Implementing a Memorandum of Understanding (MOU) with Basket Funding to Improve Routine Immunization (RI) Systems

A Start-Up Guide Compendium

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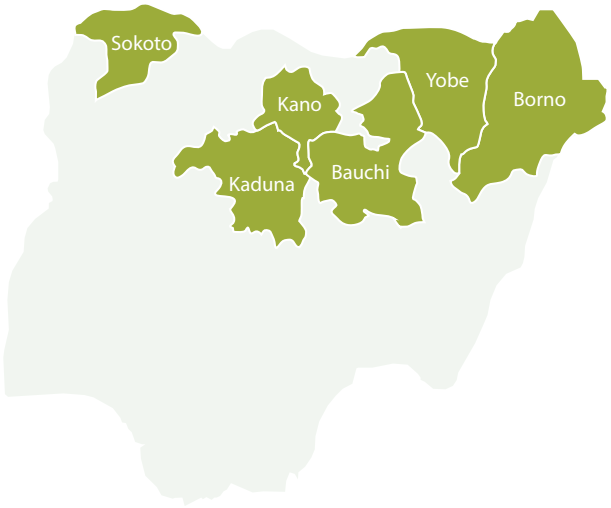
Purpose

This compendium provides a brief overview of the steps in designing, implementing, monitoring, and sustainably transitioning a memorandum of understanding (MOU) partnership for routine immunization (RI) strengthening. The steps, lessons learned, and recommendations it contains come from the implementation of government-led RI MOU partnerships in six states in northern Nigeria: Bauchi, Borno, Kaduna, Kano, Sokoto, and Yobe (see map on the next page). This guide is intended to be a quick reference for those considering or implementing similar MOU partnerships. Two of the states, in coordination with partners and donors, are currently expanding the MOU partnership approach to primary health care (PHC) more broadly; thus implementers believe that this approach could be adapted and applied beyond RI to other aspects of the health system.

In addition to this compendium, MOU partners have developed detailed case studies on each state's experience, as well as a longer guide entitled, "Implementing an MOU with Basket Funding to Improve Routine Immunization Systems: A Start-Up Guide." Links to those resources are provided at the end of this document.

Background

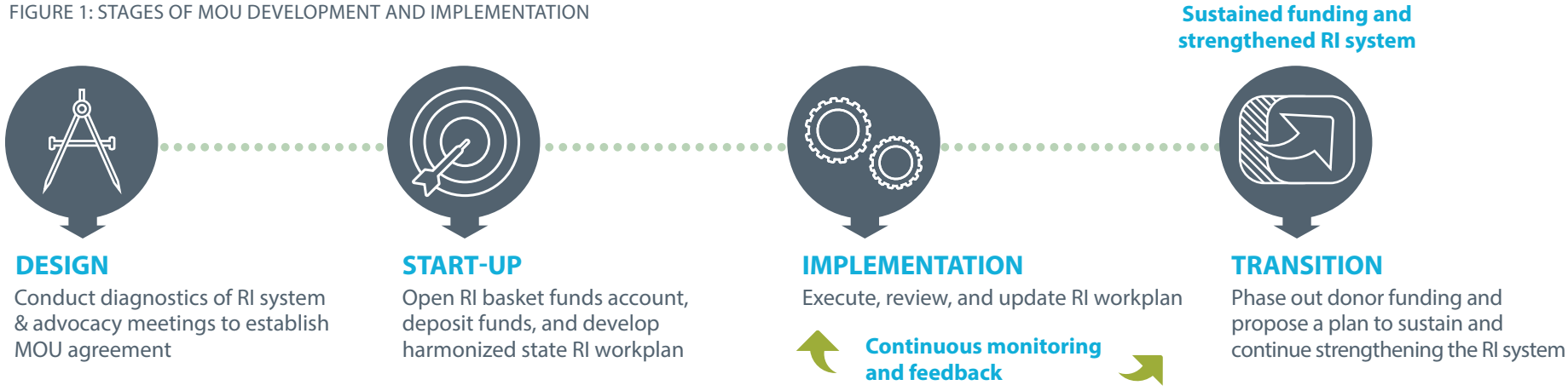


Immunization coverage rates in northern Nigeria are among the lowest and most inequitable in the world. The 2017 Multiple Indicator Cluster Survey estimates the pentavalent vaccine coverage in many of these states is below 15%, leading to high numbers of childhood illnesses and deaths due to vaccine-preventable diseases.[1] Many assessments have identified key RI program challenges, including weak cold chain and logistics systems, ineffective supportive supervision, weak community engagement, and inadequate ownership and funding by many state governments.[2,3]

To address these issues, six MOUs were created between each of six northern Nigerian state governments (Kano, Bauchi, Borno, Yobe, Kaduna, and Sokoto), the Bill & Melinda Gates Foundation, and the Aliko Dangote Foundation. The United States Agency for International Development (USAID) joined as a partner in Bauchi and Sokoto. These MOUs established an innovative platform to transform RI programming and sustainably improve immunization coverage in Nigeria's worst-performing states. Through the MOUs, the foundations and each state government contributed funds into dedicated state-managed program accounts (basket funds) to finance RI. USAID provided technical assistance in Bauchi and Sokoto through the Maternal and Child Survival Program (MCSP).

This start-up guide compendium provides an overview of the stages involved in developing and implementing an MOU and illustrates the various components within each stage required to drive the process (see Figure 1). Following a description of each component, this compendium presents recommendations based on the RI MOU experience in the six states. This document is based on findings from a collaborative learning workshop held with the Bauchi and Sokoto State Primary Health Care Development Agency (SPHCDA) staffs and relevant partners in May 2017 and is complemented with information from document reviews and interviews with key stakeholders conducted in 2018 and verified through a stakeholder workshop in October 2018.

FIGURE 1: STAGES OF MOU DEVELOPMENT AND IMPLEMENTATION



1 National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF). Multiple Indicator Cluster Survey 2016-17, Survey Findings Report. Abuja, Nigeria. 2017.
2 1. Adeloye, D., Jacobs, W., Amuta, A.O., Ogundipe, O., Mosaku, O., Gadanya, M.A., Oni, G., 2017. Coverage and determinants of childhood immunization in Nigeria: A systematic review and meta-analysis. Vaccine 35, 2871–2881.
3 National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF), 2017. Multiple Indicator Cluster Survey 2016-17, Survey Findings Report. National Bureau of Statistics and United Nations Children's Fund, Abuja, Nigeria.

