriers:** The barriers to accessing immunization services vary significantly across different contexts, requiring tailored strategies to overcome these obstacles effectively. For example, in urban areas, demand-side strategies are likely more useful for addressing immunization uptake compared to rural areas, where a mix of supply and demand-side factors are likely at play.

- **Role of traditional birth attendants:** Despite official restrictions, traditional birth attendants continue to provide delivery services in some communities. A notable barrier is their reluctance to refer mothers to immunization services, driven by a fear of reprimand for operating despite the ban.
- **Emerging critical geographies:** Critical geographies encompass communities in national and district borders, mining areas, underserved regions, and those with immigrant populations. UNEPI does not currently document these groups, underscoring the need for expanded program outreach efforts.

These lessons highlight the critical need for adaptable strategies in immunization programs, taking into account the evolving landscape of community dynamics and risks to effectively target all groups. Future reports will detail implementation research learnings and lessons.

Monitor and Measure

To effectively gauge progress, practitioners must closely monitor interventions to identify and reach ZD children. This includes reviewing data and adjusting strategies as needed. Beyond monitoring DTP1 coverage, it's essential to evaluate various indicators and data sources to accurately identify missed communities and confirm that health workers are reaching ZD children. Effective data systems enable targeted interventions and continuous monitoring of progress toward immunization equity. However, inconsistencies and quality issues in Uganda's health data systems pose significant challenges. This impacts the ability to accurately identify ZD and UI children and to measure progress effectively.

Table 4. Monitor and Measure Priorities and Activities

Monitor & Measure* Priorities in Uganda *(HSS and EAF application)	**Uganda Learning Hub *Monitor & Measure* Activities**
• Annual **operational assessments** to understand district-specific factors and interventions associated with ZD and missed opportunities. • **Equity assessment study** on ZD in communities (root cause analysis). • **Targeted lot quality assurance sampling surveys** in communities to collect evidence that informs appropriate demand generation interventions.	• **Targeted surveys** in three communities (in two rounds) to characterize ZD and UI children. • **Mapping** of health information systems ecosystems. • **Country learning agenda** and learning priorities. • **Targeted coverage surveys** in Learning Hub selected communities. • **Dissemination of findings** through stakeholder mapping.

Overview of Data Systems in Uganda

District Health Information System (DHIS2) is the primary system used nationwide for capturing immunization data, including DTP1 and DTP3 immunization coverage for children under one year of age. It relies on standardized health management information system (HMIS) 105 forms for data entry at health facilities, with the data aggregated at the national level. SPT involves the use of specially developed forms to track immunization at health facilities. Health workers give children unique identifications, and summarize and scan data into the DHIS2 system. This allows for tracking and sending

reminders for vaccinations due. Electronic Community Health Information System (eCHIS) is a mobile-based system that enables VHTs to register children at the household level and assess their immunization status during periodic visits. This system feeds data directly to the national level for aggregation.

Gaps in Available Data

- **Inconsistencies in data denominator estimations:** The use of Uganda Bureau of Statistics population projections by systems like DHIS2 and SPT leads to underestimation or overestimation of ZD coverage by not accounting for local population dynamics like migration.
- **Challenges with data quality and timeliness:** Paper-based data capture and manual data processing, especially in the DHIS2 system, leads to issues with the timeliness, completeness, and accuracy of data. Moreover, manual entry and scanning processes in SPT are prone to errors and add extra workload on health workers.
- **Interoperability and integration issues:** While there is some level of data integration, with DHIS2 acting as a central aggregator, technical bugs and the lack of a seamless flow of data between different systems can hamper efficient data analysis and use.
- **Verification and validation of immunization status:** The reliance on caregiver reports or immunization cards by VHTs in the eCHIS system, without a means to independently verify the information, can lead to inaccuracies in recorded immunization status.
- **Lack of actionable data at the facility level:** Data collected, through systems like eCHIS, goes directly to the national level without leaving a copy at the health facility. This limits the facility's ability to act on the data to improve immunization coverage in their catchment area.
- **Limited geographic coverage and scalability:** Systems like SPT and eCHIS are either in the pilot phase, or have limited geographic implementation. This restricts comprehensive data collection and analysis across all districts. The current pilot status of systems like eCHIS and the absence of a clear system for incentivizing VHTs also raise questions about the long-term sustainability and effectiveness of these data collection methods.

