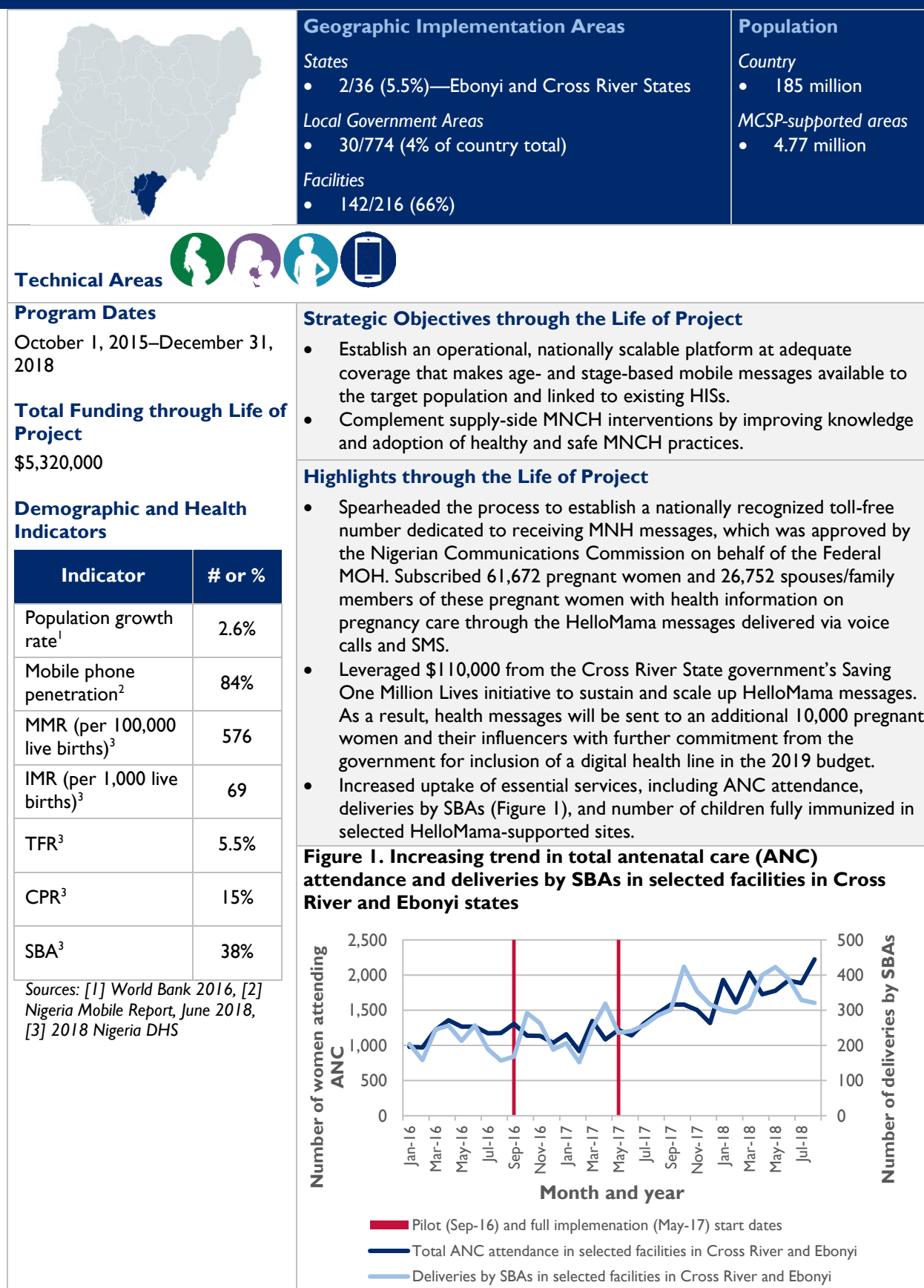


# Nigeria HelloMama EOP Summary & Results



# Nigeria—HelloMama

## Background

The Mobile Alliance for Maternal Action, a global consortium founded by Johnson & Johnson, USAID, and the United Nations Foundation, delivers vital health information to pregnant women, new mothers, and their influencers by leveraging SMS messages and voice calls on mobile phones. It sends a global set of age- and stage-based messages that can be adapted to local context via a mobile messaging platform called HelloMama. MCSP, in collaboration with the Federal MOH and state MOH officials, developed a locally led and planned-for-scale mobile messaging platform aligned with national health priorities, policies, and systems for pregnant women, newborns, children under 1 year, and their families that complements the efforts of frontline health workers. (Please see the [full report](#) and [brief](#) on HelloMama for additional details.)

## Key Accomplishments

### *Made Knowledge to Health Services Available through SMS Messages*

Over 2 years, HelloMama expanded from 47 pilot sites to 142 implementation sites, reaching more than 88,424 subscribers (pregnant women, mothers, and gatekeepers). By the end of the project, 15,803 clients received prebirth messages, 37,385 graduated from pregnancy messages, 13,420 graduated from the platform, and 26 opted out.<sup>36</sup> HelloMama also attained status as a recognizable brand tailored to local needs, context, and languages. HelloMama is known in the two supported states of Nigeria as “the phone doctor.” Many mothers are now asking how they too can receive messages from the phone doctor, demonstrating HelloMama’s ability to quickly expand and gain brand visibility in MCSP’s catchment areas. HelloMama introduced a callback feature in the last year that allows registered users to trigger a callback with their last scheduled message in the event that they miss their call or the call is interrupted. This has resulted in mothers and gatekeepers receiving more HelloMama messages vital to improving the health outcomes for pregnant women, newborns, and families in Nigeria. The program also developed a HelloMama Bot, an application that uses data from the HelloMama platform to deliver age- and stage-based messaging to end users without depending on traditional telecommunications channels.

### *Ensured Sustainability through Government Adoption of eHealth Programming*

For the first time, a nationally recognized toll-free number (1444) dedicated to receiving MNH messages was approved by the Nigerian Communications Commission on behalf of the Federal MOH. This toll-free number was integrated on the platform of [four of Nigeria’s major mobile networks operators](#), increasing the opportunities for HelloMama health messages to reach a larger segment of the population. By creating a national number, maternal and newborn care message dissemination could be scaled up to 162 million mobile subscribers<sup>37</sup> across the nation.

HelloMama also achieved government adoption, influencing national and subnational budgets for digital health. Cross River State committed \$110,000 to sustain the HelloMama SMS and voice message services. These commitments and adoption by the Federal MOH demonstrate the improved capacity of the Federal and state MOHs to manage and ensure the sustainability of HelloMama technology and program implementation.

### *Increased Uptake of Essential Maternal Health Services*

By the end of the project, HelloMama sent more than 5.9 million messages via SMS and outbound dialer. These messages facilitated positive behavior change and increased uptake of essential services. This can be seen in increasing trends in ANC attendance (Figure 1), pregnant women with four or more ANC visits, deliveries performed by SBAs (Figure 1), and number of children fully immunized in selected HelloMama-supported sites. HelloMama improved health-seeking behaviors over the life of the project and contributed to

<sup>36</sup> There were several reasons people opted out of the program. These were mainly due to miscarriages, infant mortality, or undisclosed personal preferences.

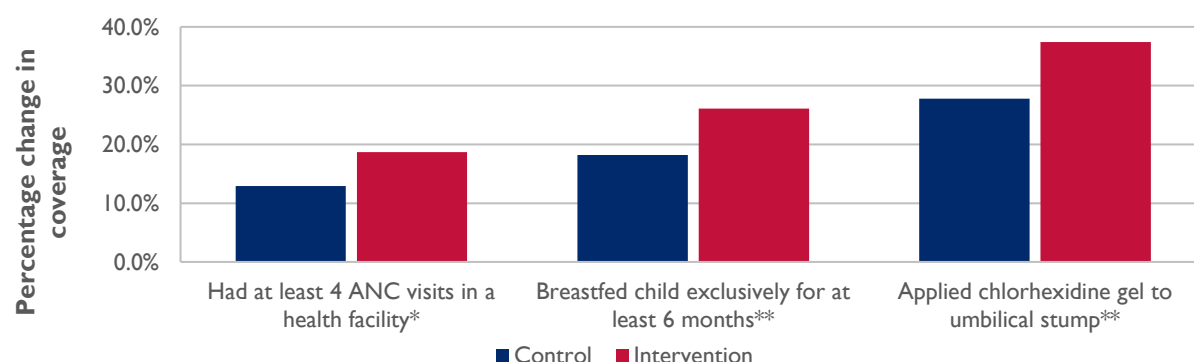
<sup>37</sup> Kolawole O. 2019. Nigeria Mobile Report 2019. Jumia website. <https://www.jumia.com.ng/mobile-report/>.

improved efficiency of service delivery. As a result of the HelloMama messages, pregnant women are more knowledgeable about the services available and know what to expect during pregnancy due to the health information received. Furthermore, clients remind health workers about the supplements they should receive based on the information provided in the HelloMama messages (e.g., IPTp with SP and iron supplementation).

### Promoted Data for Decision-Making at State Level

HelloMama empowered the national and state governments to understand their role in leading routine integrated supportive supervision for facilities by identifying and resolving issues affecting uptake and delivery of HelloMama messages through onsite joint supportive supervision visits and trainings. HelloMama developed dashboards to foster project management for decision-making at project and state levels. The dashboards supported government ownership of digital health programming through training and mentorship to help decision-makers implement informed, impactful programs. The project built interpersonal and business relationships in addition to technical solutions to address project challenges and developed the capacity of states to ensure sustainability of services.

**Figure 2. Difference in percentage in MNCH practices between baseline and endline as a result of HelloMama messages**



\*p-value <0.05

\*\*p-value <0.001

### Improving Health-Seeking Behaviors

Changes in health-seeking behaviors documented during the HelloMama endline assessment revealed that there was significant improvement in the practice and knowledge outcomes in women in both the control and intervention groups. HelloMama messages notably increased in the intervention group. The percentage of women who had at least four ANC visits increased from 13% to 19%, exclusive breastfeeding for at least 6 months improved from 43% to 69%, and the application of CHX gel to the newborn's stump soared from 6% to 43% (see Figure 2). The findings also suggested that there was a high level of acceptance of the messages among clients and that the high mobile phone penetration rate has the potential to improve MNCH outcomes by delivering health education and behavior change communication messages.

### Recommendations for the Future

Based on the lessons learned from implementing the program, the HelloMama Nigeria team would like to recommend the following to future donor-funded programs:

- **Conduct assessments of the information and communications technology infrastructure before implementing new digital health projects that include considerations for urban versus rural communities.** Before the initialization of a digital health project in sub-Saharan Africa, conducting a proper assessment of the information and communications technology infrastructure within the localities intended for deployment is fundamental. Plans for digital health projects should also be developed with

the awareness that the infrastructure and coverage are usually stronger in the urban centers as compared to rural areas.

