Nigeria Q3
Impact Report

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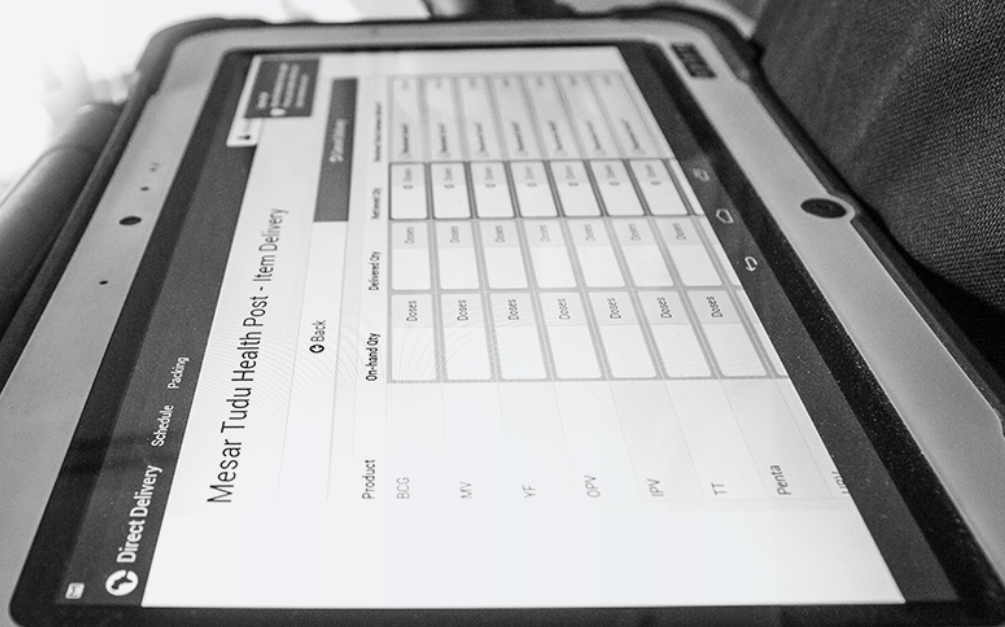
eHealth
AFRICA

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Foreword

We consistently gather data to help us glean lessons and record successes.

At eHealth Africa, we always want to push the bar and set the standard for implementing projects that truly make an impact. We are always on the lookout for problems, whether big or small, because we recognize that they provide us with opportunities to develop solutions that add value to our communities and partners.

We want to know what works so that we can better chart a course for the future.

This third quarter of 2018, we examine our challenges and celebrate the innovative ways by which we overcame them—simple or complex.

Our Mission

Our mission is to build stronger health systems through the design and implementation of data-driven solutions that respond to local needs and provide underserved communities with tools to lead healthier lives.

Our Focus Areas

eHA believes that stronger systems are best achieved through systems-level, integrated approaches. We work on the following focus areas:

Health Delivery Systems

We develop people-centric and data-driven, technological solutions to improve health delivery systems for vulnerable communities.

Laboratory & Diagnostic Systems

We work to build and deploy reporting tools and technologies needed to collect and disseminate lab data.

Nutrition & Food Security Systems

We provide data-driven, technological approaches to improving the quality and availability of nutritious food products throughout West Africa.

Disease Surveillance Systems

We provide the technological tools and operational support to collect and analyze data. Our teams contribute to the detection and ultimate prevention of disease outbreaks throughout West Africa

Public Health Emergency Management Systems

We provide infrastructure and human capacity support to improve governments' abilities to detect, investigate, and respond to public health threats, including the most remote areas.

Where We Work in Nigeria

PROJECTS

- ● GIS
- ● VTS
- ● RES
- ● RIC
- ● IFAIN
- ● GRID ³
- ● Sokoto SET
- ● AVADAR
- ● LoMIS Stock
- ● Global Good
- ● Kano Connect
- ● EOC Data Portal
- ● WFP Warehouses
- ● Vaccine Direct Delivery
- ● RI Catchment Mapping
- ● Household Dietary Diversity Survey

Map labels: Sokoto, Kebbi, Zamfara, Katsina, Jigawa, Yobe, Borno, Kano, Kaduna, Bauchi, Gombe, Adamawa, Niger, Plateau, Taraba, Abuja, Nasarawa, Kwara, Oyo, Ekiti, Kogi, Osun, Benue, Ogun, Ondo, Lagos, Edo, Enugu, Ebonyi, Anambra, Abia, Cross River, Delta, Imo, Rivers, Bayelsa, Akwa-Ibom

eHealth Africa's Q3 Key Achievements

1,646,441
PACKAGES OF FOOD AND NON-FOOD ITEMS
handled by WFP warehouses in Kano and Borno States.