Design

The first phase of developing an MOU involves conceptualizing the overall design. During this phase, an effective partnership will engage with stakeholders, conduct an assessment of the program needs, and develop a clear rationale and goal for the partnership.

Conduct advocacy and conceptualize the MOU

To ensure that an MOU is successful, it is important to engage with the people and organizations that are invested in the program and its results. Stakeholders may contribute by providing funding, lending technical assistance to improve capacity, or leading overall implementation. Some stakeholders may be involved in a specific component of the program, while others may engage more comprehensively. Mapping out stakeholders and identifying their interests can help to align their contributions with a common goal and improve overall coordination and efficient use of resources.

Advocacy and conceptualization recommendations

- Conduct significant and continuous advocacy over time to ensure the government's interest in and commitment to the MOU.
- Give attention to ensuring that the process is not driven by external stakeholders and that there are appropriate feedback mechanisms in place.

Conduct a diagnostic assessment

Proposed partners should organize a diagnostic assessment of the program needs. This assessment may be led by an outside consultant or external assessment organization in close collaboration with state RI staff. Sources of information that can be used to inform the diagnostic assessment include household surveys such as the Demographic and Health Survey; document reviews such as RI supportive supervision reports and facility improvement reports; and key informant interviews with community leaders, health education officers, cold chain officers, immunization officers, RI in-charges, RI service providers, health facility (HF) in-charges, and others. Key components of the diagnostic assessment are outlined in Figure 2. The next step is to use findings from these analyses to determine priorities that the partners will address during MOU implementation.

Diagnostic assessment recommendations

- Ensure that the assessment includes a detailed budget analysis that gathers clear and concrete financial information to inform MOU priorities and workplan development.

Establish clear rationale and goals

Establish a clear rationale and goal that are understood by all stakeholders when developing an MOU. Identifying targets for outcomes such as immunization coverage as well as ensuring financial sustainability using government funding for RI programming can provide an overarching programmatic goal. However, stakeholders may also be interested in developing goals by thematic area, which helps to clarify how the MOU will support RI functions and ultimately improve program performance. Figure 3 outlines illustrative RI goals by thematic area identified by MOU stakeholders.

Rationale and goal recommendations

- Ensure that the goal of financial sustainability is uniformly understood between the government and partners and continuously discussed even at the lower levels of implementation.

FIGURE 2: DIAGNOSTIC ASSESSMENT COMPONENTS

- Key indicators of RI program performance reflecting available funds to support the program, status of cold chain equipment, effectiveness of logistics implementation, level of community engagement, and health worker capacity
- RI program structure and main challenges
- Recommendations for the MOU to address with associated costs
- Proposed policy, management, and financial structures for implementation
- A timeline and next steps

FIGURE 3: ILLUSTRATIVE RI GOALS BY THEMATIC AREA

Governance

Government leadership and sustained, predictable financing for RI

Vaccine Security, Cold Chain, & Logistics

Increased vaccine availability with reduced stock-outs and a functional cold chain

Monitoring, Evaluation, & Supportive Supervision

Availability of quality data for decision-making

Community Partnership

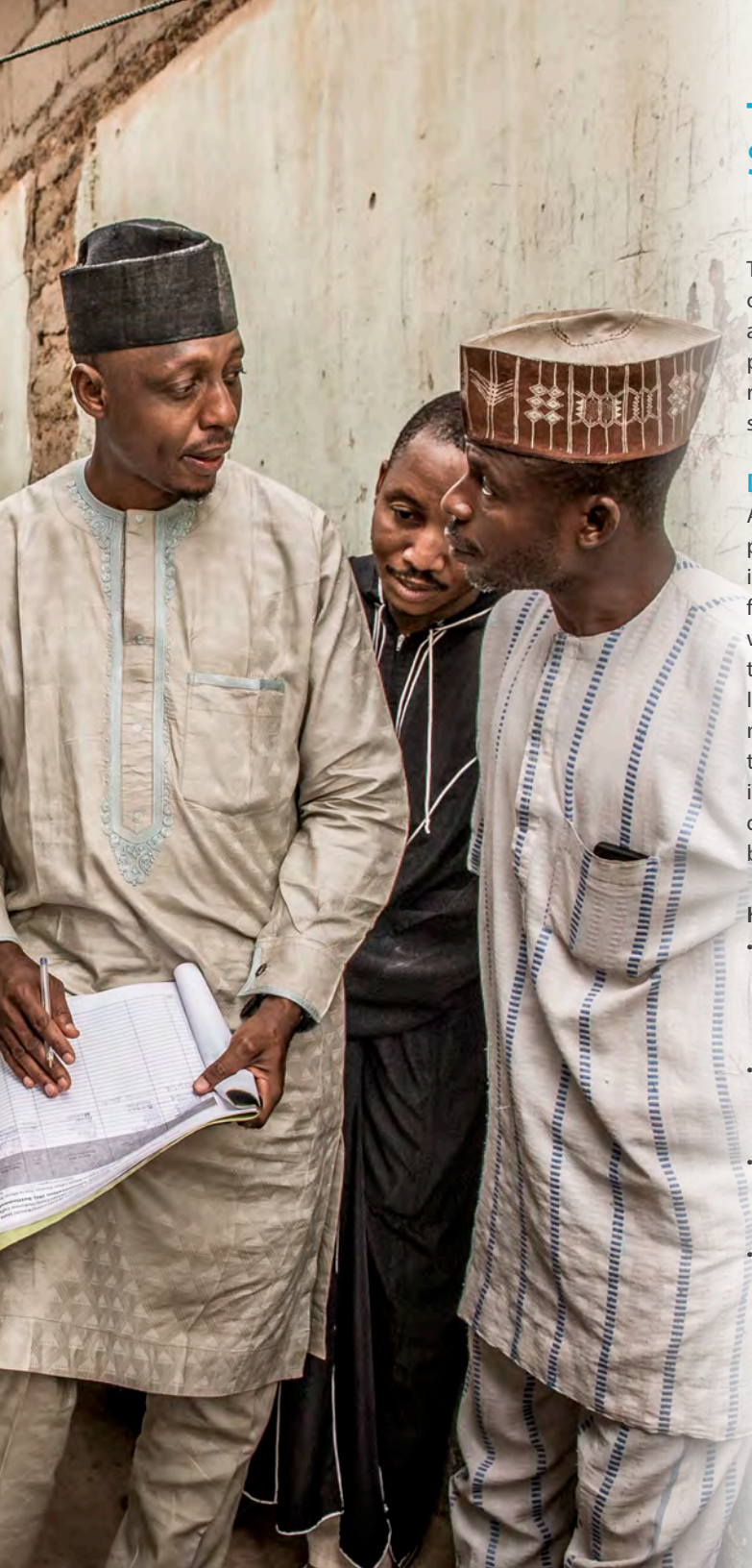
Increased awareness of and demand for RI services in the community

