

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

May 2024









Gavi Zero-Dose Learning Hub (ZDLH)

Funded by <u>Gavi</u>, the Zero-Dose Learning Hub (ZDLH) serves as the global learning partner and is led by <u>JSI Research & Training Institute, Inc.</u> (JSI) with two consortium partners, <u>The Geneva Learning</u> <u>Foundation</u> (TGLF) and the <u>International Institute of Health Management Research</u> (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.

Recommended Citation

Gavi Zero-Dose Learning Hub. 2024. "Gavi's Zero-Dose Learning Hub IRMMA Aligned Interventions: Semiannual Update—Nigeria (May 2024)." <u>https://zdlh.gavi.org/</u>.

Contact Information

JSI Research & Training Institute, Inc. 2733 Crystal Drive 4th floor Arlington, VA 22202 USA

ZDLH website: https://zdlh.gavi.org/

CONTENTS

ACRONYMS	. iv
NIGERIA	6
Nigeria Country Learning Hub	6
Zero-Dose Context—Country Priorities	7
Identify	8
Reach	12
Monitor and Measure	14
Advocate	18
ANNEX 1. GAVI-SUPPORTED ZERO-DOSE INTERVENTIONS IN NIGERIA	22

ACRONYMS

AFENET	Africa Field Epidemiology Network
AHBN	Africa Health Budget Network
CHIPS	Community Health Influencers, Promoters, and Services
CLH	Country Learning Hub
CSO	civil society organization
DHIS	District Health Information System
EPI	Expanded Programme on Immunization
FMOH	Federal Ministry of Health
GIS	geographic information system
HSS	health system strengthening
IR	implementation research
IRMMA	Identify, Research, Monitor, Measure, Advocate
JSI	JSI Research & Training Institute, Inc.
LGA	local government area
LQAS	lot quality assurance sampling
MoU	memorandums of understanding
NCDC	Nigeria Centers for Disease Control and Prevention
NERICC	National Emergency Routine Immunization Coordination Centre
NPHCDA	National Primary Health Care Development Agency
NSIPSS	Nigeria's Strategy for Immunization and PHC System Strengthening
OIRIS	Optimised Integrated Routine Immunization Session
PAPA-LQAS	Programme Management and Action—Lot Quality Assurance Sampling
PEA	political economy assessment
PHC	primary health care
PIRI	periodic intensification of routine immunization
R4S	RAISE 4 Sahel
RAISE 4 Sahel	Reaching & Adapting Immunization Services Effectively to Reach Zero-Dose Children in the Sahel
RCVP	rapid community vaccination planning
RE-AIM	Reach, Effectiveness, Adoption, Implementation, Maintenance

[d-]RFM	[decentralized] responsive feedback mechanism
RI	routine immunization
RISS	routine immunization system strengthening
SMS	short message service
SORMAS	Surveillance Outbreak Response Management and Analysis System
ТА	technical assistance
ТСА	targeted community assistance
UI	under-immunized
WHO	World Health Organization
ZD	zero-dose [children]
ZDLH	Zero-Dose Learning Hub
ZDLH-X	ZDLH Inter-Country Peer Learning Exchange
Z-DROP	ZD Reduction Operation Plan
ZIP	Zero-Dose Immunization Project

NIGERIA

NIGERIA 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 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. ZDLH works to address immunization equity through the generation of evidence and learning around effective methods and approaches for identifying and reaching zero-dose (ZD) 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 African Field Epidemiology Network (AFENET) and Africa Health Budget Network (AHBN) as the learning partner for Nigeria. The AFENET–AHBN consortium works across four states in Nigeria; Kano and Sokoto (North West); and Borno and Bauchi (North East). These states contain 49 of the 100 local government areas (LGAs) identified as priority areas for interventions targeting ZD and UI children in the ZD Reduction Operational Plan (Z-DROP). They are supporting Nigeria on interventions across Gavi's Identify, Research, Monitor, Measure, Advocate (IRMMA) framework. The ongoing support from AFENET and AHBN will allow Nigeria to continue to focus on attainable and measurable advancements in identifying and advocating for ZD children across the course of its grants.

ZDLH Technical Assistance

During the period July–December 2023, as the global learning partner, JSI continued to collaborate and co-create with the Nigeria Learning Hub using a demand-driven approach for tailored technical assistance content and resources. For example, through frequent coordination and working meetings, JSI supported the AFENET team to redesign and refine the responsive feedback mechanism (RFM) approach using the classic lot quality assurance sampling (LQAS) approach for immunization coverage assessment. JSI has continued to support the RFM (recently renamed Decentralized Immunization Monitoring) into its implementation phase at decentralized levels. During AFENET's rapid assessment phase, JSI worked to complement the CLH scoping review of barriers and facilitators to vaccination in the CLH target states. In parallel, JSI developed the Nigeria ZD situation analysis that contributed additional ZD estimates in AFENET target states using available data sources and summarized different data systems and ZD policies in place. JSI's support also involved conducting a political economy assessment (PEA) in Nigeria to explore the interactions, decision-making dynamics, and political context of the different actors central to immunization data systems and ZD programming efforts in Nigeria. This work included qualitative interviews with immunization program implementers and international partners to inform the analysis, and preliminary findings from the PEA informed the development of a country-level learning agenda focused on ZD challenges. Building on the PEA work, JSI supported AFENET with the preparation and execution of a learning agenda workshop in early December marked

a significant milestone, bringing together a total of 51 stakeholders across 17 organizations to refine objectives and strategies for addressing ZD immunization issues.