Methods to Overcome Data Gaps

Village Health Teams

VHTs in Uganda play a critical role in the country's efforts to identify ZD and UI children. Beyond identification, health facilities also task VHTs with linking ZD children to health facilities for vaccination. The Learning Hub also recognizes the importance of quality, reliable data in driving effective immunization strategies. VHTs contribute to this by collecting accurate and comprehensive data during their community engagement activities conducting house-to-house registration to identify ZD and UI children. Efforts are underway in Uganda to utilize geo-mapping of communities and profiling techniques to identify and understand the characteristics of communities with high numbers of ZD children. VHTs are crucial in this process, providing the necessary ground-level data and insights that inform targeted interventions. The Learning Hub will evaluate the effectiveness of UNICEF's support for identifying ZD children, with VHTs playing a central role in this process.

Microplanning

Microplanning is an important planning tool for identification and reach as well as monitoring and measurement of ZD and UI children. UNICEF has been working in Uganda to improve coordination, planning, implementation, and advocacy for immunization services by strengthening reporting and quality of data in national and community health information systems. However, evidence on the efficacy of the approach is not yet available. The Learning Hub will evaluate how support of software and optimization of microplanning for immunization through eCHIS contributed to improved monitoring and management of ZD and UI children.

Monitor and Measure Interventions

Based on review of the FPP Narrative (2023) and Gavi Support Detail (2023), Gavi-supported Monitor and Measure ZD interventions in Uganda include conducting equity assessments to understand and address the root causes of low immunization coverage, capacity strengthening for district biostatisticians in data analysis and geo-spatial skills, targeted surveys to characterize ZD and UI children, and annual operational assessments to tailor district-specific interventions, all aimed at enhancing service delivery for critical geographies. Activities primarily implemented by the Ministry of Health (MOH) and its district-level government agencies are addressing critical barriers across different geographic areas. **Learn more:** Annex 1. Gavi-Supported Zero-Dose Interventions in Uganda.

Emerging Lessons and Learnings: Monitor and Measure

While DTP1 coverage is a valuable indicator, relying solely on it may not provide a complete picture of immunization equity and effectiveness. A broader set of indicators and data sources is necessary for a fuller understanding. Discrepancies in population estimates complicate the calculation of coverage rates, highlighting the need for accurate, up-to-date demographic data. Emerging lessons include:

- **Strengthen and support existing community structures:** Currently, it is difficult to accurately characterize ZD and UI at the country level because the existing data ecosystem focuses on individuals that access services through health facilities missing out on those that remain in communities. Strengthening and supporting the existing community structures is critical in identifying and linking the ZD and UI and missed communities to access vaccines.
- **Enhance data quality and consistency:** Improving the accuracy and reliability of health data systems is crucial. Implementing data quality assurance processes and standardizing data collection methods across different levels of the health system can help ensure that data accurately reflects the immunization status of the population.
- **Enhance local data availability and analysis:** Improving data availability and analytics capabilities at the facility level improves the likelihood that EPI and other engaged community entities, like the VHT, are using the most up-to-date information available to inform community mapping and microplanning efforts in priority ZD areas.
- **Data triangulation:** To effectively identify and reach ZD and UI children, it's necessary to triangulate information from various sources, including health facility records, VHT reports, and household surveys.
- **Leveraging technology for efficiency:** The use of mobile technologies and electronic data collection tools has shown promise in enhancing the timeliness and reliability of data.

- **Continuous monitoring and feedback mechanisms:** Establishing regular monitoring and feedback loops can help assess the effectiveness of interventions and allow for timely adjustments.