2,359
UNIQUE AFP SURVEILLANCE
community-informant locations identified by our GIS team

2,239
CHILDREN ASSESSED
over a 2-month period in the MEDSINC pilot study
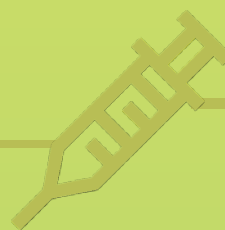
1,976
SUCCESSFUL DELIVERIES
with LoMIS Deliver

1.8M +
ANTIGENS
delivered through the Vaccine Direct Delivery project

1.4+ Million
VACCINATIONS
in accessible areas of Borno State tracked

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Health Delivery Systems

eLearning

In order to address the need of healthcare workers in Kano state to have access to platforms for continuing education and knowledge acquisition, eHealth Africa piloted the eLearning platform among 57 healthcare workers in 3 LGAs, in collaboration with Kano State Primary Health Care Management Board (KSPHCMB) and other implementing partners.

The easy to use eLearning platform is web and mobile-enabled and is available in multiple languages. Through this platform, users are able to access short online courses, texts, and presentations which will help them better deliver routine immunization (RI) services.

Following the success of the pilot phase, the platform has been scaled up to provide access to an additional 100 users.

100
new Frontline health workers onboarded
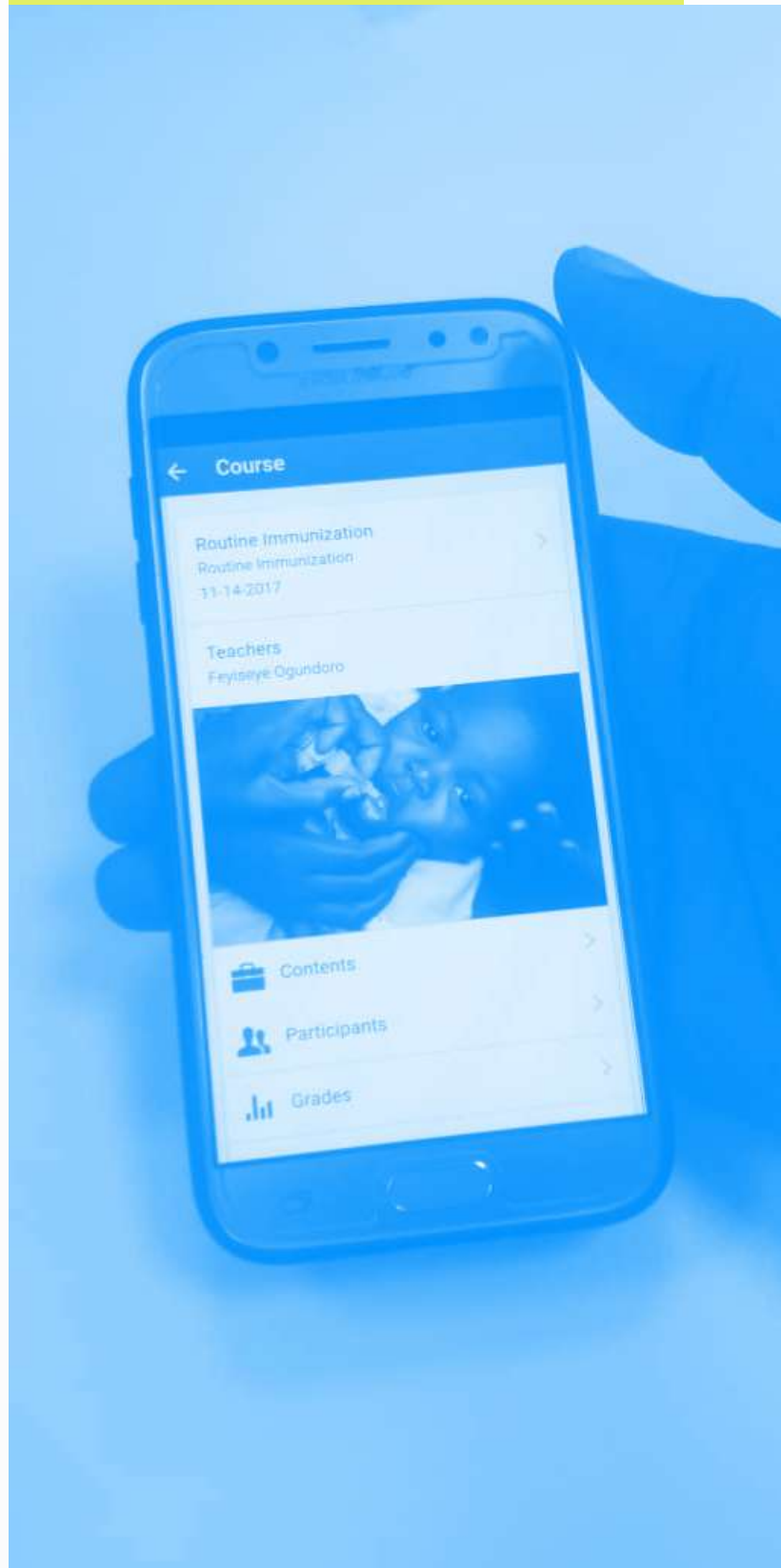
Geo-Referenced Infrastructure and Demographic Data for Development (GRID³)