Additional Resources:

- Current and previous strategies: Gavi Country Documents Repository—Nigeria
- <u>Nigeria ZDLH Zero-Dose Landscape</u>
- <u>Nigeria ZDLH Situation Analysis</u>
- <u>ZDLH Semiannual Update (October 2023)</u> (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

Table 1. Grants and Objectives

Grant	Status	Objective
Health System Strengthening (HSS) 3	Active	Core health systems strengthening grant reprogrammed in 2023 to align with the country's ongoing efforts to recover from COVID-19 pandemic disruptions and reach ZD/UI children and communities.
Equity Acceleration Fund	Not active— expected as part of Full Portfolio Planning in 2024	_

Given the size and complexity of Nigeria, the strategic focus of Gavi grants strives to be dynamic in responding to current equity needs. Under Nigeria's HSS support from 2019–2023, the strategy was to accelerate coverage and equity. In recent years, the strategy has been further refined to focus more strongly on equity issues at the subnational level:

- **Optimized Integrated Routine Immunization Session (OIRIS) strategy** under the National Emergency Routine Immunization Coordination Centre (NERICC), focused on improved delivery of fixed and outreach immunization sessions in low performing areas through integration with primary health care (PHC).
- Geographic information system (GIS)-based Reach Every Ward microplans development and implementation.
- Community advocacy and engagement strengthening, including utilizing the Community Health Influencers, Promoters, and Services (CHIPS) program in priority states.
- Strategies to reduce missed opportunities for vaccination in urban areas with many unimmunized (zero-dose) children.
- Health management information system and eLMIS (logistics management information system) integration.

• Line listing defaulter children and following-up using community outreach.

Under Nigeria's ongoing strategy, the first objective is to "dramatically reduce the number of ZD children" in 100 LGAs through focus on: (1) Big Catch-Up; (2) Z-DROPs; and (3) Learning Hub. The set of strategies targeting ZD children include:

- Nigeria's **Zero-Dose Immunization Recovery Plan (2023–2028)** to catch up, restore and expand routine immunization in Nigeria following the COVID-19 pandemic (**"Big Catch-Up"**).
- **Z-DROPs** as part of Nigeria's Strategy for Immunization and PHC System Strengthening (NSIPSS) 2.0 zero-dose strategy in 100 priority LGAs.
- Reaching & Adapting Immunization Services Effectively to Reach Zero-Dose Children in the Sahel (RAISE4Sahel) ZD Immunization Project (ZIP): a multi-partner initiative comprising Gavi, World Vision, Africa Christian Health Association Platform, Food for the Hungry, CORE Group, and Dimagi.
- Learning Hub implementation to increase coordination across partners and use of evidence for ZD programs.
- SWAPs (Sector-wide approach) is currently being designed. Government defines its priorities, and partner technical assistance (TA) is coordinated and demand driven, using government systems, and reducing parallel requirements, earmarks, and demands. Priorities are reducing measles, mumps, rubella; under-five mortality; and reproductive, maternal, newborn, and child health through the Basic Health Care Provision Program and Fund.
- Ministry of Health use of **quarterly Performance Assessment for Programme Management and Action-Lot Quality Assurance Sampling (PAPA-LQAS)** survey to assess performance of the routine immunization program, identify reasons for non-vaccination, and guide programmatic decision-making at the state and LGA levels.
- Support to local civil society organizations (**CSOs**) and **nongovernmental organizations** to advocate and mobilize local resources for immunization and primary health care, with a focus on ZD and missed communities. Health financing interventions as well as the Country Learning Hub partners and aligns with NSIPSS priorities and Gavi's CSO strategy.

Nigeria's Z-DROPs target 100 priority LGAs across 18 states in tier one "high-priority zero-dose" category for year one: Bauchi, Borno, FCT, Gombe, Jigawa, Kaduna, Kano, Katsina, Kebbi, Lagos, Nasarawa, Niger, Ondo, Plateau, Sokoto, Taraba, Yobe, Zamfara. RAISE 4 Sahel focuses on 29 priority LGAs in six states through a three-phase approach: Bauchi, Borno, Kaduna, Kano, Plateau, and Sokoto. This strategy includes activities focused at both the LGA and the ward level to target the most relevant community areas. For a more comprehensive mapping of the context, donor support, policies, and stakeholders: <u>ZDLH Nigeria Zero-Dose Landscape</u>.

IDENTIFY

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

Table 2. Identify Priorities and Activities

<i>Identify</i> Priorities in Nigeria (<i>from reprogrammed</i> HSS grant)		Nigeria Learning Hub Identify Activities		
•	Conduct rapid community vaccination planning (RCVP)—formerly microplanning—exercises.	•	Rapid assessment of interventions across the IRMMA framework.	
•	Walk-throughs in selected communities of Bauchi and Kano States to identify missed children (<i>RAISE4Sahel ZIP</i>).	•	Situational analysis of data capture ecosystem used to identify and monitor ZD children.	

Rapid Assessment Methods and Context

Nigeria has the highest number of ZD children in Africa (about 2.3 million), underlining the critical need to address this issue. The Nigeria Learning Hub conducted a rapid assessment to explore immunization facilitators and barriers, delving into both the demand and supply factors; understand the behavioral and social drivers of vaccination; and to explore uptake of recommended vaccines in selected settlements. The study covered eight LGAs across four states: Bauchi, Borno, Kano, and Sokoto. The CLH selected states with the highest number of ZD based on NERICC's ZD estimation and prioritization analysis. Across selected states, the CLH stratified the prioritized LGAs into urban and rural settings (eight selected). LGAs with the highest number of ZD children were selected from each of the strata. The assessment employed a mixed-methods approach aimed to identify factors preventing routine immunization, assess the quality of healthcare services, and understand caregivers' attitudes towards vaccination. Key components of the study involved:

- Key informant interviews with immunization stakeholders at the state and LGA level, facility in-charge and/or routine immunization focal person, and community leaders in 32 purposefully selected settlements to gain insight into the barriers and facilitators of routine immunization.
- A health facility assessment in 32 facilities to evaluate capacity and performance in delivering immunization services, the availability of resources, infrastructure quality, and service delivery effectiveness.
- A childhood vaccination survey to review vaccination history of eligible children (0–11 months, 12–23 months) with a sample of 320 caregivers of children aged 0–11 months and 12–23 months in the same 32 selected settlements.

The findings from this assessment should inform the development of context-specific action plans supporting evidence-based decision-making to improve immunization programs targeting ZD children and underserved communities.

Determinants of Vaccination

The rapid assessment captured insights into factors affecting childhood immunization in Nigeria through a review of 110 studies conducted between 1976–2023. These studies highlighted both facilitators and barriers to immunization from the perspectives of caregivers, health workers, and community stakeholders. Key facilitators included:

• **Caregiver-related:** Higher maternal education, childbirth in healthcare facilities, positive social support, and awareness of immunization benefits.