Advocate

Strong political leadership is crucial for advancing immunization equity and sustaining progress through domestic financing. Targeted advocacy efforts are key to fostering and maintaining political will.

Table 5. Advocate Priorities and Activities

***Advocate* Priorities in Uganda (EAF application)**	**Learning Hub *Advocate* Activities**
• **Engagement and orientation of local leaders** on the benefits of immunization in each community of interest. • Plan for dealing with **vaccine hesitancy for religious** reasons.	• Regular engagement of key stakeholders for **dissemination and communication of learnings**.

Country Policies

Uganda EPI's Comprehensive Multi-Year Plan is the main document outlining immunization-related priorities in the country. EPI developed the most recent plan for 2016–2020 and outlines achievements since the 2012–2016 plan, including increases in routine vaccination coverage, an increase in the percentage of facilities that report receiving supportive supervision, and the introduction of the pneumococcal conjugate vaccine. It also notes remaining immunization-related challenges such as frequent vaccine stock-outs, EPI staffing gaps at service delivery sites, and weak coordination between health facilities and community health workers. National objectives set forth in the plan include improving immunization demand; reducing the gap in DTP3 coverage between the highest and lowest socioeconomic quintiles; increasing DTP1 coverage to 98 percent and measles-containing vaccine coverage to 92 percent; and increasing the percentage of districts with detailed immunization microplans to 100 percent. The *Comprehensive Multi-Year Plan* prioritizes ZD children as part of its goal to reduce the DTP3 coverage gap but otherwise does not provide a strategy for reaching them. The inclusion of immunization activities in national strategy and policy documents signals the government's commitment to reducing vaccine-preventable disease. The draft *National Immunization Strategy* (2022-2026) is pending approval. **Learn more:** Uganda Zero-Dose Landscape.

Advocate Interventions

Based on review of the *FPP Narrative* (2023) and *Gavi Support Detail* (2023), Gavi-supported ZD *Advocate* interventions in Uganda include engaging community leaders and stakeholders across various populations, including conflict-affected, fishing, mountainous, and pastoral communities, as well as adolescents, religious sects, and refugee settlements, to promote immunization benefits and address barriers. **Learn more:** Annex 1. Gavi-Supported Zero-Dose Interventions in Uganda.

Stakeholder Engagement Methods

In this reporting period, the Uganda Learning Hub participated in meetings at both national and global levels with key EPI stakeholders. These meetings aimed to update participants on immunization programs, discuss the evaluation of UNICEF's ZD support to districts, address EPI performance issues, discuss plans for targeted community surveys, and strategize on the involvement of the private sector in urban settings targeting ZD and UI children. Key observations and actions resulting from stakeholder engagement activities includes:

- **Immunization coverage decline:** UNEPI has observed a general decline in performance of the immunization program, evidenced by the declining coverage of several antigens. MOH is drafting a national recovery plan with inputs from various stakeholders, including district health officers and biostatisticians, and will present it to the Technical Coordination Committee and Inter-Agency Coordinating Committee for approval. The Uganda Learning Hub will contribute to understanding the trends in EPI performance through the findings from the rapid assessment, the upcoming targeted community survey, and the mapping of the immunization data ecosystems in the country.
- **Catch-up plan:** Spearheaded by the Centers for Disease Control and Prevention, a catch-up plan for ZD/UI children has been drafted for Uganda. The Learning Hub will monitor the community's reception to these guidelines and the successes and challenges in their implementation.
- **Competing priorities:** The Learning Hub observed that UNEPI's agenda for 2024, encompassing the execution of EAF and HSS grants, vaccine transitions and introductions, and routine immunization activities, presents a complex set of competing priorities. This situation underscores the need for careful monitoring of how these priorities impact the effective implementation of EAF activities.
- **Digital mapping needs:** There's a recognized need for digital tools to help identify areas with suspected ZD and UI children, highlighting a gap in current strategies and a potential area for innovation and support.