The GRID³ project completed the mapping of 25 states and the FCT. Over 2,000 state-nominated data collectors were trained and they collected over 500,000 points of interest.
This quarter, the GRID³ project launched Phase Two of the project in Kaduna State, to ensure that decision makers and stakeholders in the state, are able to utilize the geospatial data collected in phase one.

The aim of this phase is to build the capacity of the necessary staff and parastatals to manage, analyze, and use the collected geospatial data for evidence-based program planning and execution, to address the needs of the state.

eHealth Africa, in collaboration with our partners, delivered training and knowledge transfer activities to the Kaduna State Bureau of Statistics (KDBS), Kaduna Budget and Planning Commission, and the Kaduna GIS (KADGIS) Department on data collection, visualization and spatial databases. eHealth Africa also conducted a nationwide training for data managers who would have the responsibility of managing the GRID³ data portals in their respective states.

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KDBS, Budget and Planning and KADGIS staff trained in data ingestion, data management and data visualisation technology.

TRANSFERRING TECHNOLOGY TO THE KADUNA STATE BUREAU OF STATISTICS

Accurate data is essential for decision-makers and government actors to plan and execute impactful interventions and programs. The Kaduna State Bureau of Statistics (KDBS) is the coordinating parastatal for all activities relating to the generation and provision of statistical data in Kaduna State. The Bureau oversees the collection, collation, analysis, and interpretation of statistical and management of data, research, and analysis. The Kaduna State Government relies on this data for policy formulation and development planning.

Yusuf Lawan Dauda is the Higher Statistical Officer in charge of geodata processing and analysis in the Geographic Information Systems (GIS) Unit of KDBS. Yusuf is responsible for mapping, analysis, and interpretation of geospatial data which can be used to plan and conduct health campaigns and censuses in the state.

Achieving the mandate of KDBS has come with several challenges for Yusuf and the rest of his team. Many of the geoprocessing operations such as feature selection, analysis, and data conversion have been difficult because the Bureau did not have the required data infrastructure or technical know-how.

Funded by the Bill and Melinda Gates Foundation (BMGF), the GRID[3] project was conceived with the aim of collecting accurate, complete geospatial data relevant to a variety of sectors across 25 states of Nigeria and the Federal Capital Territory (FCT), to provide governments with data needed for evidence-based decision making, policy formulation and program planning. With the data collection phase completed, eHealth Africa began supporting states, beginning with Kaduna State, to store, analyze, and use this data.

In response to the challenges at the Bureau, the Global Geo-Referenced Infrastructure and Demographic Data for Development (GRID[3]) program partnered with eHealth Africa to build the capacity of KDBS to improve data input, data management, and analytic processes through the establishment of geospatial data infrastructure (Gather/Aether). eHA trained personnel at KDBS and other relevant MDAs to develop and integrate the data infrastructure. They were taught how to use modern solutions and tools to analyze, interpret and store large volumes of data.

"Managing and processing our input data has been quite challenging because we do not have some of the technology needed to store and manage such large data. Commitment has been very low because many ministries, departments, and agencies (MDAs) do not fully understand how geospatial data can help them make better decisions."
-Yusuf Lawan Dauda

The transfer of technology has significantly impacted Yusuf's work. During the training sessions, Yusuf learned how to visualize, publish, and monitor large data sets in real time. Using Gather, he can now store and manage existing and incoming data from surveys.

"This was my first experience working with tools like Tableau, Kibana, and Gather. I am happy because they truly make my work more efficient. Using Gather, I can confidently manage our existing data, store incoming data from surveys, and conduct spatial data analysis to yield accurate and relevant information that the state can use to make decisions."
-Yusuf Lawan Dauda

Through this technology transfer, the GRID[3] project has not just empowered Yusuf and his team at KDBS with invaluable skills, but has also repositioned the Bureau to better contribute to the development of Kaduna State and its citizens.