- **Health system-related:** Sufficient vaccine supply, skilled workforce, timely reminders, and supportive government policies.
- **Community-related:** Community engagement, urban residency, and the presence of vaccine advocates.

Significant barriers included:

- **Caregiver-related:** Fear of side effects, misinformation, cultural beliefs, low socioeconomic status, and logistical challenges.
- **Health system-related:** Vaccine shortages, inadequate communication, workforce shortages, and fragile supply chain management.
- **Community-related:** Rural residency, regional disparities, cultural/religious beliefs, insecurity, and vaccine hesitancy.

Regional variations highlighted unique facilitators across Nigeria:

- **North-East:** Peer influence, reminder systems, security enhancements, and financial incentives for health facilities.
- North-West: Perceived vaccine benefits, urban residency, health literacy, and influence of religious/traditional leaders.
- North-Central: Knowledge, trust in healthcare providers, and maternal autonomy.
- **South-East and South-South:** High maternal education, health literacy, maternal autonomy, and strong beliefs in responsible parenting through vaccination.
- **South-West:** Use of health cards, high maternal education, skilled workforce, and supportive government policies.

Identify Interventions

Based on the review of the Nigeria workplans in 2024 & 2023; *100 LGA Z-Drop Plans; and RAISE4Sahel* (*R4S*) *Nigeria Presentation 2024 Targeted Community Assistance (TCA) Plan Summary*, Gavi-supported ZD *Identify* interventions in Nigeria include TA for improving routine immunization (RI) coverage and identifying ZD children, conducting microplanning exercises, engaging stakeholders for access to conflict-affected communities, and conducting walk-throughs in selected communities, with activities focused on service delivery, demand and community engagement, and health information systems across multiple geographic levels. Gavi-supported interventions are tailored to enhance immunization coverage at different administrative levels. UNICEF provides technical support to national and state health agencies, focusing on improving RI coverage and identifying communities such as RCVP exercises, and engages in stakeholder negotiations to access communities in conflict-affected areas, like the Liberia community in Lere LGA. Additionally, FMOH is conducting community walk-throughs in selected areas of Bauchi and Kano States to identify and address local barriers to immunization. **Learn more:** Annex 1. Gavi-Supported Interventions in Nigeria.

ZDLH-X Experience

In September 2023, the ZDLH 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 (389 responses from Nigeria). The primary ZD challenges noted by respondents from Nigeria were: (1) Community engagement and empowerment, (2) Addressing affordability, and (3) Access and equity. The three most frequently selected issues underlying ZD challenge included: (1) Cultural beliefs or misconceptions, (2) Geographic isolation, and (3) Inadequate immunization awareness. Respondents from Nigeria were more likely to select cultural beliefs or misconceptions, conflict settings, and poverty. Learn more: Early Learning from Zero-Dose Practitioners in Nigeria and Uganda: Gavi ZDLH Inter-Country Peer Exchange (ZDLH-X2).

Emerging Lessons and Learnings: Identify

The rapid assessment in Nigeria revealed the complex interplay of factors influencing immunization rates across Nigeria, emphasizing the need for tailored strategies to address regional disparities and leverage facilitators to overcome barriers. A range of logistical, socio-economic, cultural, and healthcare system-related challenges impede identifying ZD and UI children. These include the distance between caregivers' residences and immunization centers, vaccine shortages, poor relationships between health workers and caregivers, and cultural/religious influences. Issues with data quality, including inaccuracies and timeliness, pose significant challenges. Challenges in existing reporting systems, including poor data quality and reporting delays hamper the effectiveness of immunization programs. Strengthening these systems is critical for enabling data-driven decisionmaking and improving immunization outcomes. Systems like District Health Information System version 2 (DHIS2) and routine immunization (RI) short message service (SMS) reporting have limitations in measuring ZD children and reaching remote areas. The reliance on volunteers and challenges in staffing are notable barriers. Understaffing, inadequate infection control, and insufficient data management, hinder the delivery of routine immunization and contribute to the prevalence of ZD children. Strengthening community engagement and improving service delivery are crucial steps forward. **Emerging lessons include:**

- Strengthen workforce and support health workers: Addressing human resources challenges across systems and emphasizing sustainable and accountable workforce solutions. The rapid assessment revealed that a high proportion of facility staff (47 percent) were volunteers. Acknowledging the crucial role of health workers play and addressing their challenges through financial support and system improvements is key.
- Address service delivery issues and improve service accessibility: Session days and time should account for social activities and domestic responsibilities of caregivers. Extend service hours and prioritize infection prevention and control measures. Address issues like long wait times and affordability to enhance vaccination efforts.
- **Gender:** Limited information as a demand-side factor can hinder women's ability to make informed decisions. Family and community influence is higher in urban LGAs. More caregivers need permission from their husbands in rural LGAs compared to urban LGAs. Social discussions

with neighbors and friends should be part of interventions to improve vaccination, especially in rural areas.

- **Tailored communication to strengthen community engagement:** The importance of engaging with community leaders and gatekeepers to promote immunization and dispel myths is crucial. Development of communication strategies can address vaccine safety concerns and build trust in the healthcare system. Utilize the role of community gatekeepers in promoting routine immunization through community mobilization and direct communication. Work with religious and community leaders to dispel myths and promote vaccination.
- Data system improvements to enhance decision-making: Enhance DHIS2 and other data systems by developing a data quality improvement plan, improving accountability, and training health workers. Strengthen data analysis capabilities at health facilities through training and implementation of robust data quality improvement plans. Allocation of budget for printing and distribution of data tools at health facilities is also critical.
- Leverage technology: Use technology for data collection and supportive supervision, particularly in addressing challenges faced by the RI SMS reporting system and volunteers in PAPA-LQAS.