Emerging Lessons and Learnings: Advocacy

Collaboration among government entities, nongovernmental organizations, community organizations, and international partners like UNICEF is key to developing and implementing effective strategies for reaching ZD and UI children. Emerging lessons in Uganda include:

- **Foster partnerships and collaboration:** Strengthening the lines of communication and collaboration among all stakeholders is essential to ensure the effectiveness of the recovery and catch-up plans in Uganda. Continue to build and strengthen partnerships across sectors to leverage diverse resources, expertise, and networks for a unified approach towards increasing immunization coverage. Utilize evidence from research and data analysis to advocate with policymakers and stakeholders for increased focus and resources on reaching ZD and UI children highlighting the importance of immunization equity in achieving broader health goals in Uganda.
- **Focus on sustainability:** Ensure that strategies for identifying and reaching ZD and UI children are sustainable over the long term, with a focus on strengthening local capacity and resilience within health systems and communities.

ANNEX 1. GAVI-SUPPORTED ZERO-DOSE INTERVENTIONS IN UGANDA

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH/UNEPI, District Local Governments (DLGs)	1.1 Conduct community house-to-house registration by community health workers focused on 59 target districts.*	Identify	–	*Cross-cutting*	Evaluation of different data platforms for identifying ZD children
EAF	MOH/UNEPI, DLGs	1.3 Facilitate VHTs to conduct defaulter tracking.	Identify	–	*Cross-cutting*	Implementation research (UNICEF evaluation)
EAF	MOH, DLGs	5.8.1 Identify and conduct geo-mapping of conflict areas.	Identify	Community	*Conflict-prone areas* Moroto, Kotido, Nakapiripirit, Koboko	–
EAF	MOH, DLGs	5.2.4 Facilitate VHTs to track and link ZD children to catchment immunization health facilities.	Identify	Community	*Fishing communities* Kasese, Lira, Mukono, Wakiso Jinja, Rakai, Masindi, Nakasongola, Nebbi, Buliisa, Namayingo	Implementation research (UNICEF evaluation)
EAF	MOH, DLGs	5.7.1 Identify/conduct geo-mapping of affected communities.	Identify	Community	*Mountainous areas* Kasese, Mbale, Ntungamo, Isingiro, Moroto, Kabarole	–
EAF	MOH, DLGs	Identify and conduct geo-mapping of all identified ERGs.	Identify	Community	*Cross-cutting*	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.4.1 Identify and conduct geo-mapping of nomadic communities.	Identify	Community	*Pastoral* Kasese, Luwero, Rakai, Sembabule, Nakaseke, Nakasongola, Moroto, Kyankwanzi, Buliisa, Kazo, Kotido, Nakapiripirit	–
EAF	MOH, DLGs	5.5.4 Identify and conduct geo-mapping of existing refugee settlements.	Identify	Community	*Refugee settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.5.1 Engage the International Organization for Migration and United Nations High Commissioner for Refugees to support mapping of all refugee entry points at all borders for inclusion in microplans.	Identify	Community	*Refugees* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.5.10 Identify and engage refugee leaders who will act as a link to refugees in their communities (quarterly).	Identify	Community	*Refugees outside settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.6.1 Identify and conduct geo-mapping of communities with sects.	Identify	Community	*Religious sects* Kagadi, Kakumiro, Hoima, Bugiri, Mayuge, Mbale	–
EAF	CSOs	13.3 Engage local government health and non-health structures, local councils (LCs), religious, cultural and opinion leaders, education system, CSOs/community-based organization (CBOs), to implement tailored demand generation interventions based on the behavioral and social drivers (BeSD) survey findings (through sub-grants).*	Reach	–	*Cross-cutting*	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
HSS/ EAF	MOH, DLGs	Boost the use of the e-cash system; the program will provide for transactional charges of 1.05% per payment transaction for all activities to be implemented at local government level to support EPI activities.	Reach	–	*Cross-cutting*	–