Kano Connect

Kano Connect is an initiative designed to build the capacity of the Kano State Primary Health Care Management Board (KSPHCMB) to select, integrate, implement, and sustainably manage the Kano Connect mHealth platform to support improved health delivery and outcomes for Routine Immunization services.

The Kano Connect platform features a calendar that provides information about all events that take place within Kano state's health system. A number of meetings, events and activities take place across the KSPHCMB, that often require participation from the same personnel. This quarter, the Kano Connect calendar feature was upgraded to enhance the planning, coordination and participation of staff in these activities. The new online calendar can send out automatic email notifications to technical working groups and participants.

A user acceptance test was conducted among members of the State Emergency Routine Immunization Coordination Committee (SERICC) to identify issues and fix before implementation.

MEDSINC Pilot Study

The MEDSINC pilot study began with empowering frontline Community Health Workers (CHWs) with a mHealth tool designed to improve their skills in providing accurate clinical assessments. The main objective of the pilot study was to prove the use of MEDSINC as a cost effective capacity building and learning tool in low resource settings.

Using the Integrated Management of Childhood Illnesses (IMCI) guideline, eHealth Africa and THINKMD developed a 20-point IMCI observational checklist that was used for a three stage data collection process over a 2-month period among 28 CHWs in five metropolitan LGAs.

The outcomes of this implementation/pilot period includes an increase in the skills and capacity of the CHWs, a high level of user (CHWs) acceptability of the MEDSINC platform as a learning tool, and retention of the skills acquired post implementation.

"MEDSINC serves as a reminder to easily forgotten but very important questions in diagnosis of childhood illness"

-Ibrahim Ibrahim
Community Health Worker (CHW), Kawaji PHC

2,239 children assessed over a 2-month period

26% increase in the ability of CHWs to accurately diagnose sick children.

81% of CHWs accepted the MEDSINC platform as a learning tool

Vaccinator Tracking System (VTS)

This quarter, eHealth Africa continued to support the Federal Government of Nigeria and other immunization partners eradicate Poliomyelitis and achieve the polio-free certification.

This quarter, 20+ cases of circulating vaccine-derived poliovirus (cVDVP) were isolated from environmental sample sites, Acute Flaccid Paralysis (AFP) cases, healthy children and contacts in 3 states: Jigawa, Sokoto and Yobe states.

To address this, the National Emergency Operation Center (NEOC) planned and conducted two small- scale campaign activities: a mini-Immunization Plus Days (IPDs) exercise in Borno as well as an Outbreak Response (OBR) in the states affected by the isolation of the cVDVP cases.

eHA supported these activities through the VTS project by tracking vaccinators' activities and coverage in the selected states.

11 LGAs tracked during Borno Mini-IPDs

47 LGAs tracked in 5 states: Borno, JIgawa, Katsina, Sokoto and Yobe

Vaccine Direct Delivery

The rainy season is at its peak in the months of July to September and so, this quarter, the focus was on ensuring that effective delivery operations were maintained, irrespective of the river overflows, waterlogged roads and broken bridges that arose due to the heavy rains.

eHealth Africa health delivery officers, cold chain officers at the local governments and Routine Immunization providers at the facilities had to develop alternative means of overcoming the challenges above.

> "
> Very perfect! If the state government can maintain the VDD project, there won't be any more cases of vaccine stock out.
>
> **Shehu Ahmad Tambuwal**
> **Sokoto State Immunization Officer**

The effective delivery operations in Sokoto resulted in the addition of 38 health facilities, making a total of 227 health facilities served by the Vaccine Direct Delivery project. eHA also delivers vaccines and dry commodities once a month, to the 23 Local Government cold stores in Sokoto state.

1.8M+ Antigens delivered

38 additional health facilities in Sokoto state served by the Vaccine Direct Delivery Project.

Laboratory & Diagnostic Systems

This quarter, eHealth Africa completed the clinical of HemeChip which we have been conducting in collaboration with University of Nebraska Medical Centre, Case Western Reserve University, and HemexHealth, since October 2017.

The HemeChip device will allow for Sickle Cell to be diagnosed in children as early as 6 weeks old rather than at 6 months, as with current screening devices.

The results of the clinical trial proved HemeChip to be accurate in 97.2% of subjects tested. The device was also found to be 100% sensitive and over 96% specific for all hemoglobin variants. Sensitivity is the ability of a device to accurately identify those with a disease while specificity is the device's ability to correctly identify those without the disease.