Access & Utilization

Services delivered that maximize resources available for target populations

Capacity Building & Training

Highly skilled staff in place at all levels



Start-Up

The second stage of developing an MOU is using the results of the diagnostic assessment to develop strategies that address identified priorities. During this phase, an effective partnership will also address necessary operational components, including workplans and funding requirements and sources.

Develop a harmonized workplan

A harmonized workplan enables the government and all partners contributing to the program to align their activities in one document. Base the harmonized workplan on results from the diagnostic assessment. The RI MOU harmonized workplans used in the six states are structured similarly to the subworking group (sub-WG) format described in the Implementation section so that each sub-WG can identify necessary activities, resources needed, partners responsible, the implementation schedule, and parameters for monitoring progress. Activities in the harmonized workplan are updated quarterly, and finalized workplans must be approved by MOU signatories.

Harmonized workplan recommendations

- Implement only those activities that are in the approved workplan. If an activity is not in the workplan, it must be approved by the partners and added to the plan before implementation.
- Under the leadership of SPHCDA, strongly encourage alignment of all development partners with the harmonized workplan, even if they are not official MOU signatories.
- Thoroughly orient all stakeholders in work planning, implementation, and evaluation processes and hold quarterly review meetings.
- Include descriptions of activities rather than simple activity lists and budgets in the harmonized workplan to promote better understanding among all partners.

Ensure appropriate financing

Partnerships should develop a plan that creates a path to financial sustainability. The RI MOUs in the six states developed plans whereby the foundations provided the majority of the funding in the first year of implementation and decreased their funding over time, while the state increased its contribution. The budget for the MOU is based on the costs associated with the interventions in the harmonized workplan. An example funding structure is shown in Figure 4.

Financing recommendations

- Prepare accurate financial forecasts to inform budgeting processes.
- Build capacity among government staff in financial forecasting to aid in planning.

FIGURE 4: PERCENTAGE FINANCIAL CONTRIBUTION OF THE BAUCHI STATE GOVERNMENT AND FOUNDATIONS TO THE MOU BASKET FUND TO IMPROVE RI SYSTEMS BY YEAR

	2014	2015	2016	2017
Bauchi State government	30	50	70	100
Bill & Melinda Gates Foundation	35	25	15	0
Aliko Dangote Foundation	35	25	15	0

Implementation

The third phase in carrying out the MOU is implementation. This section describes how an effective partnership might manage RI program implementation by describing processes and recommendations according to thematic area. For the MOUs in the six states, similar thematic areas were the focus of sub-WGs that operated under the primary RI WG.

Governance

Developing an MOU organizational structure provides an opportunity to outline reporting structures, identify roles and responsibilities, and ensure that these functions align with the overall strategy identified to achieve the goal.

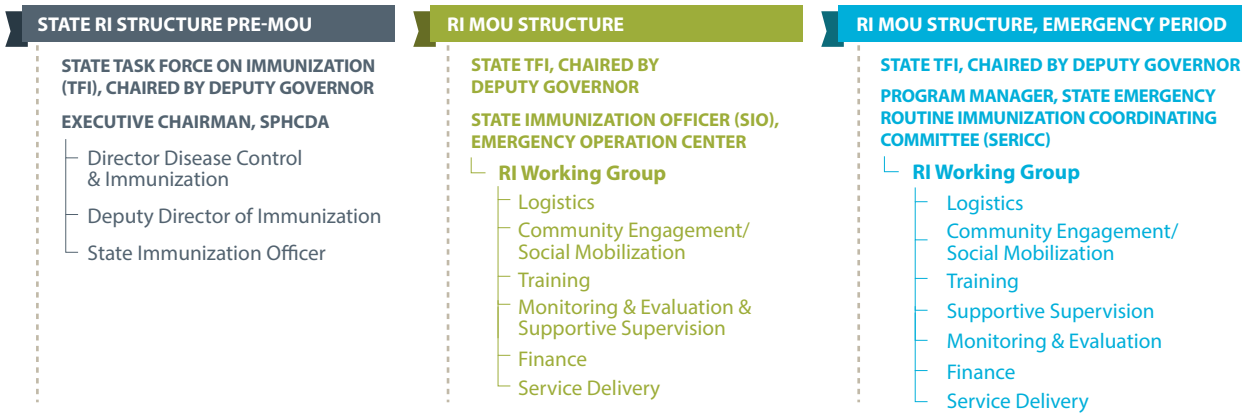
Prior to the introduction of the MOU in the six states, management of immunization practices was fragmented across state government departments and agencies,[1] making implementation of a comprehensive and strategic approach to improved RI programming challenging. Nigeria's national policy of Primary Health Care Under One Roof (PHCUOR) calls for states to consolidate planning and management around all PHC services and resources "under one roof," the SPHCDA. Adopting PHCUOR was considered a precondition to signing the MOU for the six states and helped to address some of the issues with fragmentation.

For the RI MOU partnerships in the six states, stakeholders identified a WG structure that facilitates coordination and communication (as shown in the illustrative example in Figure 5). This WG structure streamlines decision-making by appointing one person in charge of an overarching RI WG.