- **Motivate investments and scale-up of digital health interventions.** This could be done through specific policies and legislation that provide incentives for information and communications technology for health deployment within a free market economy.
- **Embed local ownership and partnership in a comprehensive systems strengthening approach to achieve sustainable results in digital health.** Projects should always aim to strengthen existing systems by aligning their interventions with national and state eHealth strategies even when implementing over a short term or piloting a new approach.
- **Support the national and state governments with the capacity to plan, budget, and implement digital health as a cross-cutting intervention in the health sector.** Future projects should consider a grant mechanism or targeted assistance to support implementation and build the technical, financial, and management capacity of government departments to ensure activities respond directly to local priorities and help countries progress in their journey to self-reliance.
- **Integrate digital health activities into existing state-led institutions and projects (e.g., Saving One Million Lives) or routine health services to ensure sustainability.**
- **A national digital health standard indicator should be included with stakeholders in the national HMIS/DHIS2 tools.** Most digital health interventions rely on customized indicators for systems performance and results tracking.
- **Explore ways to align and integrate digital health solutions in Nigeria with mobile network operators' in-house foundations as part of their social corporate responsibilities.** This can help ensure meaningful engagement with communities that focus on their needs.

Selected Performance Indicators	
Global or Country Performance Monitoring Plan Indicators	Achievement (Target)
Number of subscribers newly registered in the HelloMama service	88,424 (target: 85,310; target exceeded)
Number of HelloMama subscribers that are currently registered to receive HelloMama messages	48,430 (34,738 pregnant women/mothers and 13,692 gatekeepers; target not defined)
Number of health facilities registering subscribers in the HelloMama service	128 (target: 142; 90% achieved) <sup>1</sup>
Number of health workers trained to register subscribers to receive HelloMama services	315 (target: 284; target exceeded)

<sup>1</sup> Fourteen facilities did not register clients due to network issues within the community and transfer of trained health care workers.

For a list of technical products developed by MCSP related to this country, please click [here](#).

# Nigeria HIV Testing Services EOP Summary & Results



## Geographic Implementation Areas

### Regions

- 7/37 (19%)—Akwa Ibom, Benue, Cross River, Federal Capitol Territory, Lagos, Nasarawa, Rivers

### Local Government Areas

- 32/774 (4% of country total)

### Facilities and community-based sites

- Approximately 850

## Population

### Country

- 185 million

### MCSP-supported areas

- 27.2 million

## Technical Areas



### Program Dates

October 1, 2016–January 31, 2019

### Total Funding through Life of Project

\$650,000

### Demographic and Health Indicators

Indicator	# or %
Number of PLHIV	3.1 million
Proportion of PLHIV who know their HIV status (all ages)	38%
Proportion of PLHIV on treatment (all ages)	33%
New HIV infections (2017)	210,000
HIV incidence per 1,000 population	1.15
AIDS-related deaths (all ages)	150,000

Source: Joint United Nations Programme on HIV and AIDS Data 2018

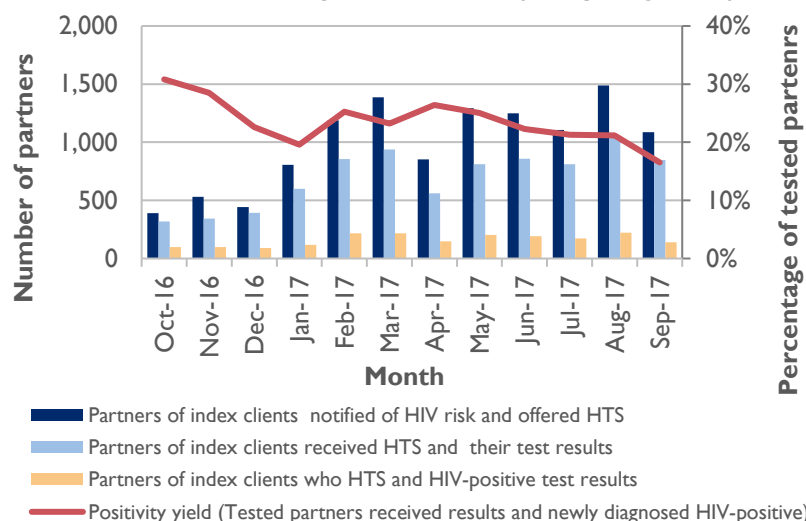
### Strategic Objectives through the Life of Project

- Provide technical assistance to USG-funded HTS implementing partners to improve yield in scale-up local government areas (LGAs) in Nigeria through partner notification services (PNS) and HIV self-testing approaches.
- Develop and disseminate a learning resource package to support facility-based implementation and standardization of PNS in Nigeria.
- Provide support for inclusion of PNS and HIV self-testing in national policies and guidelines.
- Evaluate expansion of PNS and HIV self-testing in scale-up LGAs to determine the impact on HIV testing yield, successes and challenges with PNS, and HIV self-testing implementation. Provide inputs for evaluation of a screening tool to test children of index clients and other at-risk children in facility- and community-based settings.

### Highlights through the Life of Project

- Finalized national guidelines for the HTS and Scale-Up Plan.
- Completed National Operational Guidelines for HIV Self-Testing.
- Executed the PNS Learning Resource Package.
- Evaluated scale-up of PNS in 32 LGAs, which showed HIV PNS are a high-yield HTS approach that are effective at identifying new PLHIV and linking them with HIV care and treatment.

**Figure 1. Partner notification services cascade: partners notified, tested, and received HIV-positive results (newly diagnosed)**



# Nigeria—HIV Testing Services

## Background

The Nigerian Federal MOH asked MCSP to support its commitment to expanding PNS in Nigeria by supporting training, technical assistance, and evaluation of PNS activities conducted by seven implementing partners. MCSP's HIV Testing Services (HTS) technical assistance project built on the early work of implementing partners and USG agencies in Nigeria, adapting training and technical assistance meetings to address identified gaps. Under MCSP, data collection and reporting tools, job aids, and nationally approved training materials and training videos were developed. Additionally, MCSP's HTS technical assistance project included support to the Federal MOH's National HIV and Sexually Transmitted Infection (STI) Control Programme for policy development to support implementation of novel HTS approaches, including PNS, HIV self-testing, and recency testing. Having supportive policies in place ensures implementation of these novel approaches according to nationally accepted standards with the support of the Federal MOH.

## Key Accomplishments

### *Finalized National Guidelines for HTS and Scale-Up Plan*

MCSP finalized the National HTS Guidelines and National HTS and Scale-Up Plan. These guidelines provide essential updates on new HTS approaches, including PNS, HIV self-testing, and recency testing. They provide standards for HTS providers to ensure implementation of high-quality HTS. A national dissemination meeting supported by MCSP was held in September 2018. Intense dissemination efforts such as these allowed for the results to have a larger reach.

### *Completed National Operational Guidelines for HIV Self-Testing*

MCSP worked with the Federal MOH and key stakeholders in Nigeria to develop and finalize national operational guidelines for HIV self-testing. The guidelines expand on the policy statements included in the National HTS Guidelines and provide detailed standards for HIV self-testing implementation in Nigeria. Having implementation standards outlined helps to ensure that HIV self-testing will be introduced in all relevant sectors and that the appropriate support structures will be put in place for HIV self-testing users. MCSP supported the Federal MOH with printing 1,500 copies of the National Operational Guidelines for HIV Self-Testing. The guidelines were disseminated at a national meeting after the end of MCSP, in April 2019.

### *Executed PNS Learning Resource Package*

MCSP developed a learning resource package for PNS that was first piloted in February 2017. Feedback from this pilot was incorporated into a revised learning resource package and shared with implementing partners for step-down trainings implemented between February and December 2017. Based on feedback from implementing partners between January and August 2018, MCSP updated the learning resource package and conducted a training for Federal MOH trainers using the revised package in November 2018. This learning resource package can be adapted by implementing partners for their program context, but the standardization of the training package resulted in increased knowledge and skills in PNS delivery, improved data quality, and ownership of the approach by the Federal MOH/National HIV and STI Control Programme.

### *Evaluated Scale-Up of PNS in 32 LGAs*

To determine if PNS activities were being conducted with fidelity and achieving the expected outcomes, MCSP conducted an evaluation of PNS activities for the seven implementing partners operating in 32 scale-up LGAs in Nigeria. The evaluation demonstrated an increase in overall HIV testing yield during the PNS implementation period, from 1.6% during baseline to 2.0% during the PNS implementation period. Additional details can be found in the [evaluation report](#) and a summary in the [evaluation brief](#). These results demonstrated the feasibility of and strong need for PNS.



## Recommendations for the Future


MCSP's HTS project in Nigeria demonstrated that PNS is feasible, acceptable, and can lead to increased HTS yield when conducted at scale and with adequate policy support and capacity-building for training, technical assistance, and data collection and monitoring. Recommendations for future scale-up include:

- **Ensure fidelity of PNS delivery in existing PNS sites.** This should be done through ongoing mentorship, refresher trainings, and data collection and monitoring.
- **Train additional providers and sites in high-prevalence geographic areas.** This will allow for further scale-up PNS activities in Nigeria.
- **Further explore issues related to PNS within key populations.** It will also be critical to ensure that legal and implementation-related barriers are addressed.
- **Support HIV self-testing kit evaluations.** This has the potential to expand the HIV self-testing market in Nigeria and ensure high-quality products are available to expand HIV self-testing.
- **Revise the HTS strategy to respond to the results of the Nigeria AIDS Indicator and Impact Survey when results are released (March 2019).**

Selected Performance Indicators	
Global or Country Performance Monitoring Plan Indicators	Achievement (Target)
Number of meetings/technical assistance visits held with USG-funded HTS implementing partners	8 (target: 4; target exceeded)
Number of USG-funded PNS/HTS sites visited	8 (target: 4; target exceeded)
Number of learning resource packages developed for PNS	1 (target: 1; target achieved)
Number of people trained through USG-supported programs	29 (target: 16; target exceeded)
Number of training videos completed	3 (target: 3; target achieved)
Number of (national) policies drafted with USG (MCSP) support	2 (target: 1; target exceeded)
Number of studies completed	1 (target: 1; target achieved)
Number of technical reports/papers, policy/research/program briefs, and fact sheets produced and disseminated	2 (target: 1; target exceeded)

For a list of technical products developed by MCSP related to this country, please click [here](#).

# Nigeria Maternal, Newborn, and Child Health EOP Summary & Results

	<b>Geographic Implementation Areas</b>  <b>States</b> <ul style="list-style-type: none"> <li>2/36 (5.5%)—Ebonyi and Kogi</li> </ul> <b>Local Government Areas</b> <ul style="list-style-type: none"> <li>34/774 (4% of country total, Kogi: 21/21, Ebonyi: 13/13)</li> </ul> <b>Facilities</b> <ul style="list-style-type: none"> <li>321</li> </ul>	<b>Population</b>  <b>Country</b> <ul style="list-style-type: none"> <li>185 million</li> </ul> <b>MCSP-supported areas</b> <ul style="list-style-type: none"> <li>5.45 million</li> </ul>
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## Technical Areas



### Program Dates

October 1, 2014–March 31, 2019

### Total Funding through Life of Project

\$31,285,524

### Demographic and Health Indicators

Indicator	# or %
MMR (per 100,000 live births)	576
NMR (per 1,000 live births)	37
U5MR (per 1,000 live births)	128
TFR	5.5
SBA	38%
CPR (all methods)	15%

Source: Nigeria DHS 2013 (2018 results are not available at the time of writing)

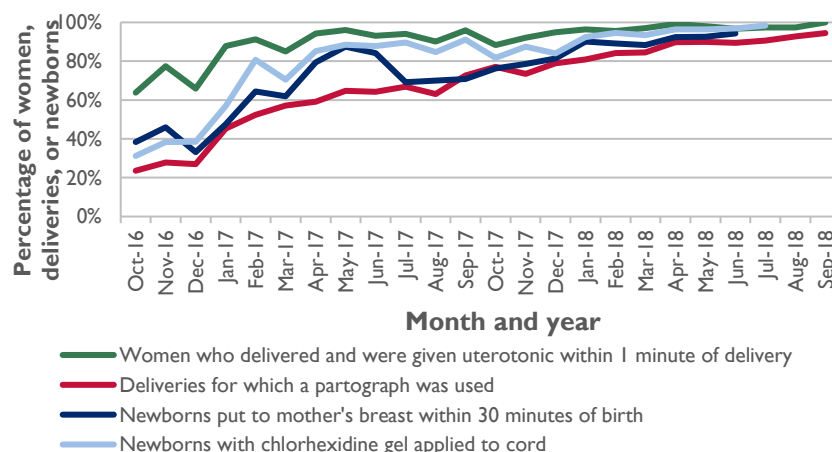
### Strategic Objectives through the Life of Project

- Improve the quality of facility-based MNCH services and community-based child health services.
- Improve information systems to monitor and evaluate health outcomes.
- Increase the use of lifesaving innovations.