EAF	MOH, DLGs	5.6.4 Prioritize mapped communities with resistant sects for BeSD studies to guide the design of appropriate demand interventions.	Reach	Community	*Religious sects* Kagadi, Kakumiro, Hoima, Bugiri, Mayuge, Mbale	–
EAF	MOH, DLGs	5.5.3 Build capacity of implementing partners and health workers in refugee settlements on immunization and surveillance.	Reach	Community	*Refugee settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLG	5.5.8 Conduct cross-border bi-annual meetings on immunization.	Reach	Community	*Refugee settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.1.7 Procure motorcycles to support mobile vaccination implementation (motorcycles will be procured for EPI focal persons at selected facilities in urban settings to support mobile vaccination, supervision, mobilization and outreach efforts). Maintenance and operations under the primary health care funds for motorcycles.*	Reach	Community	*Urban/peri-urban* Kampala, Wakiso, Mbarara, May, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–
HSS	MOH, DLGs	5.1.8 Equip public and private facilities with cold chain equipment (HSS3).*	Reach	–	*Urban/peri-urban* Kampala, Wakiso, Mbarara, may, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.8.2 Quarterly facilitation of security teams to provide security during vaccination sessions.	Reach	Community	*Conflict-prone areas* Moroto, Kotido, Nakapiripirit, Koboko	–
EAF	MOH, DLGs	5.8.3 Leverage other programs like World Food Program, Red Cross, Doctors with Africa CUAMM distribution to conduct immunization sessions.	Reach	Community	*Conflict-prone areas* Moroto, Kotido, Nakapiripirit, Koboko	–
EAF	MOH, DLG	5.8.4 Quarterly PIRIs in conflict-prone areas.	Reach	Community	*Conflict-prone areas* Moroto, Kotido, Nakapiripirit, Koboko	–
EAF	MOH, DLGs	5.3.1 Conduct quarterly island to island vaccination using mobile teams within the same district (vaccination team, coxswain, boat hire, fuel).	Reach	Community	*Fishing communities* Kasese, Lira, Mukono, Wakiso Jinja, Rakai, Masindi, Nakasongola, Nebbi, Buliisa, Namayingo	–
EAF	MOH, DLGs	5.2.1 Conduct targeted and user-friendly outreaches to fishing communities (Increase vaccination times).	Reach	Community	*Fishing communities* Kasese, Lira, Mukono, Wakiso Jinja, Rakai, Masindi, Nakasongola, Nebbi, Buliisa, Namayingo	–
EAF	MOH, DLGs	5.2.2 Facilitate health workers to reach the identified ZD children that have not been vaccinated at outreach or static points.	Reach	Community	*Fishing communities* Kasese, Lira, Mukono, Wakiso Jinja, Rakai, Masindi, Nakasongola, Nebbi, Buliisa, Namayingo	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.2.5 Dispatch social/behavior change communication teams to engage fishing communities to generate demand through community engagement meetings, meeting with religious and community leaders ahead of outreach service delivery teams.	Reach	Community	*Fishing communities* Kasese, Lira, Mukono, Wakiso Jinja, Rakai, Masindi, Nakasongola, Nebbi, Buliisa, Namayingo	–
EAF	MOH, DLGs	Procure community audio towers (community criers) for the Island communities at parish level.	Reach	Community	*Islands* Buvuma, Namayingo	–
EAF	MOH, DLGs	5.3.2 Procure safety equipment: life jackets, waterproof raincoats, gumboots, backpacks for vaccination teams.	Reach	Community	*Islands* Buvuma, Namayingo	–
EAF	MOH, DLGs	Conduct detailed situation analysis and develop an integrated costed service delivery plan (Islands).	Reach	Community	*Islands* Buvuma, Namayingo	–
EAF	CSOs	5.3.4 Dispatch social/behavior change communication teams to engage island communities to generate demand through community engagement meetings, meeting with religious and community leaders ahead of outreach service delivery teams.	Reach	Community	*Islands* Buvuma, Namayingo	–
EAF	MOH	5.7.3 Provide safety equipment (tents, helmets, ropes, chairs, boots, umbrellas) for vaccination teams.	Reach	Community	*Mountainous areas* Kasese, Mbale, Ntungamo, Isingiro, Moroto, Kabarole	–