The RI WG chair is responsible for daily RI program operations and reports directly to the leader of the SPHCDA. The SPHCDA leader reports to the deputy governor, who is the chair of a Task Force on Immunization (TFI), which brings together all stakeholders contributing to the partnership. A separate MOU Principal Partners Committee composed of MOU signatories (including the governor, Aliko Dangote, Bill Gates, and the USAID mission director) also meets biannually to discuss emerging issues that affect the operations or guiding principles of the MOU and advise the SPHCDA accordingly. The high-level partner engagement serves as an essential element in achieving sustained government commitment. In addition, a Partners Forum of both MOU signatory and nonsignatory partners meets quarterly to evaluate implementation and determine priorities. Prior to the federal government's declaration of an RI emergency in the country, states assigned the incident manager to lead the RI WG. However, with the introduction of the National Emergency Routine Immunization Coordinating Committee, states assigned the State Emergency Routine Immunization Coordinating Committee program manager to lead the RI WG. The RI MOUs also established a number of sub-WGs (under the RI WG) to address specific areas of need, including finance, community engagement/social mobilization, supportive supervision (SS), monitoring and evaluation (M&E), logistics, service delivery, and training. A state government employee led each sub-WG, and all partners contributed. The sub-WG structure enabled team members to resolve specific technical issues at a lower level during monthly reviews and elevate issues to the RI WG when more advice was required, as the heads of the sub-WGs participated in RI WG meetings.

The final important element of a successful MOU governance structure is an accountability framework, which should not only require financial accountability but also hold staff at the state, local government area (LGA), and HF levels accountable for fulfilling their responsibilities. The framework should describe measures for reward and sanction, as well as mechanisms for enforcement.

FIGURE 5: ILLUSTRATIVE RI ORGANIZATIONAL STRUCTURES PRIOR TO AN MOU, WITH THE MOU, AND FOLLOWING INTRODUCTION OF THE EMERGENCY PERIOD



1 The RI program was managed by the director of disease control and immunization who reported to the SPHCDA executive secretary (ES). The state immunization officer and deputy director of immunization reported to the director of disease control and immunization. Polio was considered an emergency and was managed separately under the leadership of the incident manager who reported directly to the SPHCDA ES. Human resources from the immunization unit supported polio activities. The SPHCDA ES reported to the deputy governor who chaired separate task forces for RI and polio.

Organizational structure recommendations

- Ensure that the SPHCDA has sufficient time after the passing of the PHCUOR bill to adjust operations before MOU implementation.
- Conduct periodic reorientation of stakeholders on the terms of reference for the WG and sub-WGs to ensure consistent understanding.
- Hold Partners' Forum meetings regularly and include high-level stakeholders to elevate the importance of the work and ensure effective coordination.
- Ensure that partners commit to active participation in MOU management at the LGA level.
- Establish communication mechanisms to share innovations and learning that could be used to improve immunization results in other states with the National Emergency Routine Immunization Coordination Centre.
- Ensure that the accountability framework is in place with enforceable mechanisms for reward and sanction.

Financial management

To ensure that funding allocated for programs is accounted for and absorbed, a number of financial management mechanisms should be put into place, including:

- A fully costed workplan
- Dedicated bank accounts at the state, LGA, and HF levels with approved signatories
- Financial management software to improve the efficiency of accounting
- Routine audits for accountability
- Policies and procedures for ensuring that funds are used as planned, including verifying that funds included in the workplan were accounted for through receipts and/or communication with communities. If funds are not used, HFs should return funds to the state account.

FIGURE 6: EXAMPLE OF FINANCIAL MANAGEMENT PRACTICES PRIOR TO THE MOU, MOU FINANCIAL MANAGEMENT MECHANISMS, AND INTENDED OUTCOMES

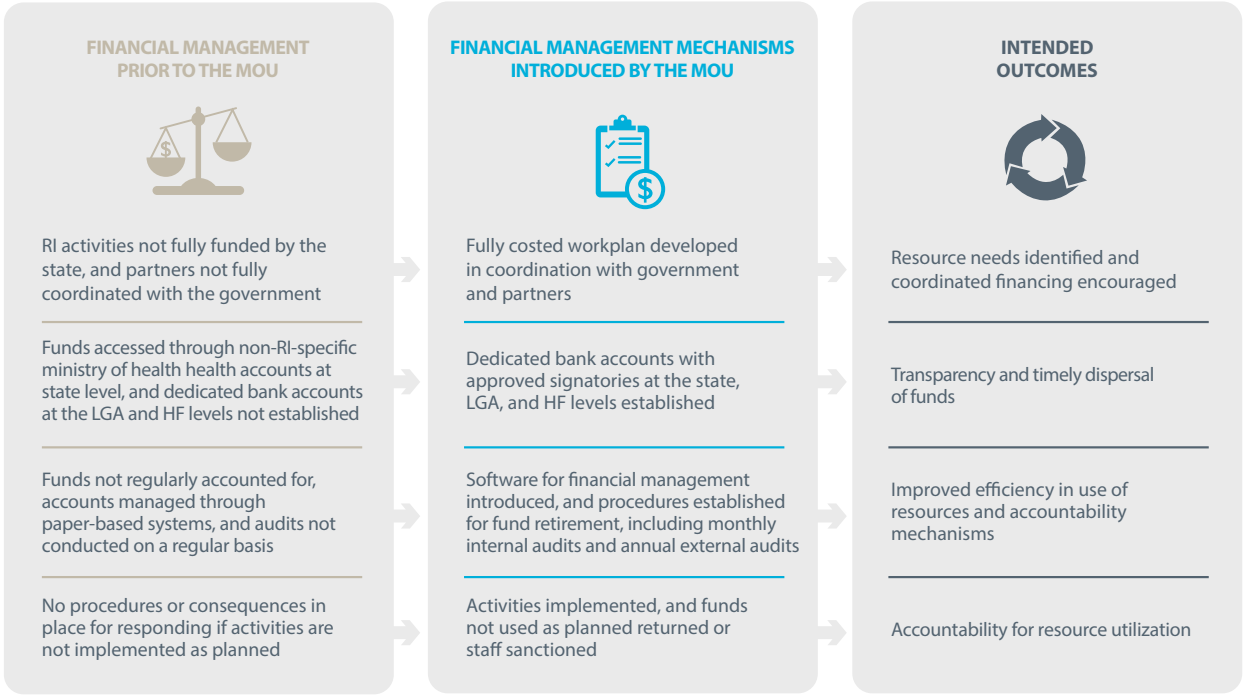


Figure 6 provides an overview of the financial management environment prior to the establishment of the RI MOU in the six states and then describes how the appropriate financial management mechanisms were introduced and the intended outcomes of these interventions.