### Highlights through the Life of Project

- Empowered over 3,800 health care workers across 321 facilities and 860 medicine vendors across 682 outlets with lifesaving skills to deliver quality MNCH services. Introduction of LDHF training approach enabled more health workers to be trained than had been possible previously.
- Deregulation of amoxicillin dispersible tablets, their inclusion on the essential medicines list, and their availability as an over-the-counter medicine enabled trained PPMVs to use the tablets for treatment of sick children at the community level.
- Improved provision of high-impact intrapartum and postnatal interventions for women and newborns, contributing to a decline in the total obstetric case fatality rate in supported facilities from 3.4% in 2015 to 2.7% in 2018, and improved provision of ENC from about 26% to 92% across both states.
- Supported Ebonyi and Kogi states to introduce the use of RMNCAH data dashboards and scorecards, which were taken up by health managers at the facility, district, and state levels for decision-making. RMNCAH data reporting rates by both states increased from an average of 58.5% in 2016 to 67.6% in 2018

**Figure 1. Improved provision of high-quality care for mothers and newborns in supported facilities in Kogi and Ebonyi states (n = 91)**



Source: MCSP QI dashboard



# Nigeria—Maternal, Newborn, and Child Health

## Background

The Government of Nigeria and USAID asked MCSP to intervene in 2014 to address the country's high rates of maternal, newborn, and child mortality. MCSP worked with and supported key stakeholders, including Federal MOH counterparts, to plan and implement a wide range of interventions and strategies for improving the quality and utilization of MNCH interventions in Ebonyi and Kogi states. The interventions led to improved capacity of health workers to deliver lifesaving services, increased uptake of innovations, increased availability and use of health data for decision-making, and review or development of policies and strategies for sustaining or scaling up the interventions, among other accomplishments.

## Key Accomplishments

### *Increased Capacity of Frontline Health Care Workers to Deliver Lifesaving Services*

MCSP empowered over 3,800 health workers (including doctors, nurses, midwives, and community health extension workers) across 321 facilities and 862 patent and proprietary medicine vendors (PPMVs) with the right knowledge and skills to deliver quality MNCH services in Ebonyi and Kogi states. The health care workers applied their new skills to conduct 71,665 deliveries; resuscitate 1,938 of 2,029 (96%) newborns who did not breathe at birth; and treat 59,756 children for childhood pneumonia, diarrhea, and uncomplicated malaria during the course of MCSP's implementation. Trained providers assisted in increasing voluntary [PPEP uptake](#) in the two project states to more than 41% of women who delivered in MCSP-supported facilities serving 19,823 women, including adolescents and young mothers.

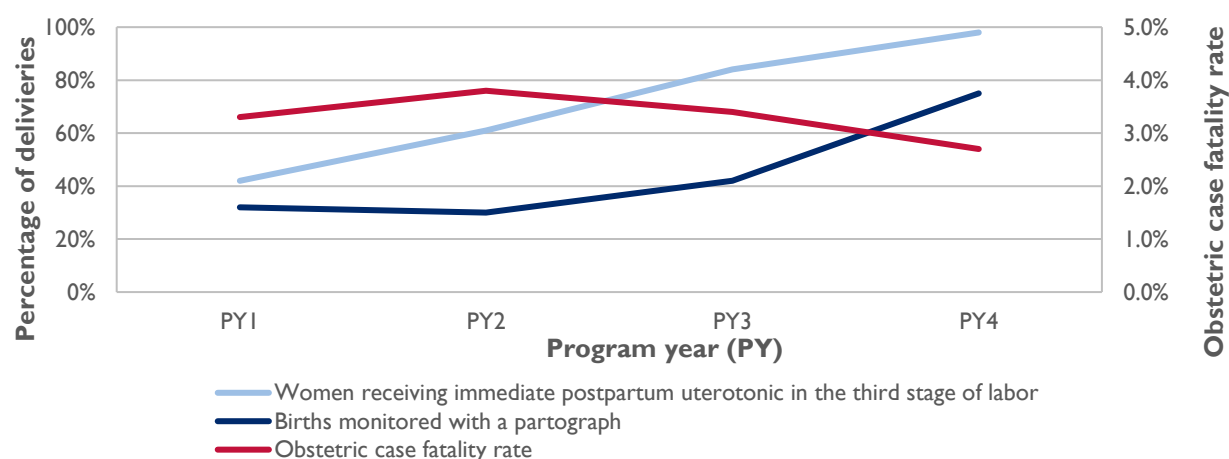
### *Improved Readiness and Quality of Care in Supported Health Facilities*

At the national level, MCSP supported the Federal MOH to create a national QI TWG that initiated the development of a first-ever national quality strategy for RMNCH. In 2015, the project—in collaboration with the Federal MOH—helped to introduce the just-published WHO Framework for Quality of Maternal and Newborn Healthcare to Nigerian stakeholders, leveraging the project's close engagement in the development of this framework at the global level. The Federal MOH made the decision to base the national RMNCH quality strategy on the WHO Quality of Care MNH framework and subsequently applied, successfully, to join the global WHO MNCH Quality of Care Network launched in 2016.

MCSP additionally supported the development of state QI operational plans in Ebonyi and Kogi, including the prioritization of common measurable improvement aims related to provision of high-impact intrapartum and PNC intervention bundles for women and newborns. In collaboration with the state MOHs and other counterparts, the project supported 91 facilities to establish QI teams and support changes in routine care processes to achieve defined improvement aims, monitoring a common set of indicators using a standardized dashboard. Many intrapartum and PNC processes improved for women and newborns as demonstrated through indicators on the monitoring of labor with a partograph, provision of an immediate postpartum uterotonic to prevent PPH, initiation of breastfeeding within 30 minutes of birth, and application of CHX gel to the newborn umbilical cord (see Figure 1). An assessment of the quality of ANC, intrapartum, and PNC at midline and endline corroborated the improvements in care processes, health outcomes, and person-centered care measured using routine information sources. For example, data collected through observation of care showed increase in use of the partograph to monitor labor from 31% at baseline in 2016 to 91% at the endline survey conducted in 2018. The application of CHX for cord care of the newborn also increased from 2% to 94% over the same period.

In addition to measured improvements in care processes, supported facilities measured improvements in selected health outcomes. For instance, the percentage of women with an obstetric complication who died due to the complication (obstetric case fatality rate) in 120 (phase 1) supported facilities decreased from 3.4% in 2015 to 2.7% in June 2018 (see Figure 2). (For more information, see the briefs "[Ensuring Better Care for Nigerian Pregnant Women and New Mothers and their Babies](#)" and "[Strengthening Newborn Care in Kogi and Ebonyi States Nigeria](#).")

**Figure 2. Increased use of uterotonic and partograph with corresponding decline in total obstetric case fatality rate in MCSP-supported facilities (n = 321 facilities)**



Source: MCSP's DHIS2 module

In addition to supporting improved processes of clinical care and improved health outcomes, the project worked closely with country counterparts, including the National Association of Nigerian Nurses and Midwives, to improve and address barriers to person-centered maternity care for women and newborns. A range of interventions were supported to improve person-centered care, including Health Workers for Change workshops, incorporation of client-centered respectful care into all clinical training/supervision, assessment of women's and providers' experience of care, and participatory design of locally defined interventions to improve experience of care.

As well as strengthening provider skills and quality of care processes, MCSP also supported facilities to improve their readiness to provide high-quality care by increasing the availability of maternity patient record booklets in 240 facilities, establishing newborn corners in 240 facilities, establishing oral rehydration therapy corners in 119 facilities, increasing the availability of customized laminated wall charts/posters in 256 facilities to monitor trends in quality of care measures, and improving WASH infrastructure in 30 facilities through incorporation of WASH and infection prevention activities into existing program strategies alongside Federal MOH partners. Out of the 30 facilities, 14 general facility spaces, 17 delivery wards, 10 PNC wards, and eight special newborn care wards achieved a clean clinic certification status in Kogi and Ebonyi states.

### *Increased Use of Lifesaving Innovations, Including Use and Uptake of CHX Gel*

MCSP promoted the use of lifesaving innovations in Nigeria, such as the [use and scale-up of CHX gel for umbilical cord care](#). The national scale-up strategy for CHX in Nigeria was developed and launched with support from MCSP and USAID's Center for Innovation and Impact. MCSP also supported government of Kogi and Ebonyi states to set up and strengthen existing coordinating structures for the state-level scale-up of CHX. By the end of the implementation of MCSP's interventions, uptake of CHX gel for umbilical cord care increased from 12% of newborns in supported facilities in 2015 to 99% of newborns in 2018 in Kogi and from 3% to 83% over the same period in Ebonyi. Furthermore, MCSP, in collaboration with the Federal MOH, supported and advocated for the adoption of the strategy in all 36 states plus the Federal Capital Territory. Support was provided for states to develop their own action plans to operationalize implementation of the strategy through public- and private-sector channels.