EAF	MOH, DLGs	5.7.2 Conduct integrated sustained outreach services (a team comprised of mobilizers, recorders, health workers camp in communities with no health facilities for three days bi-monthly, provide per diem for health workers).	Reach	Community	*Mountainous areas* Kasese, Mbale, Ntungamo, Isingiro, Moroto, Kabarole	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.7.5 Procure community audio towers (community criers) for the mountainous communities at parish level.	Reach	Community	*Mountainous areas* Kasese, Mbale, Ntungamo, Isingiro, Moroto, Kabarole	–
EAF	MOH	14.5 Leverage telecommunications company and mHero connector platforms to provide SMS [short message service] reminders on immunization and messages that counteract rumors, mis- and disinformation on vaccines in the 59 priority areas.	Reach	–	*Other sub-populations*	–
EAF	MOH, DLGs, UNICEF, CSOs	14.3 Profile (who, where, and why), target and mobilize communities with zero-dose children using LCs, VHT, administrative structures, and CSOs/CBOs and link them to immunization service delivery points. (Mobilization and registration of children under 1 year, facility and community-based activities based on BeSD findings).	Reach	–	*Other sub-populations*	Targeted community surveys; health facility assessment (HFA) in selected communities
EAF	MOH, DLG, CSOs	14.2 Utilize health and non-health community structures and institutions (CSOs; CBOs; private sector; and other local partners including local councils [LCs], administrative structures [sub-counties/parishes] and religious, cultural, opinion leaders) to mobilize and link ZD households to immunization service delivery points.	Reach	–	*Other sub-populations*	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH	Integrate interpersonal communication (IPC) training (DHTs/health workers) as part of the tailored quality improvement approaches implemented by the service delivery teams, using a combination of IPC training tools and materials. Demand generation and service delivery teams to review and integrate IPC training modules into the quality improvement approach, including adaptation and use of Quality Improvement and Verification Checklists (review meetings for IPC training modules).	Reach	District/ Local Government Administration (LGA)	*Other sub-populations*	–
EAF	CSOs	18.4 Subcontract 15 CSOs to catalyze implementation of demand generation activities tailored to specific ERGs based on findings from BeSD surveys and human-centered design sessions.	Reach	Community	*Other sub-populations*	–
EAF	CSOs	18.7 Orientation of health workers on interpersonal communication to effectively address gender-related barriers affecting active male involvement in immunization services. IPC sessions will be part and parcel of the quality improvement interventions to be implemented in health facilities.	Reach	Community	*Other sub-populations*	–
EAF	MOH, DLGs	5.4.3 Collaborate with the Ministry of Agriculture, Animal Industry, and Fisheries to integrate animal vaccination with routine vaccination outreach efforts.	Reach	Community	*Pastoral* Kasese, Luwero, Rakai, Sembabule, Nakaseke, Nakasongola, Moroto, Kyankwanzi, Buliisa, Kazo, Kotido, Nakapiripirit	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.4.2 Conduct additional quarterly targeted outreach efforts in pastoral communities.	Reach	Community	*Pastoral* Kasese, Luwero, Rakai, Sembabule, Nakaseke, Nakasongola, Moroto, Kyankwanzi, Buliisa, Kazo, Kotido, Nakapiripirit	–
EAF	MOH, DLGs	5.5.6 Conduct monthly targeted outreach efforts in these refugee settlements.	Reach	Community	*Refugee settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.5.2 Build capacity of health workers for vaccination status screening, registration, and vaccination at entry points for refugees.	Reach	Community	*Refugees* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.5.12 Facilitate quarterly PIRIs in these informal refugee settlements (targeting refugees outside formal settlements and they are not usually reached through existing general population interventions or formal refugee settlement interventions).	Reach	Community	*Refugees outside settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.5.11 Identification of community health workers among the refugee community to support targeted outreach efforts, demand activities, and PIRIs.	Reach	Community	*Refugees outside settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLGs	5.6.2 Conduct quarterly home vaccination visits using mobile vaccination teams.	Reach	Community	*Religious sects* Kagadi, Kakumiro, Hoima, Bugiri, Mayuge, Mbale	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