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 Nigeria		Nigeria Learning Hub Reach Activities		
•	Conducting supplemental immunization activities and periodic intensification of routine immunization (PIRIs) to reach ZD children.	 Implementation research on comparative effectiveness and costs of PIRI, OIRIS, and optimized outreach sessions. 		
•	Conduct randomized controlled trial study testing impact of demand side interventions on reaching ZD children.			
•	Optimized allocation of decentralized facility financing through the Basic Health Care Provision fund in Kano, Katsina, Kaduna, Niger, Gombe, and Lagos.			

Interventions to Reach ZD

Based on the review of the Nigeria workplans 2024 and 2023, *100 LGA Z-DROPs*, and *R4S Nigeria Presentation 2024 TCA Plan Summary*, Gavi-supported interventions aim to enhance immunization coverage and address critical barriers. These initiatives include engaging more women as community vaccinators and implementing the Z-DROPs in 100 LGAs as part of the National Strategic Immunization Plan (NSIPSS 2.0). Major efforts such as the "Big Catch-Up," involving three rounds of PIRI, are integral to these strategies. The FMOH is also developing and refining cost-effective RI workplans and microplans, particularly in priority LGAs. This includes strengthening capacity through the Learning Hub and improving service integration of Expanded Programme on Immunization (EPI) and PHC in the eight Gavi focus states: Kebbi, Zamfara, Katsina, Gombe, Jigawa, Taraba, Niger, and Bayelsa. UNICEF is contributing to these efforts by guiding national and subnational social and behavior change strategies to enhance routine immunization programs, with a focus on reducing ZD incidence and supporting new vaccine introductions. The FMOH activities also include enhancing partnerships with local CSOs and health facilities, such as Chigari Foundation; Federation of Muslim Women's Association of Nigeria; Mission for Education, Social, and Health; and Zipline Nigeria, and is training health workers to provide RI services in fragile and conflict settings. Learn more: Annex 1. Gavi-Supported Zero-Dose Interventions in Nigeria.

Optimized Integrated Routine Immunization Session

The NERICC was established as an arm of the National Primary Health Care Development Agency (NPHCDA) in 2017. Prior to its establishment, Nigeria's Penta3 immunization coverage was low (33 percent), according to the 2016/2017 Multiple Indicators Cluster Survey/National Immunization Coverage Survey report, and fluctuated significantly over the previous decade, with most states with low immunization coverage located in the Northern region. The NERICC team prioritized 18 poor-performing states (Sokoto, Jigawa, Kaduna, Kano and Katsina, Borno, Gombe, Bauchi, Adamawa, Yobe, Zamfara, Kebbi, Kogi, Taraba, Nasarawa, Niger, Bayelsa, and Plateau) for implementation of strategic interventions. To address poor performance, the NERICC and partners developed the OIRIS strategy. OIRIS is a multi-pronged, system-wide strategy for improving RI in poor performing areas. It focuses on improving the effectiveness and efficiency of fixed and outreach RI sessions and integrating these sessions into other PHC services to provide clients the opportunity to receive a wide range of interventions during their clinic visits. The five key pillars of OIRIS are optimized RI sessions, integration of RI with other services, intensified RI supportive supervision, ownership, and accountability. Through OIRIS, state and LGA health workers and managers are optimizing fixed and outreach immunization sessions by removing barriers to access. Learn more: ZDLH Nigeria Zero-Dose Situation Analysis.

Implementation Research

The Country Learning Hub's IR focuses on evaluating the barriers and facilitators, effectiveness, efficiency, and incremental cost and cost-effectiveness of three vaccination strategies in Nigeria: OIRIS, PIRI, and optimized outreach sessions. These strategies aim to improve immunization coverage and target ZD children in various contexts, including remote rural areas, fragile settings, border communities, and urban slums. This research will generate evidence to guide programmatic adjustments and inform policy decisions to enhance immunization outreach and coverage in Nigeria. The objectives of the IR are to identify potential barriers and facilitators in the implementation of the strategies; to assess their effectiveness and efficiency in reaching ZD children across different settings; and to examine the incremental costs and cost-effectiveness of these strategies. The Learning Hub will conduct the research through a pre-/post-cross-sectional study design, utilizing a mixed methods approach. The implementation research will use the Practical, Robust Implementation and Sustainability Model framework to identify and address the contextual factors that influence the implementation and outcomes of the three strategies used to improve routine immunization in Nigeria. The framework expands the Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) framework¹ to

¹ The goal of RE-AIM is to encourage program planners, evaluators, and policy-makers to pay more attention to essential program elements including external validity that can improve the sustainable adoption and implementation of effective, generalizable, evidence-based

identify contextual factors inherent in implementing health programs or interventions. The Learning Hub will share findings in future reports.

Emerging Lessons and Learnings: Reach

Strategies that enhance community trust and outreach efficacy, especially in reaching under-served or hard-to-reach populations are critical. Implementing broad vaccination strategies such as Big Catch-Up rounds, Z-DROPs in LGAs, and targeted campaigns like PIRI are essential. These approaches address both immediate gaps in immunization coverage and longer-term systemic challenges. Strengthening the capacity of frontline providers and ensuring the development and improvement of costed RI workplans and microplans are vital. Implementation research is pending, and the Learning Hub will detail learning in future reports. Learn more about *Reach* strategies shared by frontline health workers during the ZDLH-X peer exchange: From Exchange to Action: Summary Report of Gavi Zero-Dose Learning Hub Inter-Country Peer Exchanges.

MONITOR AND MEASURE

Table 4. Monitor and Measure Priorities and Activities

Monitor & Measure Priorities in Nigeria		Nigeria Learning Hub Monitor & Measure Activities		
•	Development and implementation of new methods for ZD identification and monitoring.	•	Situational analysis of data capture ecosystem used to identify and monitor ZD children.	
•	Routine review of data for use, and capturing of 7D learnings.	•	Development of RFM.	
•	Data Quality Assessment and data validation exercises.	•	Development of implementation research plan and protocol finalize for Phase II, including delivery strategies.	
•	Finalize ZD measurement, survey approaches, and M&E plans for Z-DROPs.	•	Learning agenda following rapid assessment on drivers and characteristics of ZD children.	