### *Introduced LDHF Training Approach*

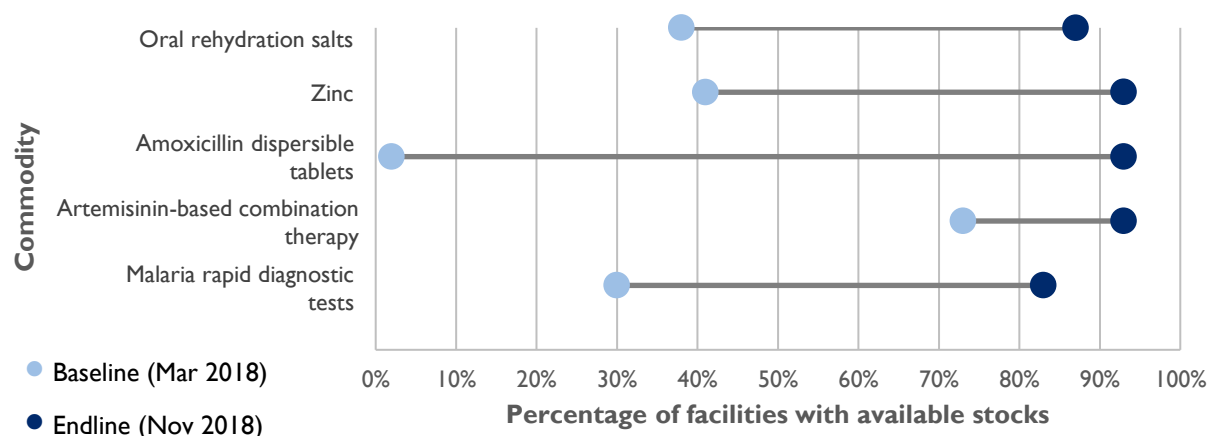
MCSP introduced an LDHF training approach, which helped both states to train and retrain more health workers than typically possible with the traditional offsite, multiday approach to training. Through the LDHF approach, information is delivered, and skills updates are done based on local needs through short, structured, onsite, interactive learning activities that involve the entire team and are spaced over time to optimize learning. In contrast with the traditional training arm, the LDHF/mobile mentoring arm had better

post-training assessment scores for assisting normal birth, active management of the third stage of labor, manual removal of placenta, bimanual compression of the uterus, abdominal aortic compression, and pre-eclampsia/eclampsia management in the 12-month post-training assessment, a twofold increase. The LDHF arm was also associated with an incremental cost-effectiveness savings of \$487.10 per provider trained compared to the traditional method. Shifting to an onsite approach is a practical solution for a system with significant turnover, especially if it can be integrated into formal orientation and induction processes. The Federal MOH should consider making policy changes based on the study findings to reach a national scale. More information can be found in MCSP's brief [Onsite LDHF Training Versus Traditional Offsite Group-Based Training for MNH Care Workers in Ebonyi and Kogi States Nigeria](#).

### Improved Treatment of Sick Children in the Community

MCSP collaborated with the Kogi and Ebonyi state MOHs, the Pharmacists Council of Nigeria, the Nigeria Association of Patent and Proprietary Medicine Dealers, and state-based associations of PPMVs to design the [Enhancing Quality iCCM through PPMVs and Partnerships](#) approach as a sustainable way of engaging and supporting PPMVs to provide high-quality iCCM services. Between April and September 2018, 862 trained PPMVs effectively assessed, classified, and treated 2,635 childhood pneumonia cases, 10,201 confirmed malaria cases, and 3,006 diarrhea cases. Midline and endline audits of 176 PPMV outlets showed dramatic and sustained increases in the availability of iCCM medicines and other commodities (Figure 3), and in the percentage of sick children appropriately assessed for all danger signs, treated and counseled, or referred for higher-level care (See the Child Health summary for further information).

**Figure 3. Stocks available on the day of the inventory audit at 172 PPMV outlets in Ebonyi and Kogi states at baseline and endline**

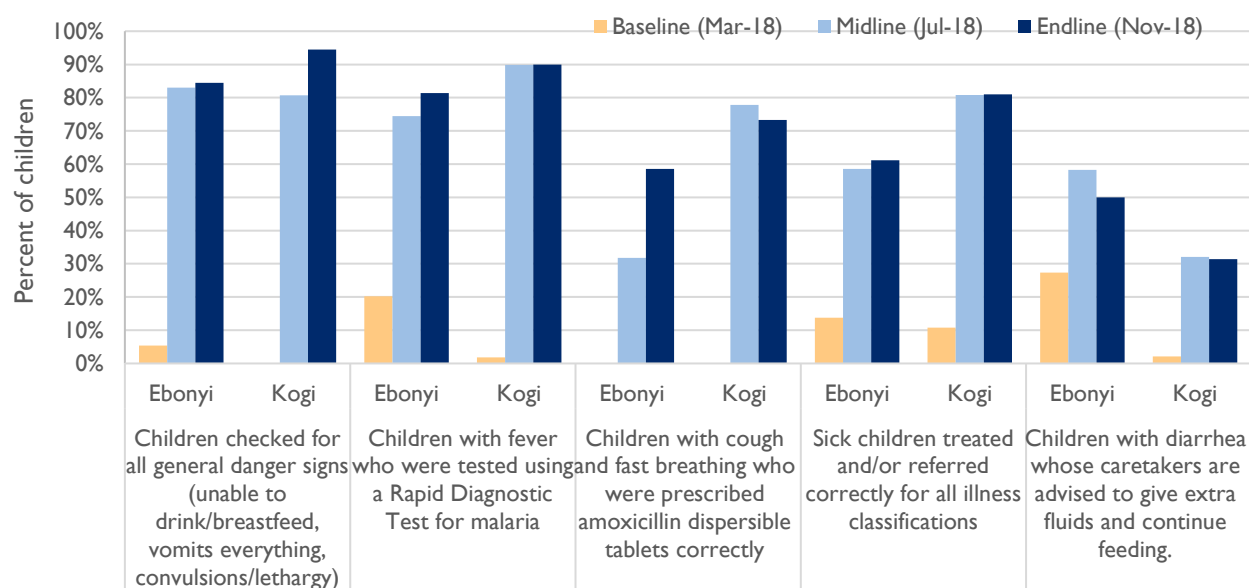


The effective public-private partnership model among state MOHs, State Primary Health Care Development Agencies, the Pharmacists Council of Nigeria, the Nigeria Association of Patent and Proprietary Medicine Dealers, logistics management coordinating units, LGA focal people, and ward development committees ensured joint planning, supervision, and monitoring of PPMV iCCM services at the community level that can be sustained beyond the life of the project. The partnership's approach also assured that PPMVs stock the first line pharmaceuticals for sick children by bringing PPMVs, the Nigeria Association of Patent and Proprietary Medicine Dealers, and local pharmaceutical manufacturers and wholesalers together. Together, they found ways to make quality medicines for malaria, pneumonia, and diarrhea more accessible, not through donor or government purchase, but by using market forces. This strategy—to aggregate the PPMVs' demand for quality products and the willingness of the manufacturers and wholesalers to supply these products at low cost—appears to be working and could be applied to other health priorities. By developing and integrating the community HMIS and logistics management information system addenda into the iCCM curriculum, MCSP made it possible for the first time to capture private-sector data from PPMVs, with the potential for the data to be incorporated through public-sector HMIS data flows into the national DHIS2 database in the future.

Deregulation of amoxicillin dispersible tablets, their inclusion on the approved Essential Medicines List, and their availability as an over-the-counter medicine (all changes supported by MCSP) enabled trained PPMVs to stock and dispense amoxicillin dispersible tablets, among other medicines, for treatment of sick children at the community level. Furthermore, MCSP's technical support informed the design of Ebonyi's first sustainable drug financing strategy for essential medicines. The drug revolving fund is currently operational in 171 primary health centers, including the 58 MCSP-supported facilities in the state.

By July 2018, the capacity of the 862 trained and supported PPMVs at 682 outlets to provide high quality iCCM services had greatly improved. These improvements were sustained when measured again in November 2018. The impact on PPMV knowledge and practice was evaluated through direct observation with clinical re-examination at baseline (March 2018), midline (July 2018), and endline (November 2018). The findings from the assessments show that the proportion of sick children assessed for danger signs, tested for malaria, and treated and/or referred correctly based on their illness classifications increased significantly, as did counselling practices (see Figure 4).

**Figure 4: Quality of assessment, treatment, and counseling for sick children under five years of age at 176 PPMVs before and during implementation (MCSP Nigeria program data from 88 PPMVs in Kogi and 88 PPMVs in Ebonyi states)**



MCSP also supported the Federal MOH and the Kogi and Ebonyi state MOHs to drive the use of simplified antibiotics for management of sick newborns with [PSBI at primary health centers where referral is not possible](#). In collaboration with the Federal MOH, MCSP harmonized the ENC course and IMCI tools with PSBI, built the capacity of health workers, and advocated to the Kogi and Ebonyi state governments to ensure PSBI commodities (amoxicillin dispersible tablets and gentamicin injection) are easily available and reasonably affordable for the prevention and management of newborn sepsis.

### **Improved Emergency Referral Systems and Access to Essential Health Care**

The project worked with state MOH counterparts and professional associations to standardize referral protocols by system level for common, life-threatening emergencies based on updated guidance in the 2017 second edition of the WHO *Managing Complications in Pregnancy and Childbirth* manual (supported by the project at global level in collaboration with WHO). Also at the community level, a referral support system—the emergency transport scheme—was introduced and established with the support of MCSP in six LGAs in Ebonyi and Kogi states, leading to the timely transportation of 539 women and 315 sick children to nearby facilities for care. Similarly, MCSP collaborated with ministries of women affairs and social development to support the introduction of a women's savings and loans clubs in Ebonyi and Kogi states, supported the

establishment of over 70 clubs in selected LGAs, which raised over NGN 5 million (USD 14,000) that enabled 2,120 women to have access to alternative health financing to seek high-quality health care. Almost all members of the clubs also utilized loans from the clubs to improve their livelihood and enhance their financial independence.

### *Improved Quality of Services for Adolescents and Young Mothers*

MCSP worked with a range of stakeholders and partners, including the Kogi and Ebonyi state MOHs and the Gender, Adolescent, School Health, and Elderly Care Division in the Federal MOH, to improve the quality of health services available to and accessible by adolescents or young mothers/parents in selected areas in Ebonyi and Kogi states. Age and life stage assessment and counseling tools were developed to tailor counseling to meet the specific needs of these women. The tools were used to strengthen communication and counseling to increase knowledge and skills related to delaying early childbearing; accessing high-quality care during pregnancy, birth, and the postpartum period; and increasing access to voluntary PPFP, PNC, and child health services for thousands of adolescents. MCSP conducted [formative research](#) exploring the factors influencing use (and nonuse) of health services by young parents in six states. Based on the findings from the formative research, the *Our First Baby* guide was developed to facilitate group discussion on parenting, healthy timing and spacing of pregnancy, and GBV for first-time mothers, who also benefited from the establishment of savings and loans clubs in three designated sites. (For more information, see [MCSP's brief](#).)

### *Increased Reporting and Data Use by Project States*

MCSP contributed to improved data reporting rates by supported facilities in the two states (from 53.5% and 63.4% of facilities in 2016 to 64.5% and 70.7% of facilities in 2018 in Ebonyi and Kogi, respectively). Key program interventions included recordkeeping training and monthly data collation, validation, and review meetings. MCSP supported Kogi and Ebonyi states to institutionalize the use of RMNCAH scorecards as a flexible management tool for the state MOH to monitor health service delivery and outcomes, strengthen accountability, and drive action for improving service provision. Staff in the HMIS units in the two states are now equipped with the skills to update the scorecards on a quarterly basis; continuously monitor the timeliness, completion, and quality of data reported; and analyze results for decision-making in collaboration with manager and health care worker counterparts.

MCSP's review of the existing national recordkeeping and reporting system forms and processes revealed a need to strengthen the system to track essential recommended global RMNCAH indicators that were missing. The review identified gaps in the health facility labor and delivery register, such as the inability to track the use of oxytocin immediately after birth and application of CHX gel to the umbilical cord as part of ENC. Based on the review, MCSP was able to inform and advocate with the Federal MOH for the inclusion of key maternal and newborn data elements in the national HMIS. (See [Improving Health Outcomes by Enhancing the Content and Use of RMNCH Data in Nigeria's National Health Management Information System](#) for more information.)