HSS	MOH, DLGs	5.1.2 Partner with private health sector providers to conduct quarterly support supervision and capacity building visits to private facilities (reporting, vaccines requisitions, and conducting periodic reviews); (the checklist will be updated to include gender components).	Reach	Community	*Urban/peri-urban* Kampala, Wakiso, Mbarara, may, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–
HSS	MOH, DLGs	5.1.3 Support implementation of urban immunization guidelines in the private health sector (service delivery and social and behavior change communication).	Reach	Community	*Urban/peri-urban* Kampala, Wakiso, Mbarara, May, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–
EAF	MOH, DLGs	5.1.5 Facilitate the public and private health facilities of urban districts to update their microplans annually.	Reach	Community	*Urban/peri-urban* Kampala, Wakiso, Mbarara, May, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–
EAF	MOH, PATH	15.1 Develop demand generation interventions based on the findings from the BeSD survey for each of the eight priority equity reference groups.	Reach	Community	*Cross-cutting*	–
EAF	MOH, CSOs,	15.1 Develop demand generation interventions based on the findings from the BeSD survey for each of the eight priority equity reference groups.	Reach	Community	*Cross-cutting*	–
EAF	MOH, DLGs	5.1.4 Capacity building for health workers in both public and private health facilities using the urban immunization toolkit.	Reach	Community	*Urban/peri-urban* Kampala, Wakiso, Mbarara, May, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.1.6 Conduct targeted community outreaches outside traditional hours and areas to identify special groups (slums, gated communities, working mothers in the seven focus cities).	Reach	Community	*Urban/peri-urban* Kampala, Wakiso, Mbarara, may, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera	–
EAF	MOH, DLGs	Adapt the developed urban immunization toolkit/guidelines (define areas of responsibility for community health workers, map available service points to areas of responsibility, define the remuneration package).	Reach	*Community*	*Urban/peri-urban Kampala, Wakiso, Mbarara, May, Kabarole, Jinja, Mbale, Lira, Mukono, Mpigi, Kyotera*	–
EAF	MOH/UNEPI, DLGs	1.5 Conduct an equity assessment study on ZD in communities (root cause analysis) to understand the who, where, and why and develop an integrated costed service delivery plan for critical geographies.	Measure	District/LGA	*Cross-cutting*	Targeted community surveys to characterize ZD/UI children; HFA
EAF	MOH/UNEPI, DLGs	1.5 Conduct an equity assessment study on ZD in communities (root cause analysis) to understand the who, where, and why and develop an integrated costed service delivery plan for critical geographies.	Measure	District/LGA	*Cross-cutting*	Targeted community surveys to characterize ZD/UI children; HFA
EAF	MOH/UNEPI, DLGs	19.1 Capacity building of district biostatisticians on regular data analysis with focus on geo-spatial skill sets.	Measure	District/LGA	*Cross-cutting*	–
HSS	WHO	TCA: 12.3 Conduct targeted lot quality assurance sampling surveys in communities in eight critical geographies to collect evidence that informs appropriate demand generation interventions (data collection).	Measure	–	*Cross-cutting*	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH/UNEPI, DLGs	Conduct detailed equity assessment study.	Measure	Community	*Cross-cutting*	Targeted community surveys to characterize ZD/UI children; HFA