Data Systems and Sources

ZDLH conducted a ZD situation analysis in Nigeria providing an overview of various routine and periodic data sources that collect, capture, and report data on ZD, including details related to which entity or organization manages the data system and how, frequency of data collection and reporting, level of disaggregation, any known data quality issues, availability/accessibility of data, and use of data or use cases. While these systems collectively enhance the understanding of RI in Nigeria, they also face challenges related to data quality, reporting timeliness, and access limitations, particularly in areas with security concerns. Learn more: ZDLH Nigeria Zero-Dose Situation Analysis.

• **DHIS2** serves as the backbone for health data management in Nigeria, capturing a wide range of health indicators, including those related to RI. Managed at the LGA level, DHIS2 facilitates

interventions. The five steps to translate research into action are: Reach the target population; Effectiveness or efficacy; Adoption by target staff, settings, systems, and communities; Implementation consistency, costs and adaptions made during delivery; and Maintenance/ sustainability of intervention effects in individuals and settings over time.

monthly data reporting from health facilities. It tracks around 1,000 data elements, producing 85 summary indicators that are crucial for monitoring the EPI performance. Despite its extensive use and the integration of vaccine logistics and stock management, DHIS2 faces challenges like untimely reporting and issues with internet connectivity, which SMS reporting partly addresses in certain states.

- **SMS reporting** complements DHIS2 by offering real-time data aggregation for RI across 18 priority states in Nigeria. It captures daily updates on immunization sessions and stock levels, providing a granular view of RI performance. The system helps identify discrepancies with DHIS2 data, although disparities between vaccination numbers and session reports have been noted.
- Nigeria Demographic and Health Survey, conducted every five years, offers comprehensive demographic and health information, including data on children's immunization statuses. The latest Nigerian Demographic and Health Survey utilized computer-assisted personal interviewing, enhancing data quality and availability. However, areas affected by security concerns have seen limited data collection, impacting the comprehensiveness of the survey.
- **PAPA-LQAS** employs a household survey approach to assess RI quality and performance, utilizing age-specific indicators for different child cohorts. Conducted quarterly, this survey provides critical insights for intervention strategies but faces limitations in data availability and dissemination at the health facility level.
- Multiple Indicators Cluster Survey/National Immunization Coverage Survey, conducted every three years, gathers extensive data on child health and immunization coverage. The incorporation of computer-assisted personal interviewing has improved data quality, though challenges persist in areas with security issues, affecting the survey's reach.
- World Health Organization (WHO) and UNICEF Estimates of National Immunization Coverage
 offer annual reviews of national immunization coverage, combining government reports, survey
 data, and expert consultations to estimate coverage levels. While providing a valuable overview
 of immunization status, WHO and UNICEF Estimates of National Immunization Coverage data
 rely on diverse sources that may vary in quality and accuracy.

Data Gaps

The evaluation of routine immunization reporting systems conducted by the Learning Hub highlighted strengths, challenges, and recommendations for five key systems. This evaluation underscores the importance of improving data quality, access, and system integration to enhance routine immunization reporting and target ZD children more effectively.

System	Strengths	Challenges	Recommendations
DHIS2: an electronic platform of the health management information system—health facilities report service delivery data monthly.	Open-source, customizable, with data visualization tools.	Issues with data quality and timeliness, complex user interface, lacks specific fields for ZD children.	Training for data handling, improved internet connectivity, real-time reporting, and integration with systems like Surveillance Outbreak Response Management and Analysis System

Table 5. Data Strengths and Challenges

System	Strengths	Challenges	Recommendations	
			(SORMAS).	
PAPA-LQAS: population-based survey implemented quarterly by NPHCDA.	Effective in identifying high ZD burden areas and monitoring quarterly.	Depends heavily on volunteer staff; methodology is unclear.	Implement detailed house-to-house surveys and utilize GIS for precise ZD estimates.	
RI SMS reporting: electronic database designed to aggregate RI implementation across 18 NERICC priority states in real time.Wide accessibility, captures routine immunization sessions, and provides useful weekly dashboards.		Struggles to identify ZD children at the healthcare facility level and in challenging terrains, financial constraints for SMS, risk of data loss.	Population census for accurate targeting, addressing staff shortages, and technology-enhanced training and supervision.	
Routine Immunization System Strengthening (RISS) Checklist: An open data kit based supervisory checklist that facilitates the identification of gaps or areas for improvement in RI.	Aids in routine immunization supervision and identifies drop-out children, aiding ZD reduction.	Resource and scalability challenges, potential oversight in remote locations.	Leverage technology for better data management, update checklists for current challenges, and ensure regular training for health workers.	
SORMAS: disease surveillance platform used by Nigeria Centers for Disease Control and Prevention (NCDC) and NPHCDA to track and respond to measles and other vaccine-preventable outbreaks, including real-time data collection and post- vaccination surveys to assess program effectiveness.	Efficient for reporting outbreak and surveillance data.	Limited access for routine immunization surveillance affects data quality and timeliness.	Enhance collaboration between health agencies for better data sharing and integration.	

Responsive Feedback Mechanism (Decentralized Immunization Monitoring)

The Learning Hub will pilot a decentralized RFM (dRFM) with support from JSI and Liverpool School of Tropical Medicine using a classic LQAS methodology for the household survey component, along with health facility service availability and readiness assessments conducted in selected facilities. The approach aims to complement PAPA-LQAS to assess RI performance at the ward level and to understand local drivers/barriers of vaccination. dRFM adopts the ward as the lot, thereby capturing the wide variation in ZD settings and populations within the LGA. dRFM is designed to estimate average coverage for selected immunization indicators at the LGA level and identify priority wards that do not reach the average coverage point estimate for vaccination at the LGA level. This information, in turn, will equip local health managers to delve deeper and diagnose the main contributors to poor performance and make data-driven decisions about how to improve immunization programs in their respective communities. data collection, dRFM will train and leverage community members using already existing as supervisors and guides. Implementing the dRFM approach quarterly provides continuous evidence generation for strategic interventions at the decentralized level. The qualitative approach will generate community and healthcare workers' perspectives on demand and supply-related challenges acting as

barriers to vaccination. This will facilitate a client-centered approach (co-creation) factoring in client and community involvement in routine immunization. The CLH will implement the dRFM approach in eight LGAs across the four Learning Hub states (Bauchi, Kano, Sokoto, and Borno) with a pilot in a sample of wards located in one LGA (Kumbotso LGA in Kano). This effort underscores a commitment to informed, strategic interventions aimed at improving immunization coverage, with a focus on understanding and addressing specific local challenges to vaccine uptake. Data collection is ongoing and the Learning Hub will address learnings in future reports.