### *Integrated Gender into RMNCAH Service Delivery*

[MCSP supported Ebonyi and Kogi state MOHs to address gender-related barriers to delivering high-quality RMNCAH care in the two states](#). The support led to, among other achievements, a significant increase in the number of women who were accompanied, when desired, by their male partners to health facilities, from 1,479 women in June 2017 to 5,627 women in September 2018. MCSP also promoted the Health Workers for Change approach in the two states, benefiting over 1,000 health providers and strengthening their ability to deliver gender-sensitive, respectful care, especially during childbirth. A pool of 30 health workers was created to sustain and scale up this approach in Ebonyi and Kogi states with state funding. Furthermore, there are now about 251 health workers with improved capability to provide first-line support and basic clinical care to GBV survivors in the states. A referral directory was developed and disseminated to health facilities to help link survivors to other available services (shelter, police, mental health, etc.).



## Strengthened MPDSR Systems

As in many countries, Nigeria's MPDSR policy has outpaced the implementation of processes at the state level. In collaboration with local professional associations,<sup>38</sup> the project helped to create or revitalize MPDSR committees and strengthen processes at the state, LGA, and facility level, including timely notification and audit of maternal and perinatal deaths, and development of robust action plans based on key underlying contributors. Ebonyi and Kogi state MOH leadership, with support from the professional associations, are now managing the MPDSR committees and processes in both states. While continued support is needed to strengthen MPDSR processes, including consistent follow-up and monitoring of identified action plans, important gains were made over the life of the project in translating national MPDSR policy into state-level implementation. See the report on MCSP's [Assessment of MPDSR Implementation in Ebonyi and Kogi States, Nigeria](#) for more information.

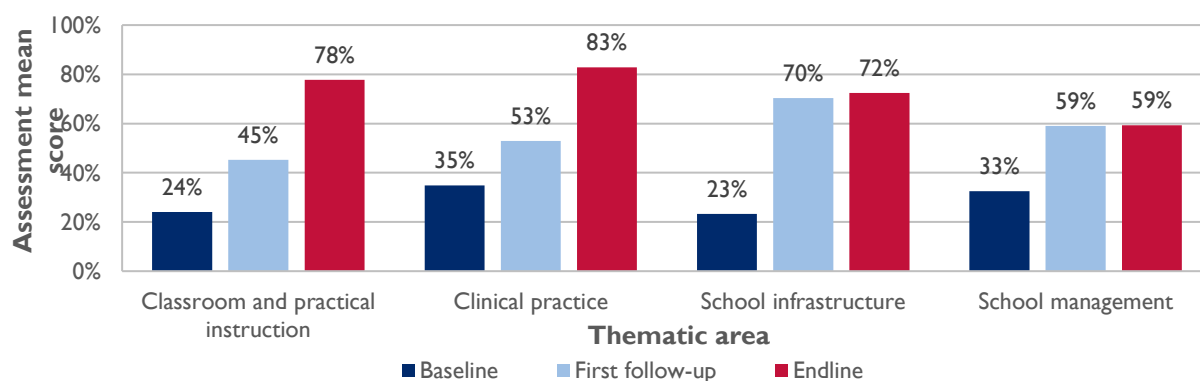
## Improved the Health Policy Environment

To ensure MCSP's gains are sustained and scaled up as widely as possible, a number of policy documents, strategic development plans, training manuals, job aids, and learning briefs were developed as a framework for the future. MCSP also supported the development of national policy and strategy documents, such as the updated national antenatal guidelines, the national scale-up strategy for CHX, the revised Nigeria ENAP, the 2016 National Child Health Policy, the national gender and health policy, and ENC course training materials. MCSP worked with the Federal MOH to create a national MNCH quality TWG to develop the first-ever national MNCH quality of care strategy and a national plan for Nigeria's participation in the multicountry WHO MNCH Quality of Care Network (WHO MNCH Quality of Care Network). The national- and state-funded interventions are already being implemented in line with MCSP-proven approaches.

## Strengthened PSE

[MCSP's support to 14 pre-service institutions](#) (nine in Ebonyi and five in Kogi) included equipping their skills laboratories with anatomic models and essential equipment, and supporting the establishment of education development committees to manage the skills laboratories. MCSP's support contributed to increased capacity of the institutions' tutors and preceptors to provide high-quality PSE for frontline MNH providers, including midwives, nurses, and community health extension workers. A baseline (November 2016) and endline (August 2018) assessment of the mean performance of the 14 supported pre-service schools against standards in four thematic areas demonstrated improvements across the board: classroom and practical instruction increased from 24% to 78% of standards met, clinical practice improved from 35% to 83% of standards, school infrastructure increased from 23% to 72% of standards, and school management increased from 33% to 59% of standards (see Figure 4).

**Figure 5. Comparison of baseline with post-intervention results of schools' performance across four thematic areas in Ebonyi and Kogi**



<sup>38</sup> From the beginning of the program in Nigeria, MCSP worked with local professional associations to provide targeted technical support to the states, including the Society of Gynaecology and Obstetrics of Nigeria, Paediatric Association of Nigeria/Nigerian Society of Neonatal Medicine, and the National Association of Nigeria Nurses and Midwives.



## Recommendations for the Future

MCSP is honored to have been given the opportunity to work closely with the Federal MOH, state MOHs, LGAs, professional associations, health facilities, and PPMV counterparts in Ebonyi and Kogi states to strengthen access to high-quality care for women, newborns, and children. MCSP is optimistic that the project's strong collaboration with national- and state-level managers and health workers will help to sustain and extend improved quality of human-centered care for women, newborns, and children, per the primary mandate of MCSP in Nigeria. It is reassuring that there are already ongoing state-funded interventions initiated during MCSP (e.g., onsite LDHF training of health workers). However, without a doubt, federal and state government political will and strong leadership will be critical to sustain and expand the program gains, and to attain the goal of ending preventable deaths of women and children in Nigeria.

- **Utilize local leadership and governance, effective partnerships, and a comprehensive systems strengthening necessary to achieve and sustain improved RMNCAH care and health outcomes.** Aligning systems approaches with local governance structures, state-led projects and assets (e.g., Saving One Million Lives), and established health system processes (e.g., integrated supportive supervision) is vital for achieving and sustaining gains.
- **Ensure a “fit-for-purpose” health workforce by expanding and sustaining competency-based, continuous capacity-building that is focused on clinical, QI, management, and measurement skills, and tailored to the responsibilities of specific actors.** Onsite clinical and QI capacity-building should be encouraged as a more efficient approach than traditional classroom training based on MCSP's learning.
- **Guarantee and sustain adequate infrastructure and commodities at the state level for the provision of high-quality care in all facilities and communities in addition to building clinical, data, and QI skills.** National-, state-, LGA-, and facility-led QI processes, with close engagement of community stakeholders, are vital to support continuous improvement of RMNCAH services linked to broader HSS efforts. Nigeria's membership as one of 10 first-phase countries in the multicountry WHO MNCH Quality of Care Network is an important opportunity to continue to mobilize high-level political commitment, resources, and partnerships to support continuous improvement of effective, safe, efficient, and person-centered RMNCAH services for women, newborns, and children in Nigeria.
- **Continue to use and update the RMNCAH scorecards in recognition that they are not just one-time advocacy tools, monitor data reporting, analyze results for decision-making in state-level HMIS units, and share results with stakeholders through the commissioners of health during regular review meetings.** HMIS departments in the State MOHs should also continue providing supportive supervision and mentoring in these areas.
- **Bridge the gap in access to high-quality childhood services, especially in rural, underserved communities, by tailoring training, supervision, and mentoring PPMVs, and providing easy access to low-cost, high-quality medicines.** PPMVs are an important and accessible source community-based services for sick children and are often the closest and most affordable sources of care, sought by caregivers of sick children. Health authorities at all levels should support and expand the approach to improve PPMVs' ability to provide appropriate assessment and treatment for uncomplicated childhood illnesses with quality medicines. Scale up of this intervention should be accompanied by a monitoring and evaluation system that ensures that quality of care is maintained.

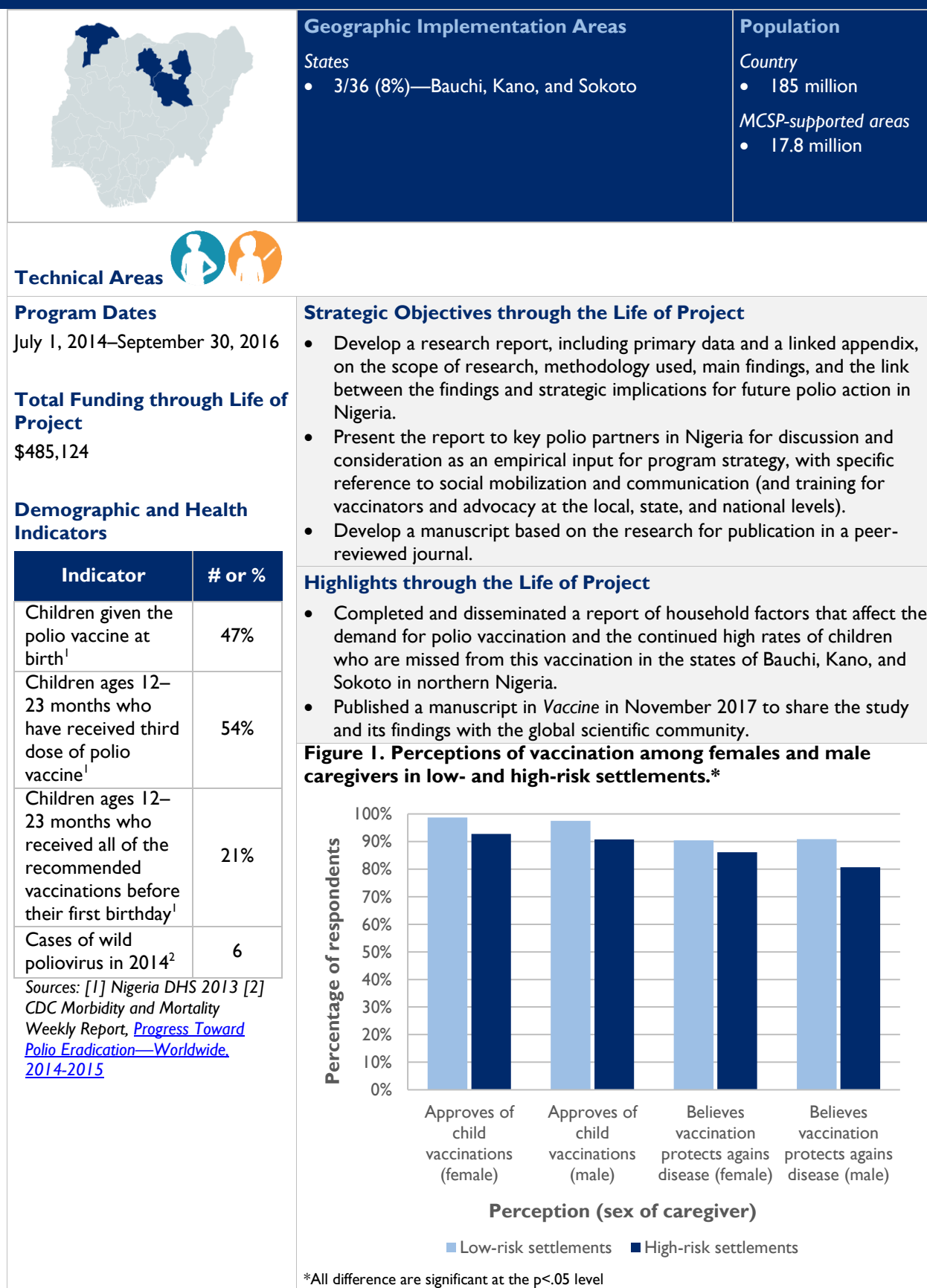
Selected Performance Indicators	
Global or Country Performance Monitoring Plan Indicators	Achievement (Target)
Number of people trained in MNCH through USG-supported programs	2,028 (target: 1,244; target exceeded)
Number of people trained on FP/reproductive health with USG-supported funds	697 (target: 680; target exceeded)