HSS	MOH/UNEPI, DLGs	1.6 Annual operational assessments to understand district-specific factors/ interventions (Integrated support supervision).	Monitor	District/LGA	*Cross-cutting*	Targeted community surveys to characterize ZD/UI children; HFA
EAF	MOH, DLG	5.8.5 Engage Kraal leaders in dialogue meeting on immunization.	Advocate	Community	*Conflict-prone areas* Moroto, Kotido, Nakapiripirit, Koboko	–
EAF	MOH, DLGs	5.2.3 Engagement and orientation of leaders in fishing communities on the benefits of immunization and to address other BeSD related barriers to mobilize for immunization services.	Advocate	Community	*Fishing communities* Kasese, Lira, Mukono, Wakiso Jinja, Rakai, Masindi, Nakasongola, Nebbi, Buliisa, Namayingo	–
EAF	MOH, DLG	5.7.4 Engagement and orientation of community leaders in mountainous communities on the benefits of immunization and to address other BeSDs to mobilize for immunization services.	Advocate	Community	*Mountainous areas* Kasese, Mbale, Ntungamo, Isingiro, Moroto, Kabarole	–
EAF	CSOs	5.7.6 Facilitate local CBOs familiar with the local context to conduct community engagement and mobilization ahead of the continuous outreach services activities to address BeSD that may affect optimal immunization uptake.	Advocate	Community	*Mountainous areas* Kasese, Mbale, Ntungamo, Isingiro, Moroto, Kabarole	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	CSOs	Peer-to-peer dialogue sessions targeting in and out of school adolescents to promote positive and supportive gender norms towards human papillomavirus (HPV) vaccination and childhood immunization for teenage mothers.	Advocate	–	*Other sub-populations*	–
EAF	CSOs	Identify and amplify through media and interpersonal communication channels voices of the young women especially those who are now mothers and were beneficiaries of HPV vaccination to promote positive perceptions towards HPV vaccination.	Advocate	–	*Other sub-populations*	–
EAF	MOH, DLGs, CSOs, UNICEF	14.4 Targeted dialogues (using BeSD survey findings) with communities and households that subscribe to religious beliefs opposed to vaccination to address their concerns about immunization and vaccines and link them to immunization service delivery points.	Advocate	Community	*Other sub-populations*	–
EAF	MOH, DLGs, CSOs	5.4.4 Engagement and orientation of leaders in pastoral communities on the benefits of immunization and to address other BeSDs (identified during BeSD surveys in these communities) to mobilize for immunization services.	Advocate	Community	*Pastoral* Kasese, Luwero, Rakai, Sembabule, Nakaseke, Nakasongola, Moroto, Kyankwanzi, Buliisa, Kazo, Kotido, Nakapiripirit	–
EAF	MOH, DLGs	5.5.7 Engagement and orientation of religious and community leaders in refugee communities on the benefits of immunization and to address other BeSDs to mobilize for immunization services.	Advocate	Community	*Refugee settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–

Grant	Implementer/ Sub-Recipient	Activity Description * > $ 1 Million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	*Target Populations*/ Geographic Focus	Learning Hub Support
EAF	MOH, DLGs	5.5.3 Engage Office of the Prime Minister, United Nations High Commissioner for Refugees/implementing partners bi-annual stakeholders' meetings.	Advocate	Community	*Refugee settlements* Isingiro, Kyegegwa, Kikuube, Kampala, Koboko	–
EAF	MOH, DLG	5.6.3 Using evidence-based channels models (such as channels of hope), engage leaders of the resistant sects in dialogue sessions to explore fears and concerns and encourage them to mobilize their followers to access immunization services.	Advocate	Community	*Religious sects* Kagadi, Kakumiro, Hoima, Bugiri, Mayuge, Mbale	–
EAF	MOH, DLGs	5.6.5 Development and implementation of a plan for dealing with vaccination hesitancy for resistant religious sects.	Advocate	Community	*Religious sects* Kagadi, Kakumiro, Hoima, Bugiri, Mayuge, Mbale	–
EAF	CSOs	15.2 Implement the urban immunization communication plan customized to the needs of the population in selected urban areas in the targeted priority districts.	Advocate	Community	*Cross-cutting*	–

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