Interventions to Monitor and Measure ZD

Based on the review of the Nigeria workplan 2024 and 2023, *100 LGA Z-DROPs*, and *R4S Nigeria Presentation 2024 TCA Plan Summary*, Gavi-supported ZD *Monitor and Measure* interventions in Nigeria are designed to enhance data collection, reporting, and analysis to bolster immunization efforts. Interventions focus on enhancing immunization effectiveness and coverage through targeted efforts in specific geographic areas and across the national landscape. Interventions in eight LGAs include initiatives such as IR and the strengthening of routine data through a RFM). At the national level, efforts concentrate on developing a ZD learning agenda, semi-annual performance reviews, and disease modeling for diphtheria and other vaccine-preventable diseases to bolster surveillance and response capabilities. Additional national initiatives include the conduct of RISS assessments and data quality audits in designated RAISE4Sahel ZIP LGAs. Collectively, these activities aim to address the critical barriers of data reliability within the identified high-priority regions and nationwide. **Learn more:** <u>Annex</u> <u>1. Gavi-Supported Zero-Dose Interventions in Nigeria</u>.

Emerging Lessons and Learnings: Monitor and Measure

Successful monitoring relies on the adaptability and integration of data systems. Systems like DHIS2 show the importance of open-source, customizable platforms with data visualization capabilities. However, the challenge remains in integrating these platforms (e.g., DHIS2 with SORMAS) to ensure seamless data flow and comprehensive monitoring. Issues with data quality and timeliness are recurring challenges across different platforms. Ensuring accurate, real-time data reporting is critical for identifying and reaching ZD children effectively. The application of GIS technologies, as suggested for PAPA-LQAS, highlights the potential for more precise targeting and estimation of ZD populations, underscoring the need for innovative technological solutions in monitoring efforts. Engaging community members and healthcare workers through mechanisms like the RI SMS reporting system and RISS checklist not only aids in data collection but also in identifying drop-out and ZD children through direct engagement and supervision. RFM emphasizes the importance of continuous, evidence-based decision-making at local levels enabling real-time adjustments and strategic interventions based on current data and feedback. Emerging lessons include:

- Enhance training and connectivity: Address the challenges of complex user interfaces and data quality by investing in comprehensive training for data handlers and improving internet connectivity across monitoring platforms.
- Integrate and scale up technology solutions: Leverage technology to enhance data management and reporting. This includes integrating existing platforms and adopting new technologies like GIS for better targeting and monitoring of ZD children.

- Implement comprehensive surveys: Beyond technology, implement detailed house-to-house surveys to accurately identify ZD children. This grassroots approach can provide nuanced insights into local immunization barriers.
- **Foster interagency collaboration:** Improve collaboration between health agencies (e.g., NCDC and NPHCDA) for better data sharing, integration, and utilization. This can enhance both routine immunization surveillance and outbreak response capabilities.
- **Prioritize client-centered approaches:** Adopt client-centered approaches that involve community and client feedback in the design and implementation of immunization programs. This co-creation process ensures that strategies are responsive to the actual needs and barriers faced by communities.

ADVOCATE

Strong political leadership is crucial for advancing immunization equity and sustaining progress through domestic financing. Targeted advocacy to stakeholders at the national and sub-national (state, LGA, and community) levels is critical to reaching ZD and UI children in Nigeria.

Table 4. Advocate Priorities and Activities

Advocate Priorities in Nigeria		Nigeria Learning Hub Advocate Activities		
•	Advocacy, partner engagement, and subnational financing monitoring (<i>RAISE4Sahel ZIP</i>). Engagement of CHIPS agents/community mobilizers for demand generation (<i>RAISE4Sahel ZIP</i>).	•	Partner advocacy. Sub-national budget analysis completed in 4 states: Bauchi, Borno, Sokoto, and Kano. Dissemination of learning products from assessments and research.	

Country Policies

Nigeria's Strategy for Immunization and PHC System Strengthening (NSIPSS) is the government's primary document for outlining immunization-related priorities. The FMOH developed the NSIPSS for the period of 2018–2028, originally as part of the Gavi transition plan that started in 2017, and outlines Nigeria's immunization programming and priorities. A complementary and updated NSIPSS was developed for 2021–2024 to provide a three-year roadmap for strengthening immunization programming based on experiences from and progress made in the first three years of the 2018–2028 NSIPSS and to reposition the NSIPSS in the context of the COVID-19 pandemic and updated global immunization agendas (Immunization Agenda 2030 and Gavi 5.0). The NSIPSS 2.0 includes a revised national goal of achieving routine immunization coverage of 90 percent for all antigens in at least 90 percent of LGAs. It also includes specific objectives of reducing the number of UI children by 20 percent by 2024 based on Penta3 coverage and the number of ZD children by 35 percent based on Penta1 coverage. All the objectives, strategies, and activities outlined in the document consider how to reduce the number of ZD children. Specific strategies for improving access to and use of immunization services for ZD children and missed communities include optimized integrated reproductive, maternal, newborn, child, adolescent health, and nutrition and immunization sessions; a geospatial microplanning toolkit; and an integrated medical outreach program. The NSIPSS 2.0 also considers the country's ZD reduction strategy and specifically mentions interventions to reach ZD children in humanitarian assistance

contexts, including those in areas affected by conflict. More generally, the inclusion of immunization activities in national strategy and policy documents indicates the government's commitment to reduce vaccine-preventable disease nationally. **Learn more:** <u>Nigeria Zero-Dose Landscape</u>.