Selected Performance Indicators	
Global or Country Performance Monitoring Plan Indicators	Achievement (Target)
Number of people trained through USG-supported programs on IMNCI and iCCM	2,031 (target: 3,030; 67% achieved)
Number of MCSP-supported health facilities that have a systematic approach to track and display priority RMNCH indicators	91 (target: 154; 59% achieved)
Number of facilities with maternal and perinatal death reviews conducted	96 (target: 120; 80% achieved)
Percentage of births monitored with a partograph	77% (target: 55%; target exceeded)
Couple years of protection in USG-supported programs	164,334 (target: 121,200; target exceeded)
Number of postpartum counseling visits for FP/reproductive health	100,224 (target: 36,500; target exceeded)
Number of pregnant women that attended antenatal clinic for at least four times	60,953 (target: 83,800; 73% achieved)
Number of deliveries by SBAs	59,319 (target: 71,000; 84% achieved)
Percentage of babies for whom CHX was applied to the umbilical cord at birth	93% (target: 80%; target exceeded)
Percentage of newborns receiving essential care through USG-supported programs	96% (target: 90%; target exceeded)
Number of children under 5 referred to a high-level facility by PPMVs for treatment of severe diarrhea, pneumonia, malaria, or danger signs in USG-/MCSP-supported programs <sup>1</sup>	255 (target: 1,505; 17% achieved)
Number/percentage of PPMVs that received quarterly supportive supervision	87% (target: 80%; target exceeded)

<sup>1</sup> Due to requested changes to the child health program's PPMV activities, implementation was delayed, limiting the number of referrals provided, and commodities were not available, limiting the number of people to be treated. Also, targets may have been overestimated, as no similar work had been done in the past, so no baseline data were available.

For a list of technical products developed by MCSP related to this country, please click [here](#).

# Nigeria Polio EOP Summary & Results



# Nigeria—Polio

## Background

By 2015, the Nigerian polio eradication program had made extraordinary advances: transmission of wild poliovirus is at its lowest level in the history of the program, and service quality had improved dramatically, with lot quality assurance sampling coverage in high-risk areas above 80% and rising steadily in 2013–14. However, within the picture of aggregate improvement, there were small but significant areas of suboptimal oral polio vaccine coverage. To maximize chances of interrupting transmission and sustaining population immunity, a study was designed to investigate demand-side issues leading to poor coverage. The study selected high- and low-performing areas and conducted a comparative analysis to look for systematic differences in household (or settlement) characteristics that may explain localized deficits in oral polio vaccine acceptance.

MCSP's polio program in Nigeria accounted for phase II of the research study, conducted jointly with The Communication Initiative Network and Public Health Services & Solutions, a Nigerian NGO. The specific goal of the research was to understand household factors that affect the demand for polio vaccination and the continued high rates of children who are missed from this vaccination in the states of Bauchi, Kano, and Sokoto in northern Nigeria. The study was designed during phase I, which was largely completed under MCHIP, and vetted by the Federal MOH and polio and immunization partners in Nigeria. Phase I also included data collection and preparation of the initial data set by Public Health Services & Solutions.

## Key Accomplishments

### *Collected, Cleaned, and Analyzed Data*

As the second phase of the household factors that affect the continued high rates of children who are missed from polio vaccination in northern Nigeria, MCSP completed follow-up data collection from phase I, data cleaning, and analysis. Over 3,300 male and female respondents were surveyed from over 1,600 households and asked about family life, perceptions of external actors, their health care experiences, and knowledge of/attitudes toward RI and polio eradication efforts. The analysis of the data was done using a methodology based on qualitative comparative analysis and disaggregated by state, gender, and residence.

Findings showed that 16–17% of households reported having children who were missed by the oral polio vaccine, and 14–17% considered missing the vaccine in the future. Though risk of oral polio vaccine refusal was not predicted by worse past experiences with the health system, it did correlate with less knowledge of vaccines and absence of a positive perception of immunization in general. Propensity to refuse the oral polio vaccine was clustered, such that 20% of the sample communities accounted for almost 75% of the refusal risk and over 50% of all missed children. In contrast to the common profile of rural, illiterate communities being most susceptible to anti-vaccine myths, urban communities showed the highest levels of refusal risk. This also correlated with high expectations of the government, low confidence in one's ability to influence government performance, low perception of health care falling within the legitimate mandate of the government, and low levels of participation in community activities. Higher household wealth, education, and female literacy correlated with lower refusal risk, except in urban Sokoto, where the concentration of risk was in the context of better material conditions and access to resources. Degree of religious observation did not appear to correlate with oral polio vaccine refusal.

### *Finalized and Disseminated Report*

MCSP engaged stakeholders in Nigeria to generate recommendations for polio vaccine demand creation (see below) and prepare the documentation. The final report was disseminated in late 2015 to decision-makers and implementers in the Nigerian government and other polio programs, as well as through The Communication Initiative Network's newsletter and [website](#). A [manuscript](#) was also published by *Vaccine* in November 2017.

## Recommendations for the Future

The polio study revealed several key implications at the state, household, and settlement levels, which are included in the formal report.

- **Implement a community-level approach targeted at especially high-risk settlements to overcome some of the risk clustering.** Such approaches should also focus on providing information on the benefits of vaccination in general, mitigating the impact of negative perceptions, and strengthening engagement between male and female caregivers. Vaccine administration planners should also pay particular attention to urban populations and further investigate emerging sets of risk in these areas.
- **Maintain or restore operational focus at the state level in the northwest, alongside the focus on Kano and Yobe-Borno transmission zones.** Furthermore, state programs are encouraged to strengthen their capacity (including developing qualitative and quantitative data gathering methods) to analyze program performance at the settlement level to identify persistent, localized gaps in the performance of supplementary immunization activities.

Selected Performance Indicators	
Global or Country Performance Monitoring Plan Indicators	Achievement (Target)
This program did not have a Performance Monitoring Plan.	

For a list of technical products developed by MCSP related to this country, please click [here](#).

# Nigeria Routine Immunization EOP

## Summary & Results



### Geographic Implementation Areas

#### States

- 2/36 (6%)—Bauchi, Sokoto

#### LGAs

- 43/43 (100%)—20 in Bauchi, 23 in Sokoto

#### Wards

- 567/567 (100% in both states)

#### Facilities

- 1,583/1,853 (85%, Bauchi: 1,029, Sokoto: 554)

### Population

#### Country

- 185 million

#### MCSP-supported areas

- 8.85 million

### Technical Areas



#### Program Dates

September 1, 2014–December 31, 2018

#### Total Funding through Life of Project

\$12,999,000

#### Demographic and Health Indicators

Indicator	# or %
Live births/year <sup>1</sup> (millions)	7.133
Infant mortality rate <sup>2,3</sup> (per 1,000 live births)	69 (2013) 67 (2018)
U5MR <sup>2,3</sup> (per 1,000 live births)	128 (2013) 132 (2018)
DTP3 rate 2013 <sup>2</sup>	
National	38.2%
Bauchi State	12.5%
Sokoto State	2.6%
DTP3 rate 2018 <sup>3</sup>	
National	50.1%
Bauchi State	32.1%
Sokoto State	7.2%
DTP3 rate 2018 <sup>4</sup>	
National	57.2%
Bauchi State	41.5%
Sokoto State	22.4%

Sources: [1] UNICEF State of the World's Children 2015; [2] Nigeria DHS 2013; [3] Nigeria DHS 2018; [4] National Nutrition and Health Survey 2018. DTP3 rates are at time of surveys. Discrepancies in 2018 coverage rates by survey are believed to be due to relatively small state sample sizes and the resulting confidence intervals.

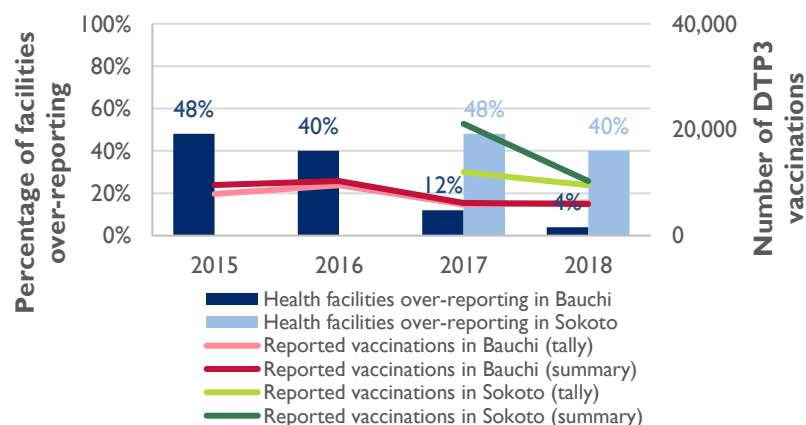
#### Strategic Objectives through the Life of Project

- Support state-led and -owned efforts to achieve over 80% RI coverage in every ward of Bauchi and Sokoto states by the end of December 2018.
- Support state-led and -owned efforts to expand the availability and quality of RI services by providing technical assistance in the areas of capacity-building and training, supportive supervision, monitoring and use of data, supply/cold chain, and community engagement.
- Promote the transition of all responsibility for sustaining and building on these gains to Bauchi and Sokoto states by January 2019, and improve their capacity to promote, deliver, and monitor RI services at state, LGA, health facility, and community levels.

#### Highlights through the Life of Project

- Expanded RI service delivery in Bauchi and Sokoto from 1,445 facilities to 1,580 and reached 1,614,200 children with RI (diphtheria-tetanus-pertussis, third dose, DTP3) between 2014 and 2018.
- Supported training of 63,000 health workers in all 43 LGAs of Bauchi and Sokoto states on 13 RI-related topics.
- Sokoto and Bauchi state governments contributed approximately \$1.1 million and \$4.3 million, respectively, under RI MOUs to match private foundation funding (2014–2018).

**Figure 1. Data quality assessments in Bauchi and Sokoto show improved consistency between data tools and fewer health facilities over-reporting DTP, third dose vaccinations**



Source: Service statistics (HMIS) and data quality assessment reports



# Nigeria—Routine Immunization

## Background

In 2017 and again in 2018, over 4 million Nigerian children under 1 year old missed one or more vaccinations, making Nigeria the country with the largest number of unvaccinated children in the world, according to [UNICEF](#) and the [CDC](#). Recent population-based surveys show RI coverage increasing, albeit slowly and with large variations by region and state. Findings from the most recent survey, the 2018 Demographic and Health Survey, indicate that national coverage of DTP3 (the RI proxy indicator) increased to 50% of children 12–23 months old at the time of the survey, up from 38% in 2013, with the most pronounced progress being seen in the North East and North West regions. Despite this progress, immunization coverage is still very low in many of the northern states, and the pace of improvement is much slower than required for Nigeria to reach its national immunization goals.