Financial management recommendations

- Emphasize financial and professional accountability to increase effective implementation at all levels.
- Carry out sanction measures effectively and as frequently as needed to show real consequences for noncompliance with rules.
- Ensure that state auditors and other personnel are consistently available to conduct required audits and have the technological capacity to conduct computer-based analyses of budget performance and funds utilization.
- Build capacity in finance and accounting staff, especially at the LGA and HF levels, to carry out financial management and oversight procedures.

Capacity building and supportive supervision (SS)

Stakeholders should ensure that an assessment is conducted to identify training needs, develop an appropriate curriculum, and create a cascaded training approach that enables staff at each level of the health system to build the necessary skills. In addition, it is important to record who has been trained on what and when, so establishing a database for tracking trainees and trainings conducted can help to ensure that all staff are reached.

SS and mentoring approaches also provide a means of building capacity beyond traditional training activities. Clearly defining roles and responsibilities of supervisors and establishing a schedule for conducting SS visits can ensure that visits to HFs are conducted on a regular basis. In addition, providing supervisors with standardized checklists that enable them to monitor activities can be a useful means of providing feedback to health providers on a routine basis. Figure 7 provides further detail on capacity strengthening approaches deployed within the SPHCDAs for the MOUs.

Training and SS recommendations

- Ensure that partners focus on collaborating with, mentoring, and building capacity in government staff at all levels to promote sustainability rather than working in parallel to government operations.
- Improve the quality of SS and mentoring efforts to ensure that they occur regularly and reinforce trainings in work settings, and conduct spot-checks to determine whether staff skills improve after training.
- Develop simple SS tools for supervisors that are not time consuming to implement.
- Establish local training WGs to manage session organization, and ensure that LGAs appropriately prepare for trainings.
- Ensure that cascaded trainings happen no more than two days after initial trainings to enable trainers to recall content.
- Create dedicated training rooms in facilities.
- Hold trainings outside the location where trainees work when possible to ensure they stay for full sessions.
- Develop a cloud-based record system to improve management of training data.

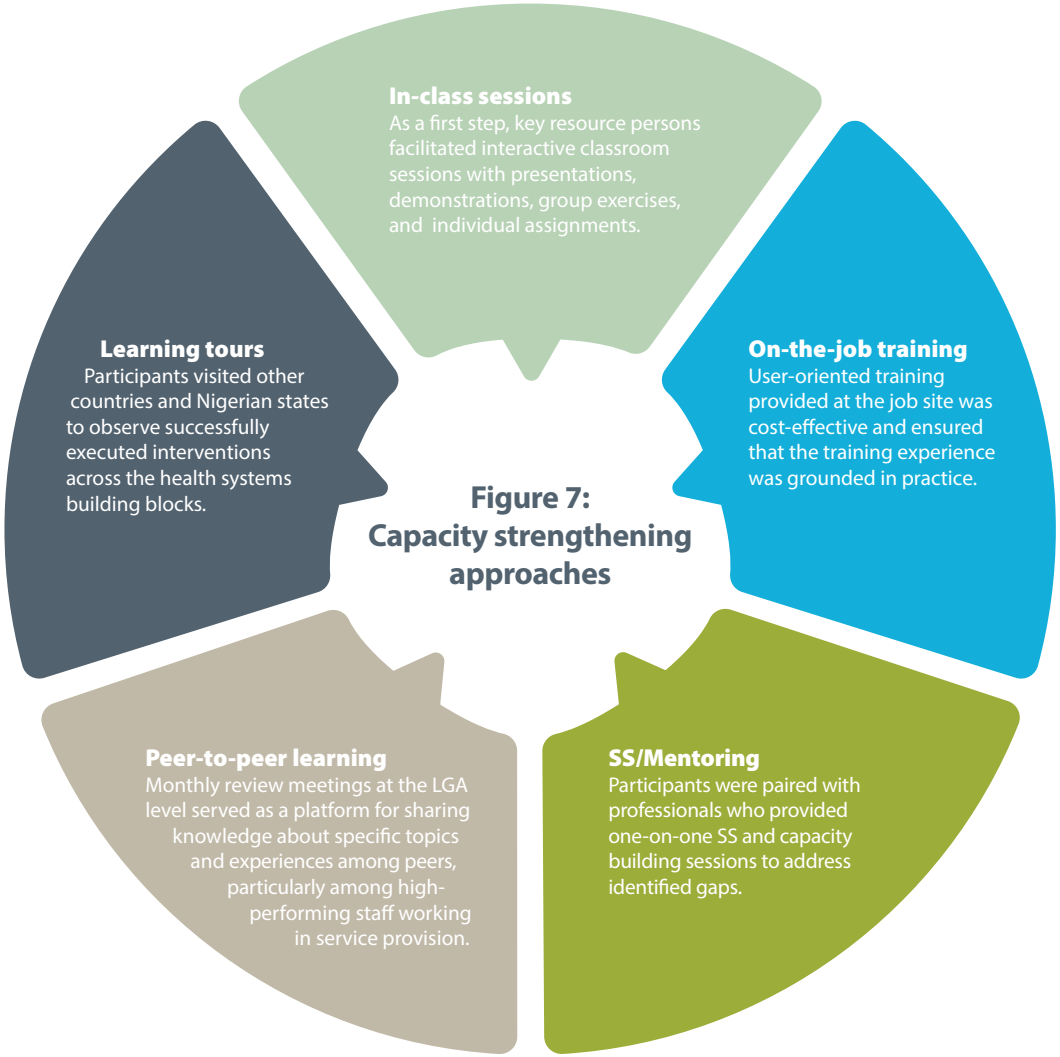


Figure 7: Capacity strengthening approaches

FIGURE 8: OUTLINE OF STEPS IN NEWBORN TRACKING APPROACH

TRADITIONAL BARBER (WANZAM)

- Visits family household for newborn hair shaving ceremony or other event.
- Counsels caregiver(s) on the importance of RI.
- Asks about immunization status to confirm if a child in the household requires referral for immunization.
- Issues a "yellow card" to any newborn and/or child in the household that needs immunization.
- Refers family to the nearest HF or RI service delivery point and explains that a "green card" and child health card will be issued by the RI service provider after the required immunization.