Nigeria Zero-Dose Immunization Recovery Plan (2023–2028)

Guided by the Immunization Agenda's 2030 framework for action and the need to rebuild immunization programming in the wake of COVID-19 while focusing on reaching ZD children and missed communities, countries have been tasked to develop individual Immunization Recovery Plans. The Nigeria ZD Immunization Recovery Plan (2023–2028) aims to catch-up, restore, and strengthen immunization services in the country. It includes evidence-based strategies aimed at increasing immunization coverage while reducing the number of ZD children. Its goals are to achieve a 30 percent reduction (750,000 children) in the cumulative number of ZD children by the year 2025 and a 50 percent reduction by the year 2028. Achieving the 2028 goal in Nigeria would contribute to a six percent reduction of ZD children globally. Specific objectives included in the Nigeria ZD immunization recovery plan include catch-up immunization efforts targeting children who were missed during the COVID-19 pandemic from 2019 to 2022, with a minimum of 50 percent reached through multi-antigen periodic intensification of routine immunization; dedicated large campaigns and other interventions; and restoration of the full range of immunization delivery services (including outreach, new vaccine introduction, and supplemental immunization activities) to mitigate further backsliding. The plan also aims to reach ZD children by bolstering community and primary health care services while also expanding immunization activities and making them more efficient. Learn more: ZDLH Nigeria Zero-Dose Situation Analysis.

Stakeholder Engagement Methods

The Learning Hub is leveraging the expertise of AHBN, using CSO networks to reach out to identified stakeholders at the national and sub-national levels and implementing a comprehensive stakeholder engagement and advocacy strategy targeting legislators, government officials, international partners, CSOs, traditional and religious leaders, and communities to improve routine immunization. Key methods include advocacy visits, workshops, and the dissemination of learning materials to address challenges such as siloed data and non-specific budget allocations for immunization. Significant engagements at the national level involved meetings with Senate and House Health Committees, while at the subnational level, efforts focused on state assembly members for sustainable immunization financing. Additionally, the Learning Hub fostered engagements with government officials aimed at ZD, and partnerships with international organizations and CSOs for coordinated action against ZD challenges. Key stakeholder engagement also extended to traditional, religious, and community leaders in ZD communities, raising awareness about the importance of vaccination.

Nigeria's engagement with and support gained from the NERICC, the State Emergency Routine Immunization Coordination Center, and local government areas provide valuable opportunities to assess progress, address challenges, and refine strategies in real-time, ensuring that efforts to improve immunization coverage remain responsive to evolving needs. Through these efforts, the Learning Hub has laid the groundwork for deeper impacts in its next phase, emphasizing the necessity of inclusive and participatory approaches in immunization programs for achieving sustainable health outcomes.

Sub-National Budget Analysis

The Learning Hub conducted a subnational budget analysis to analyze immunization allocations and disbursements (2021–2023); to review coordination and partnership at the state level that promotes immunization and equity to reach ZD children and missed communities; and to offer recommendations for advocacy. The methodology included a desk review of state budgets, health memorandums of understanding (MoUs) with donors, and other relevant documents–alongside data analysis and key information interviews to enrich the findings.

The health budget allocations in the ZDLH states, particularly for PHC, are low, with Sokoto and Borno having particularly poor allocations. The analysis revealed that state governments have made minimal investment in PHC, possibly due to significant funding from external partners, which may affect long-term sustainability planning for PHC.

Budget allocations generally lack clarity, especially concerning immunization-specific funding. There is no distinct budget line for immunization or related infrastructure like cold chain storage, though federal governments or donors often fund these. Efforts have been made through MoUs with various partners like the Bill & Melinda Gates Foundation and Aliko Dangote Foundation to improve routine immunization and PHC services. However, funding delays and bureaucratic challenges have hindered the timely release of funds in states like Bauchi, Kano, and Sokoto, raising concerns about state governments' commitment to these initiatives.

Leadership changes in health departments, such as in Sokoto, have further impacted the coordination and effectiveness of health service delivery. The CLH has highlighted gaps in direct state investment in immunization and plans to enhance advocacy efforts to ensure sustained support and progress towards universal health care in these regions. The Learning Hub proposes advocacy for earlier consideration of immunization needs during the annual operational plan development. Additionally, the consortium encouraged annual immunization reports from state governments for increased transparency and accountability. The advocacy efforts in Nigeria for clear and dedicated budget lines for immunization within state health budgets exemplify strategic advocacy. By addressing the challenge of non-specific budget allocations, the CLH is advocating for transparency and efficient resource utilization, which are critical for the sustainable financing of immunization programs.

Advocate Interventions

Based on the review of the Nigeria workplans 2024 and 2023, *100 LGA Z-DROPs, and R4S Nigeria Presentation 2024 TCA Plan Summary*, Gavi-supported ZD *Advocate* interventions in Nigeria include partner engagement, subnational financing monitoring, state-level program launches, and the engagement of community health workers to strengthen demand generation for vaccines. **Learn more:** <u>Annex 1. Gavi-Supported Zero-Dose Interventions in Nigeria</u>.

Emerging Lessons and Learnings: Advocacy

Strong political leadership is essential for advancing immunization equity and sustaining progress through domestic financing—this underscores the critical role of engaging political leaders in advocacy efforts as demonstrated by Nigeria's multi-level engagement strategy. Emerging lessons include:

• Enhance engagement with political leaders: Continue and deepen advocacy efforts aimed at political leaders at national and sub-national levels to secure their support for immunization

programs, focusing on the importance of domestic financing for sustainability. Develop and implement advocacy strategies specifically tailored to the unique contexts and needs of different states and communities. This might include targeted messages that address the specific challenges and barriers to immunization in those areas. Utilize data and evidence from assessments, research, and budget analyses to strengthen advocacy messages. Data-driven advocacy can help make a compelling case for increased and more targeted immunization funding and support.

- **Tailored stakeholder engagement:** Recommendations include enhancing advocacy efforts by increasing the engagement of religious and community leaders, implementing contextually appropriate communication strategies, and ensuring that advocacy initiatives are well-funded and continuous.
- Advocate for transparent and adequate financing: Focus advocacy efforts on securing clear and dedicated budget lines for immunization within state health budgets. Advocate for increased transparency and accountability in the allocation and disbursement of funds for immunization programs.