States have taken different approaches to improving their immunization performance. Beginning in 2014, the Bauchi State government partnered with the Bill & Melinda Gates Foundation, Dangote Foundation, and USAID under a unique, multipartner MOU for RI system strengthening. The purposes of the 2014 [Bauchi RI MOU](#) and the 2015 [Sokoto RI MOU](#) were to mobilize and increase sustainable financing for state immunization programs, and increase vaccination coverage by expanding the supply of services, increasing demand, and institutionalizing government and partner coordination and accountability mechanisms at the state level. USAID's contribution to the Bauchi and Sokoto RI MOUs came in the form of MCSP's technical assistance, which began in late 2014 and continued through December 2018.

In addition to the six multipartner state MOUs that were in place by 2018, the Government of Nigeria established a [National Emergency RI Coordination Centre](#) in mid-2017 and quickly moved to set up comparable state-based groups in priority states. MCSP worked under the [RI MOU model](#)<sup>39</sup> and as a member of the Bauchi and Sokoto State Emergency RI Coordination Centres, supporting efforts in 43 LGAs, 1,583 health facilities, and countless communities to strengthen RI in the context of primary health care.

## Key Accomplishments

### *Developed New Model for Financing and Delivering RI Programs*

With MCSP's and other partners' support, the Bauchi and Sokoto state governments increased high-level political commitment to and capacity for RI program management and coordination. Reflecting the accountability and motivation the states felt to achieve sustainable results, the State Primary Health Care Development Agencies, with MCSP's support, developed state accountability frameworks for RI, which were reinforced by recommendations from routine internal and external MOU financial audit reports. Finance working groups tracked and enforced accountability recommendations, enabling each state to track disbursement, use, and retirement of accounts at all levels. Bauchi and Sokoto state governments matched their increasing financial investments with timely disbursements and consistent availability of funds for RI at all operational levels through dedicated health facility bank accounts. Each state developed a harmonized and budgeted RI work plan, which helped to strengthen planning and align its partners with state priorities. Routine activities, such as monthly review meetings, supportive supervision, and RI outreach sessions, were conducted as planned but also using revised and improved approaches. MCSP's close coordination with the many partners working in each state under its RI MOU work plan minimized duplication of efforts and maximized government and partner investments. Both states now have functioning RI state task forces chaired by their deputy governors that serve as the highest decision-making body in each state for RI. These task forces promote effective responses to needs by sharing information, setting priorities, assigning responsibilities, and encouraging joint accountability for results. The task forces (and their underlying TWGs) will continue functioning beyond the life of MCSP. In addition, the Bauchi State Task Force is being scaled up to cover broader primary health care activities, as well as RI.

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<sup>39</sup> *Implementing an MOU with Basket Funding to Improve RI Systems: A Start-Up Guide Compendium* provides guidance on designing, implementing, and evaluating an RI MOU.

MCSP worked with RI MOU partners during implementation to document processes, context, achievements, challenges, and lessons learned in the development and implementation of the RI MOUs. Findings were shared with MOU partners in each state and are being disseminated through the document, [Implementing an MOU with Basket Funding to Improve RI Systems: A Start-Up Guide Compendium](#), its accompanying MOU tools, and individual MOU case study reports for Bauchi, Sokoto, and the other foundation-supported MOU states. A manuscript summarizing the MOU experience and lessons learned is also under development for publication.

### ***Developed and Implemented National Policy***

MCSP's national-level RI technical support included sharing experiences and lessons learned from RI MOU implementation in Bauchi and Sokoto states, contributing to quarterly reviews of Nigeria's EPI, supporting the states as they adapted and adopted national policies and guidelines, and providing technical assistance to the Federal MOH and National Primary Health Care Development Agency in development of national policies and plans, such as the 2016-2020 Comprehensive Multiyear Plan. In addition, MCSP supported revisions to the National Immunization Policy in 2018 to reflect introduction of the National Emergency for RI Coordination Centre and the National Primary Health Care Development Agency's optimized integrated RI sessions approach. MCSP also supported finalization of national RI supportive supervision and mentoring standard operating procedures, an RI job aid for health care providers, national EPI training guidelines for the National Primary Health Care Development Agency, the *Basic Guide for RI Service Providers*, and the national Measles Elimination Plan 2018–2028. Finally, MCSP contributed to annual Gavi joint appraisals and to Nigeria's National Strategic Plan to Strengthen RI and Primary Health Care 2018–2028, which was approved by Gavi in 2018.

### ***Expanded and Strengthened RI Services***

A central focus of MCSP's technical support to both states was expansion of access to RI services. At the start of the MOUs, very few health facilities were conducting regular fixed and outreach RI sessions. MCSP supported the states to identify 43 new secondary health facilities (23 in Bauchi and 20 in Sokoto) and three new tertiary health facilities where RI was not offered, and then worked with these facilities to begin offering RI to their clients. Consistent monitoring and follow-up of RI sessions (including through quarterly microplan review, monthly LGA-level review meetings, and supportive supervision and mentorship visits) contributed to an increased number of fixed and outreach RI sessions being planned and higher percentages of those sessions being conducted. In Bauchi, the annual number of planned RI sessions conducted increased significantly from 43,600 sessions in 2014 to 74,734 sessions in 2018, and the percentage of planned sessions that were conducted also increased from 79% to 95% over the same period. In Sokoto, MCSP's support led to even more dramatic results: a fivefold increase in the annual number of fixed and outreach RI sessions (10,941 sessions in 2014 to 50,286 sessions in 2018).

MCSP's assistance to each LGA (e.g., prioritizing data quality and use, and supervision strengthening) was a major contributor to the expansion of state RI services. Regular disbursement of RI MOU funds to health facilities was also important to ensure that they consistently had funds for outreach. MCSP's LGA-based consultants helped state counterparts track use and successfully retire accounts at the operational level.

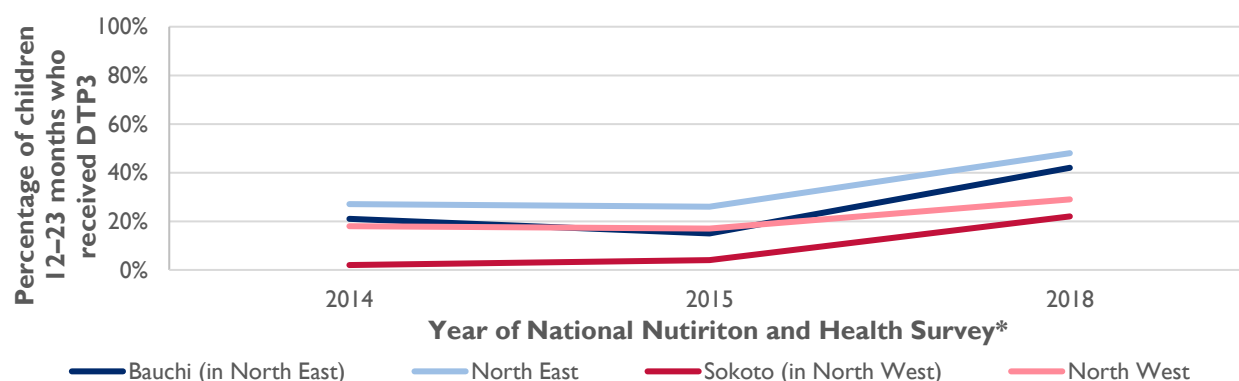
MCSP's support also increased demand and catalyzed a higher number of clients returning and completing their immunizations. This is reflected in the dropout rates, which fell to around 10% by the end of the project, compared to a baseline of 19% in Bauchi and 21% in Sokoto (and a national average of 14%, per WHO and UNICEF's 2017 estimate). During the life of the project, 1,614,200 children (962,791 in Bauchi and 651,409 in Sokoto) received DTP3. According to population-level data from the [National Nutrition and Health Surveys](#)<sup>40</sup> of 2014, 2015, and 2018 (Figure 2), DTP3 coverage increased about 20 percentage points in Bauchi and Sokoto between 2014 and 2018, and the gaps between state and corresponding regional coverage narrowed considerably, especially in Sokoto. Demographic and Health Survey 2018 findings indicate less

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<sup>40</sup> National Nutrition and Health Survey is a household survey conducted using Standardized Monitoring and Assessment of Relief and Transition (SMART) methodology. The Government of Nigeria's intent is to conduct an NNHS annually. To date, these surveys have been conducted in 2014, 2015 and 2018, with support from USAID, UKAID and Unicef.

dramatic improvements in both states (32% in Bauchi and 7% in Sokoto), but the confidence intervals at the state level are large.

**Figure 2. Increase in diphtheria-tetanus-pertussis, third dose (DTP3) coverage among children 12–23 months in Bauchi and Sokoto from 2014 to 2018**

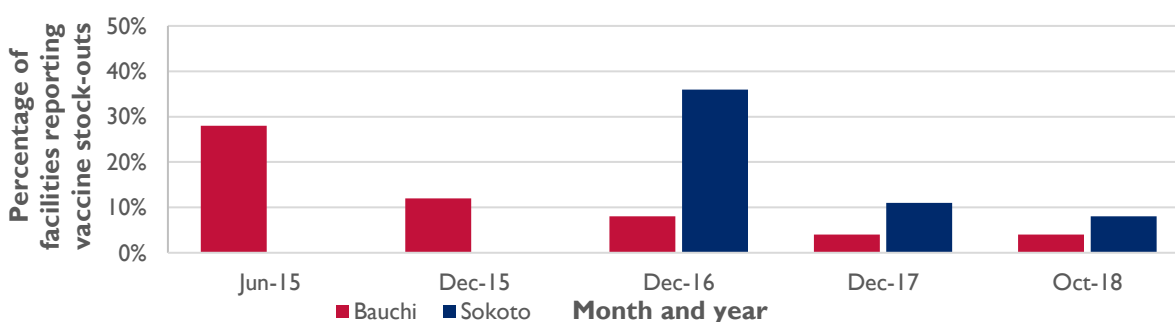


\* National Nutrition and Health Surveys use the Standardized Monitoring and Assessment of Relief and Transition methodology

### Supported Vaccine Supply Chain and Logistics

MCSP supported both State Primary Health Care Development Agencies to coordinate activities critical to vaccine security, cold chain strengthening, and RI logistics. Through development, implementation, and use of a Planned Preventive Maintenance Guide at LGA level and in apex health facilities, and by building the capacity of 567 service providers in supply chain and logistics skills, the consistency of vaccine stock data improved in zonal cold stores and across all LGAs. Stock-outs were reduced through LGA-level vaccine stock dashboards and public-private partnerships that “pushed” vaccine delivery to LGAs and health facilities. The reduction in vaccine stock-outs in Bauchi was dramatic: from 28% in June 2015 at the introduction of vaccine direct delivery to only 4% in October 2018. In Sokoto, stock-outs fell from 36% to 8% between December 2016 and October 2018 (Figure 3). At the end of 2018, 95% of the 289 facilities with cold chain capacity in Bauchi and 91% of the 221 facilities in Sokoto had experienced no vaccine stock-outs for 30 days. These achievements represented an improvement of 69 percentage points in Bauchi and 57 percentage points in Sokoto from the 2014 baseline, a substantial increase in vaccine availability at service delivery points.<sup>41</sup>

**Figure 3. Reduction in vaccine stock-outs in 1,029 health facilities in Bauchi (June 2015 to October 2018) and 542 health facilities in Sokoto (December 2016 to October 2018)**



Source: state and LGA records

<sup>41</sup> The Federal MOH purchased vaccines and supplies. Solina designed, managed, and tested vaccine distribution to health facilities by a third-party vendor. MCSP supported and monitored the rollout of the new distribution system, ensured redistribution between apex and other health facilities, strengthened state systems to identify and report malfunctioning cold equipment, developed and helped implement plans for training in preventive cold chain maintenance, and tracked the performance of the third-party vendor.