CHILD'S FAMILY

- Takes newborn/child to RI services.

RI SERVICE PROVIDER AT THE HF/RI SERVICE POINT

- Takes yellow card from the caretaker and files it in the "referrals for RI" box.
- Provides RI for child's age.
- Issues child health card and green card to child's parent/ caregiver.

TRADITIONAL BARBER (WANZAM)

- Revisits the child's family in their house.
- Verifies RI referral by asking to see the child health care and green card.
- Collects green card from child's family.
- If the newborn is not yet immunized, provides the information to the traditional leader and service provider for follow-up.
- Conducts follow-up visits to remind families of immunization dates in the child health card.

Community engagement

Partnerships are more successful when the government works not just with funding partners but also with traditional institutions and communities. To ensure strong community linkages, it is important to identify traditional leaders and institutions, advocate for their involvement during planning and implementation, and train traditional groups on important health messages and key interventions.

The RI MOUs ensured that traditional institutions including the Sultanate Council Committee on Health were engaged at the onset to develop a community engagement strategy. Through this engagement process, they were able to identify and then train community resource groups such as traditional birth attendants, traditional barbers, imams, and other community leaders who could support activities and identify and refer children at the community level for immunization services. Figure 8 provides an illustration of a successful community engagement activity conducted in Bauchi and Sokoto states during the RI MOU.

Community engagement and social mobilization recommendations

- Train facility staff and community leaders together to foster coordination.
- Provide additional support to settlement leaders, especially in cases of illiteracy.
- Create facility health committees as a platform for coordination.
- Improve government support for social mobilization efforts with additional support and supervision of settlement heads in implementing community engagement activities and commitment from government to conduct trainings and mentorship.
- Bring different communities together to learn about what has worked in different contexts.
- Translate training manuals into local dialects.
- Create additional structures to engage male advocates for immunization rather than focusing exclusively on women.
- Triangulate community data to determine gaps in coverage and areas of need for increased community engagement.

Vaccine security, cold chain, and logistics

To ensure that health commodities, including vaccines, are delivered on time, implement activities to strengthen the logistics system. First, ensure that adequate cold chain equipment (CCE) is procured, which ensures a more consistent supply of appropriately-stored vaccines and leads to fewer stock-outs. Figure 9 provides a framework for CCE procurement and installation. It is also important to renovate cold storage rooms to ensure they are functioning and to establish a preventive maintenance strategy. Next, introducing a push system for direct delivery of vaccines to HFs through a private distributor can help to improve the reliability of vaccine delivery. It is also important to build staff capacity for CCE management through training, SS, and mentorship. Developing a guide to show the maintenance protocol and training staff in its use can support these efforts. Finally, establishing an electronic system to monitor vaccine stock levels at all points can improve reporting and evidence-based decision-making.

Logistics recommendations

- Create a specialized biomedical unit to resolve issues with maintenance and management of CCE. Alternatively, make additional funds available for maintenance through a flexible mechanism, enabling immediate deployment of resources, allowing the system to respond quickly to equipment repair needs, and avoiding expired vaccines.
- Develop a direct contract with a diesel fuel supplier to help avoid bureaucratic delays in fuel delivery.
- Conduct additional regular trainings for cold chain officers as well as other state, LGA, and HF staff to build capacity in basic pharmacological concepts to support cold chain management.