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

Grant	Implementer/ Sub-Recipient	Activity Description * > \$ 1 million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	Geographic Focus	Learning Hub Support
ТСА	UNICEF	TCA: Provide technical support to the NPHCDA and the State Primary Health Care Board and states in improving RI coverage, analysis of data and identification of missed communities and ZD children, implement strategies for reaching ZD children including catch-up and recovery.	Identify	Region/ State	_	_
HSS	FMOH	R4S/ZIP: Conduct RCVP (formerly microplanning) exercises for the Phase 2 LGAs—December 2023–January 2024.	ldentify	District/LGA	R4S/ZIP LGAs	_
HSS	FMOH	R4S/ZIP: Continue to engage stakeholders on new communities and negotiation of access to communities in conflict (e.g., Lere LGA—Kayarda ward—Liberia community).	Identify	Community	R4S/ZIP LGAs	_
HSS	FMOH	R4S/ZIP: Conduct walk-throughs in selected communities of Bauchi & Kano States.	Identify	Region / State	R4S/ZIP LGAs	_
HSS	FMOH	R4S/ZIP: Deliberately engage more women as vaccinators for outreaches.	Reach	Community	R4S/ZIP LGAs	_
HSS	FMOH	Big Catch Up (2024): including conducting three rounds of PIRI.	Reach	_	_	Implementation research
HSS	FMOH	Implementing Z-DROPs in 100 LGAs (Accelerated implementation of NSIPSS 2.0 ZD Strategy)—2024.	Reach	_	Z-DROPs	

Grant	Implementer/ Sub-Recipient	Activity Description * > \$ 1 million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	Geographic Focus	Learning Hub Support
HSS	FMOH	Learning Hub: Capacity strengthening in IRMMA for front line providers.	Reach	_	_	Rapid Assessment; Landscape; dissemination of learning products
ТСА	WHO	TCA: The development and implementation of costed RI workplan Z-DROPs in priority LGAs.	Reach	District / LGA	Z-DROPs	-
ТСА	WHO	TCA: Assessment and improvement of the quality of Reach Every Ward microplans and its implementation in addressing the burden of zero dose.	Reach	District/LGA	_	_
ТСА	WHO	TCA: Provide technical support to State Primary Health Care Development Agency in the 8 Gavi focus states (Kebbi, Zamfara, Katsina, Gombe, Jigawa, Taraba, Niger, and Bayelsa) to develop and implementation of work plans for Integration of EPI and PHC services toward strengthening Health Systems and reach for ZD, under immunized and missed communities.	Reach	Region/ State	Gavi focus states	_
TCA	UNICEF	TCA: Provide overall technical support and guidance in the formulation and management of social and behavior change strategies and plans at national level in support of routine immunization program, focusing on ZD reduction, and new vaccine introduction.	Reach	National	_	_
TCA	UNICEF	TCA: Provide subnational level oversight support to adoption of localized and context specific social/behavior change strategies and plans in priority states/LGAs.	Reach	District/LGA	_	-
ТСА	Independent contractor (to be confirmed)	TCA: Provide TA embedded within NERICC to support priority workplan activities under the Direction of Director, DCI including; rollout of ZD interventions, human papillomavirus rollout, and support for PAPA 2.0 LQAS.	Reach	National	_	_

Grant	Implementer/ Sub-Recipient	Activity Description * > \$ 1 million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	Geographic Focus	Learning Hub Support
HSS	МОН	R4S/ZIP: Sign MoU with local CSOs, local partners, and health facilities: Chigari Foundation; Federation of Muslim Women's Association of Nigeria, Mission for Education, Social, and Health; Zipline Nigeria.	Reach	Community	R4S/ZIP LGAs	_
HSS	МОН	R4S/ZIP: Train R4S ZIP health workers on RI service provision in fragile and conflict settings, social and behavior change/gender equity and social inclusion.	Reach	Region/ State	R4S/ZIP LGAs	_
HSS	МОН	R4S/ZIP: Formalize the partnership with Zipline in Kaduna State and strengthen the direct vaccine delivery model Push-Plus in the other states.	Reach	Region/ State	R4S/ZIP LGAs	_
HSS	МОН	Implementation research and costing analysis (8 LGAs).	Measure	-	-	Development of implementation research plan and protocol
HSS	МОН	Finalize the national ZD learning agenda and hold a semi-annual performance review with partners.	Monitor	_	_	Development of ZD learning agenda on drivers and characteristics of ZD
HSS	МОН	Strengthen routine data with Responsive Feedback Mechanism (8 LGAs).	Monitor	_	-	Development of Responsive Feedback Mechanisms (RFM)
ТСА	NCDC	TCA: Support development and deployment of diphtheria and vaccine-preventable disease modeling to guide surveillance, preparedness, and response for the diphtheria Emergency Task Team (NPHCDA, FMoH, NCDC) and ZD-focused surveillance systems strengthening.	Monitor	National	_	

Grant	Implementer/ Sub-Recipient	Activity Description * > \$ 1 million USD	Identify, Reach, Monitor, Measure, Advocate (IRMMA)	Level	Geographic Focus	Learning Hub Support
HSS	FMOH	R4S/ZIP: Conduct RISS and data validation exercises in December 2023.	Monitor	National	R4S/ZIP LGAs	Development of RFM planned—real time data- driven feedback
HSS	FMOH	R4S/ZIP: Conduct 2023 data quality assessment by January 2024.	Monitor	National	R4S/ZIP LGAs	Development of RFM— real time data-driven feedback
HSS	МОН	Learning Hub advocacy, partner engagement, and subnational financing monitoring.	Advocate	_	_	Sub-national budget analysis in four states: Bauchi, Borno, Sokoto, and Kano
HSS	МОН	R4S/ZIP: Organize state-level launches of the R4S ZIP in the implementing states.	Advocate	Region/ State	R4S/ZIP LGAs	-
HSS	МОН	R4S/ZIP: Continue the engagement of CHIPS agents/community mobilizers in all states to strengthen Demand Generation.	Advocate	Community	R4S/ZIP LGAs	_

JSI Research & Training Institute, Inc. 2733 Crystal Drive 4th floor Arlington, VA 22202 USA

ZDLH website: <u>https://zdlh.gavi.org/</u>