## Improved RI Data Quality

In Sokoto and Bauchi states, RI data quality has historically been poor, with large discrepancies between administrative and population-based survey data.<sup>42</sup> In support of the two states' strategies to improve data quality and consistency, MCSP provided technical support to the State Primary Health Care Development Agencies to review RI indicators, identify and address data management and quality gaps, and monitor improvements over time. Using various approaches—directly observed data entry, supportive supervision, needs-driven mentoring, and data quality assessments and spot checks—the states and partners have begun to address data discrepancies, falsification, and over-reporting issues. In collaboration with other RI MOU partners, MCSP supported the coaching and mentoring of 238 service providers in Sokoto and 285 in Bauchi from 523 health facilities (33% of all health facilities providing RI) to improve the quality and timeliness of their reporting. As a result, the timeliness of RI reporting improved 10 percentage points to 93% in Sokoto and 18 percentage points to 86% in Bauchi, and data quality assessment cycles from 2015 to 2018 showed fewer health facilities over-reporting DTP3 immunization. There was also improved consistency in data recorded on the tally sheets that are used during immunization sessions, health facility immunization registers, and monthly health facility and LGA reports (Figure 1). While these are encouraging trends, data quality issues continue to undermine RI planning, monitoring, and problem-solving in both states, and deserve even greater attention by the State Emergency RI Coordination Centres and MOU partners in the future.

## Linked Communities and Health Facilities

With an expanded approach to community partnership, MCSP engaged all actors (traditional and religious leaders, village and ward development committees, and beneficiaries themselves) in efforts to increase immunization coverage and address low levels of awareness of RI and the population's distrust of the health system. MCSP played a role in analyzing context-specific community issues, addressing gaps identified through community assessments, and working with social mobilization working groups in both states to develop and align with state Community Engagement Strategies for RI and other primary health care services. Incorporating best practices used in other countries, MCSP addressed factors that lead to missed opportunities for immunization and large numbers of unimmunized children, such as weak tracking mechanisms for newborns and challenges with identifying and following up with children who are left out or drop out of the RI system. For example, MCSP effectively leveraged the influence of 2,858 trained traditional barbers (trusted community members) in the tracking and referral to RI services of 66,611 newborns in Bauchi and 4,157 newborns in Sokoto, tapping an important unused resource and increasing male engagement in demand generation. As a result of this innovative activity, 90% of newborns in Bauchi and 96% of newborns in Sokoto referred by traditional barbers successfully accessed RI services. [To learn more about this initiative, read MCSP's blog post "In Northern Nigeria, barbers trim newborn mortality – one haircut at a time."](#)

Building off of lessons learned increasing immunization coverage in India, Timor Leste, and Malawi, MCSP also adapted and tested the My Village My Home visualization tool in three wards of three LGAs in each state as a complementary approach to existing name-based records. In Bauchi and Sokoto the tool was called Healthy Children, Community's Pride. By the end of the project, 7,542 children had been tracked in the project register, and 85% of them were up-to-date with their vaccines. In addition, 4,550 children were registered and tracked at fixed and outreach sessions through a program called WeMUNIZE, which used informational telephone calls and SMS messages to influence, remind, and persuade caregivers to take children for immunization. In light of these successes made possible through MCSP's technical and organizational capacity-building and support, this tool went on to receive a USAID Digital Development Award. Finally, MCSP used a geographic information system to produce digital catchment area maps for 283 health facilities (199 in Bauchi and 84 in Sokoto). Developing digital maps enabled the government to identify service provision gaps and opportunities to increase the number of children immunized during outreach sessions. This process was documented in the manuscript "From Paper Maps to Digital Maps: Enhancing RI Microplanning in Northern Nigeria," which will be published in a forthcoming BMJ Global Health supplement.

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<sup>42</sup> Example: In 2017, Sokoto State reported 86% DTP3 coverage based on monthly administrative reports; however, the recent Demographic and Health Survey 2018 survey estimated only 7.2% coverage.

## Built Capacity to Ensure Quality RI Services

Skilled and knowledgeable health care providers are required to ensure delivery of high-quality RI services at health facilities and outreach sessions. At various levels and in close collaboration with Solina and other RI partners, MCSP used a combination of user-centered approaches—onsite training and support, needs-based mentoring and cross-learning, monthly data review meetings, and supportive supervision—to build and reinforce improvements in health worker capacity. MCSP played a key role in integrating adult learning techniques into the national *Basic Guide for RI for Service Providers* training approach that is used with all public- and private-sector health service providers. To institutionalize best practice training approaches, MCSP also supported the State Primary Health Care Development Agencies in both states to set up training units for coordination of RI and other primary health care-related trainings.

Over the life of the project, MCSP supported training of over 53,000 health workers in Bauchi and nearly 10,000 health workers in Sokoto on RI topics. Appreciating that capacity is strengthened and sustained over time, MCSP also helped develop a mentoring component for follow-up that is cited as a model in the new national standard operating procedures for supportive supervision. A pool of 109 “super mentors” (63 in Bauchi and 46 in Sokoto) was established and will continue to provide onsite, needs-based mentoring to build capacity among other mentors. This mentoring approach was enhanced by introduction of a CommCare-based digital application that tracked mentees’ progress and monitored the mentorship process.

## Recommendations for the Future

The RI MOU model demonstrates how a coordinated, state-led approach between the private and public sectors can mobilize domestic resources, improve accountability, provide clear governance structures, and leverage the comparative strengths of partners and community stakeholders to improve RI performance. MOU basket funding, coupled with high-quality, targeted, and demand-driven technical assistance provided by MCSP and other partners, strengthened RI systems and expanded service delivery in Bauchi and Sokoto states. Much work still remains to accelerate RI coverage improvement in MOU states, but the initial results are promising.

- **Prioritize demand generation.** Going forward, demand generation must be given greater priority, for without dramatically increasing the population’s utilization of RI services, coverage will remain low.
- **Build the capacity of state- and LGA-level stakeholders, communities, policymakers, and managers.** MCSP provided multicomponent, multilevel technical assistance to the State Primary Health Care Development Agencies and LGAs with skills and knowledge transfers that will only be sustained through continued capacity-building and onsite mentoring. Engaging communities, building the capacity of policymakers and managers, addressing disparities in RI coverage, and improving the quality and use of RI data will also continue to be extremely important in both states.
- **Increase the efficiency of immunization services.** Although the supply of services has been greatly expanded, LGAs and health facilities must now look for more efficient combinations of fixed and outreach immunization sessions, as well as ways to increase demand, if they are to improve their results.
- **Build consensus among partners and take a unified approach to implementation.** MCSP found that these were great strengths of the MOU partnership model.
- **Encourage MOU partners to innovate, systematically ask and answer questions, and share findings about what works at community, health facility, and LGA levels.** This can help find ways to sustainably increase demand for RI and primary health care services, improve data quality and use, more fully integrate RI and primary health care services, and address other persistent problems. An iterative approach to asking and answering these and other important questions during implementation would both strengthen the MOU and State Emergency RI Coordination Centre partnerships, and improve their results.
- **Consider and explore use of the MOU model for new public health areas.** The public-private MOU model could help Nigeria mobilize and align its domestic and external resources, and generate the political will and accountability it needs to prevent child and maternal deaths. However, the advantages and limitations of this model will be important for USAID to consider in future programming. The MOUs with Bauchi and Kano states, where progress on RI was greatest, are being broadened to include primary health



care strengthening and may have potential in other areas of public health. By studying what has and has not worked, USAID and the other MOU partners have the opportunity to refine and improve the model.

Selected Performance Indicators	Bauchi	Sokoto
Global or Country Performance Monitoring Plan Indicators	Achievement (Target <sup>1</sup> )	
Number of national policies drafted with USG (MCSP) support	13 (target not defined)	
Percentage of children under 12 months who received DTP3 from USG-supported programs	84% (target: 85%; 99% achieved)	76% (target: 80%; 94% achieved)
DTP1 to DTP3 dropout rate	11% (target: <10%; target not achieved)	9% (target: <10%; target achieved)
Number of people trained in child health (immunization) and nutrition through USG-supported health area programs	52,466 (target exceeded) <sup>2</sup>	11,830 (target exceeded) <sup>2</sup>
Percentage of health facilities receiving RI basket funds on a monthly basis	94% (target: 95%; 99% achieved)	97% (target: 95%; target exceeded)
Percentage of RI fixed sessions conducted as planned	96% (44,761/46,713, target: 90%; target exceeded)	98% (26,059/26,698, target: 90%; target exceeded)
Percentage of RI outreach sessions conducted as planned	93% (29,973/32,396, target: 90%; target exceeded)	98% (24,227/24,785, target: 90%; target exceeded)
Percentage of health facilities offering RI services	94% (target: 95%; 99% achieved)	71% (target: 90%; 79% achieved) <sup>3</sup>
Percentage of health facilities receiving at least one supportive supervision visit for RI in a quarter	94% (target: 90%; target exceeded)	97% (target: 90%; target exceeded)
Percentage of health facilities with no stock-out of vaccines for 30 days	95% (target: 80%; target exceeded)	91% (target: 80%; target exceeded)
Percentage of satellite cold store health facilities with functional cold chain equipment	89% (target: 90%; 99% achieved)	84% (target: 80%; target exceeded)

<sup>1</sup> For the indicators reporting percentages, the targets and achievements are shown for PY4 (October 2017 to September 2018). For the indicators reporting numbers, targets and achievements are cumulative through the life of the project (September 2014–December 2018).

<sup>2</sup> Life-of-project target for this indicator are Bauchi, ~3,000, and Sokoto, ~1,500. Significant overachievement in training indicators is in part due to figures that include data from MNCH weeks and from polio and measles vaccination campaigns in both Bauchi and Sokoto, which both states did not incorporate into their original annual targets. The functionality of the TWGs in each state, as well as dedicated funding made possible by each state's RI MOU basket fund to ensure well-coordinated planning and execution of trainings, also contributed to strong performance.

<sup>3</sup> The 90% MOU target for Sokoto was not achieved because the state decided mid-PY4 to prioritize increasing the frequency of RI services and improving the quality of RI sessions at existing health facilities instead of expanding to new facilities. Furthermore, the state's plan for expansion is dependent on health worker recruitment, which has been challenged by the poor economy and low fund allocations by the states. Plans are underway to recruit more health workers in 2019.

For a list of technical products developed by MCSP related to this country, please click [here](#).