FIGURE 9: FRAMEWORK FOR CCE PROCUREMENT AND INSTALLATION

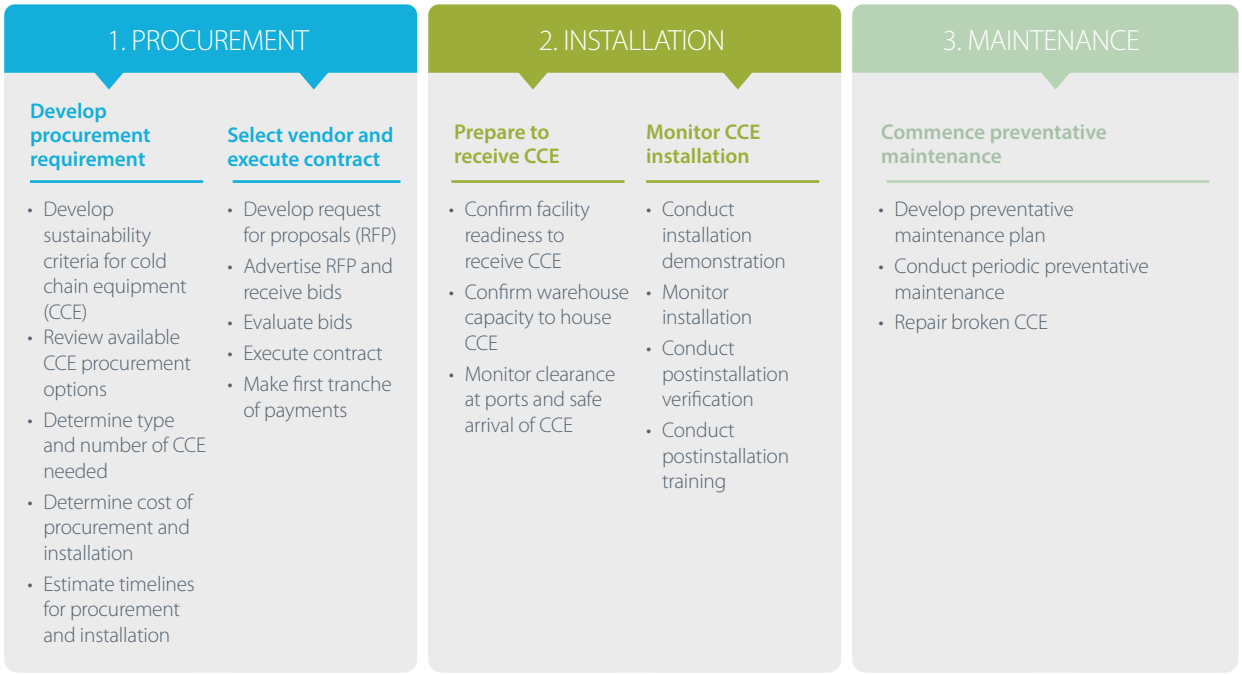
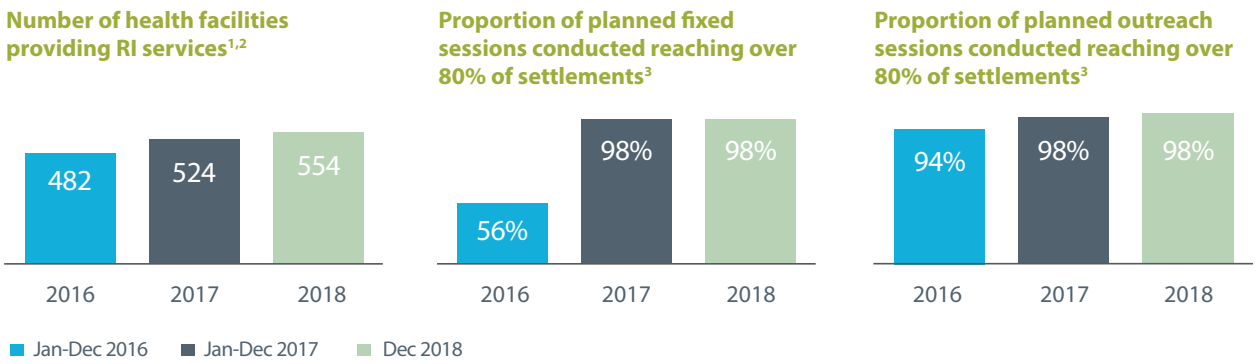


FIGURE 10: TRACKING SERVICE DELIVERY PERFORMANCE IN SOKOTO, 2015-2018



Source: 1. State HFs master list 2. Includes 8 HFs not conducting outreaches 3. DHIS2 (administrative)

Service delivery

To improve immunization coverage, planners and health workers must make important choices about how, when, and where to deliver RI services. Most of these choices are made during microplanning at the LGA and HF levels and adjusted during implementation. Improving the quality of data used in RI microplanning and monitoring is an important first step in developing effective service delivery strategies. Using core process indicators (see examples in Figure 10) to monitor implementation also helps to identify gaps and refine microplans. Onsite SS and mentoring identify issues affecting service delivery, including those related to health worker capacity; vaccine supply, delivery, and storage; staff motivation and attitude; funding; and data management. Monthly microplan reviews at the LGA level are used to discuss progress, identify common service delivery issues, and develop action plans for HFs. Finally, using data to determine RI needs and then guide the allocation of available resources for fixed and outreach sessions helps to maximize those resources and increase access to immunization services.

Service delivery recommendations

- Reinforce accountability measures at the LGA and HF levels by verifying that outreach services were conducted with the communities.
- Continuously engage the community in planning, implementing, and monitoring RI activities.
- Continuously improve the quality of data used in planning and monitoring RI services, and use process indicators during implementation to refine service delivery strategies and maximize the use of available resources.

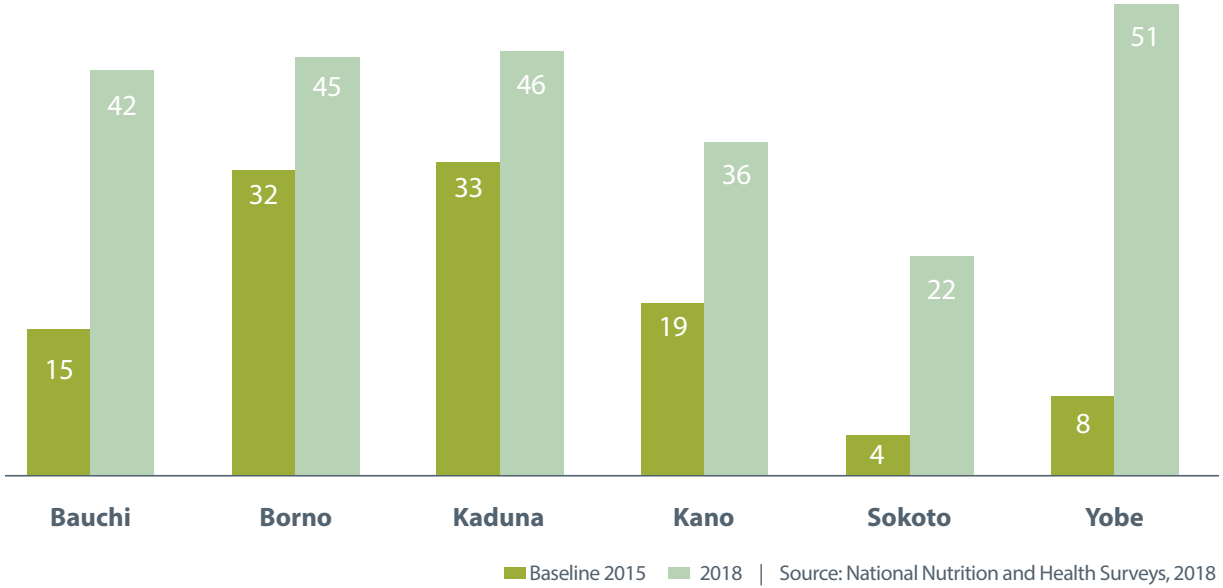
Monitoring & Evaluation

Effectively implementing an M&E framework and plan guides implementation of the harmonized workplan, promotes transparency, and provides the data necessary to monitor progress and improvements. It is also important to conduct periodic performance reviews to analyze MOU indicator data and discuss progress. Ensuring that computers are available and have stable internet access also helps to improve routine monitoring. It is important to build capacity at the state, LGA, and HF levels, especially in using the District Health Information System (DHIS2). Instituting directly observed data entry sessions under the observation and mentorship of M&E staff also strengthens M&E and reporting.

M&E recommendations

- Develop a single, partner-endorsed M&E plan used by all partners for effective and systematic M&E.
- Ensure consensus on the data source used to measure progress toward key targets.
- Monitor coverage rates from household surveys and administrative data, as well as dropout rates, vaccine stock-outs, and immunization sessions conducted to inform decision-making.
- To more accurately measure outcomes, conduct household surveys using lot quality assurance sampling (LQAS) to identify communities with low numbers/proportions of infants vaccinated.
- Limit M&E indicators and do not focus only on individual activities but on whether desired results were achieved, as shown in Figure 11.
- Build capacity among government workers at all levels to interpret and use data and to describe, observe, and reflect on trends.
- Build capacity to use technology to improve staff motivation and ensure more effective electronic data management.
- Conduct monthly review meetings at LGA and state levels.

FIGURE 11: PERCENTAGE OF CHILDREN RECEIVING PENTAVALENT VACCINE ACROSS THE SIX RI MOU STATES, 2015 AND 2018



Source: National Nutrition and Health Surveys, 2018

Transition

As MOU partners consider plans for the future, including phasing out partner funding and building on RI structures to support PHC, it will be necessary to determine which structures established during the MOU will continue to provide coordination and oversight of the program. Lessons learned from the MOU can provide a foundation that will enable stronger program performance and improved coordination and financial sustainability for the future. These recommendations should be considered during the design phase and through start-up and implementation to facilitate adoption.

Transition recommendations

Programmatic sustainability

- Ensure the program is owned and driven by the state through operational and thematic WGs.
- Leverage existing structures, and ensure systematic community engagement. Community engagement should include interventions to educate community members on services available at facilities.
- Increase attention to building the workforce, and provide additional capacity building opportunities. Continuous capacity building is especially important in data management and analysis.

Financial sustainability

- Establish funding structures that promote sustainability.
- Develop a separate budget for PHC and ensure that bank accounts are established at each level of the health system.
- Improve coordination through a harmonized plan to realize efficiencies across partner investments.

Political sustainability

- Ensure RI and PHC programs are nonpartisan endeavors, and conduct continuous advocacy for funding.

Conclusion

This RI MOU start-up guide compendium provides a brief overview of the steps needed to design, start up, implement, monitor, and transition an MOU partnership to sustainability. Key achievements, challenges, and lessons learned across the six RI MOU states are described in Figure 12.

This document shares how an RI MOU can be developed in a coordinated approach that mobilizes resources, provides clear governance structures, and leverages the competitive strengths of key stakeholders to ultimately produce improved program performance. A link to a more detailed document on how to implement an MOU to improve RI program performance is provided at the end of this document ("Implementing a Memorandum of Understanding with Basket Funding to Improve Routine Immunization Systems: A Start-Up Guide").

A similar process could be adapted and applied more broadly to other aspects of the health system, such as the expansion of the MOU that has taken place to address PHC in Bauchi and Kano States since 2018.

FIGURE 12: ILLUSTRATIVE ACHIEVEMENTS, CHALLENGES, AND RECOMMENDATIONS BY THEMATIC AREA

Theme	Achievements	Challenge	Recommendations
Governance	Establishing the RI technical working group structure and tracking and validating RI activities in accordance with funding agreements and established workplans	Delays in release of RI funds and difficulty implementing clear reward and sanction measures	Fast-track funds release and utilization
Vaccine Security, Cold Chain, & Logistics	Equipping all wards with CCE	Irregular maintenance causing breakdown of solar CCE and gaps in CCE availability	Create a state team for preventative maintenance of cold chain
Monitoring, Evaluation, & Supportive Supervision	Conducting RI review meetings at state & LGA levels	Gaps in staff capacity for M&E and inadequate use of data for decision-making	Provide one-on-one mentorship in M&E for staff at all levels
Community Engagement	Developing a community engagement strategy with full participation of traditional institutions	Delayed rollout and institutionalization of community engagement strategy	Provide feedback to communities on achievements and challenges
Access & Utilization	Increasing the numberof fixed and outreach immunization sessions	Unrealistic RI session plans and inadequate RI services in rural communities	Engage with the community to determine realistic RI session plans
Capacity Building & Training	Building the capacity of health workers through service delivery, data management, and demand creation trainings at all levels	Inconsistent application of training knowledge on the job	Improve the quality and regularity of post-training mentorship sessions

Links to Key Resources and Sample Documents

Implementing a Memorandum of Understanding (MOU) with Basket Funding to Improve Routine Immunization (RI) Systems: A Start-Up Guide
http://www.scidar.org/implementing-mou/

Implementing a Memorandum of Understanding (MOU) with Basket Funding to Improve Routine Immunization (RI) Systems: A Start-Up Guide Compendium
https://jsi.com/JSIInternet/IntlHealth/techexpertise/display.cfm?tid=1000&id=76&xid=2634

National Routine Immunization Strategic Plan (2013-2015)
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Sample Diagnostic Report
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Sample MOU legal document
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Sample Annual RI MOU Workplan
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Sample MOU Costing Model
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State-Specific Documents

BAUCHI

Strengthening Routine Immunization through Subnational Partnerships – The Experience in Bauchi State, Nigeria
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Bauchi 2018 End of Year Report (EYR) Meeting Document
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BORNO

Strengthening Routine Immunization through Subnational Partnerships – The Experience in Borno State, Nigeria
http://www.scidar.org/implementing-mou/

Borno 2018 EYR Meeting Document
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KADUNA

Strengthening Routine Immunization through Subnational Partnerships – The Experience in Kaduna State, Nigeria
http://www.scidar.org/implementing-mou/

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KANO

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SOKOTO

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YOBE

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