Topline results of the Clinical Trial

97.2% overall accuracy for all subjects tested.

100% sensitivity for all hemoglobin variants tested.

96.4% for HbSS vs. HbAA (96.4% of the time, HemeChip correctly identified subjects with the AA genotype as negative for sickle cell anemia)

98.2% for HbSS vs. HbAS (98.2% of the time, HemeChip correctly identified subjects with the AS genotype as negative for sickle cell anemia)

100% for HbSC vs. HbAS (In ALL cases, HemeChip correctly identified subjects with the AS genotype as negative for sickle cell)

100% for HbAS vs. HbAA (In ALL cases, HemeChip classified subjects with the AA genotype as not having the Sickle cell trait)

eHealth Africa is still supporting operations at the Sokoto Meningitis lab which serves as a first point of testing for meningitis in Kebbi, Sokoto and Zamfara States.

SETTING STANDARDS IN ACCURATE LABORATORY DIAGNOSIS OF CEREBROSPINAL MENINGITIS

In Nigeria and other sub-Saharan African countries, Cerebrospinal Meningitis (CSM) is still a major public health concern. The disease is highly fatal and about 5% to 10% of patients die 24-48 hours after the onset of the symptoms. Several bacteria can cause meningitis but *Neisseria meningitidis* is the pathogen with the potential to cause large epidemics. Laboratory diagnosis and testing are of paramount importance to identify which of the six strains of *Neisseria meningitidis* is responsible for the infection before treatment can commence.

Previously, cases of CSM were treated with broad-spectrum antibiotics, without proper laboratory investigation to direct the course of treatment. This poor practice can be linked to the mutation of the *Neisseria meningitidis* strain A to *Neisseria meningitidis* strain C in recent years, which has led to outbreaks of CSM. For Dr. Amina Ali Yusuf, a house officer with the Pediatric Medical Ward at Specialist Hospital, Sokoto, care and treatment of patients with CSM has been a very disheartening and challenging process.

"Prior to now, we lacked the specialized skill set and equipment needed for diagnosing CSM. Many patients would die despite prolonged treatment because we were treating one thing while the patient was suffering from something else.
-Dr Aminatu
House Officer, Pediatric Medical Ward

In 2016, Nigeria was hit by an outbreak of Cerebrospinal Meningitis. The first case was reported in Zamfara in December 2016. By June 2016, there had been a total of 14,518 cases and 1,166 deaths across 25 states.

The Sokoto-Kebbi-Zamfara tristate area was the worst hit by this outbreak, accounting for over 89% of the cases.
In response to the outbreak, eHealth Africa in collaboration with the International Foundation Against Infectious Diseases in Nigeria (IFAIN) and the Sokoto State Ministry of Health (SMoH) deployed the Sokoto Meningitis Laboratory to handle the testing of cerebrospinal fluid (CSF) samples collected from patients with suspected cases of CSM in this tristate area. eHA constructed the lab and currently manages the facility and coordinates lab operations and sample transportation from health facilities across local government areas in the Sokoto metropolis. IFAIN provides the reagents, technical support and laboratory machines including the Bactec 9050 for blood culture, while the SMoH provides the Medical Lab Scientists and Technicians. Some testing kits—Pastorex and lumbar puncture (LP) kits—are also provided to the lab by the World Health Organization via the SMoH.

"This lab is unlike anything we have ever ever had in this region and efforts have to be put in place from the Sokoto State Ministry of Health in order to ensure our people maximum such a rare opportunity."
-Dr Aminatu

The establishment of the Sokoto Lab has triggered the State Ministry of Health to build the capacity of medical officers across the state on proper techniques of sample collection including lumbar puncture, aseptic blood collection, and media inoculation techniques. In addition, periodic sensitization activities are conducted to ensure that medical officers inculcate the habit of disease investigation before administering appropriate treatment.

Since its inception, the Sokoto Lab has tested nearly 1000 CSF and blood samples taken from patients with symptoms of Meningitis and 93 have been confirmed positive.

"Who knew that such a variety of pathogens existed in Sokoto? Thanks to the Sokoto Meningitis Lab, we are able to correctly isolate the causative agent behind any meningitis infection. This has also helped us to tailor courses of treatment to the specific microorganism. Hopefully, this will translate to lesser cases of CSM."
-Dr Aminatu

The Sokoto Lab also contributes to progress towards halting the spread of antibiotic-resistant pathogens by isolating and detecting other disease-causing organisms apart from Neisseria meningitidis. Now more than ever, citizens of Kebbi, Sokoto and Zamfara states can be assured of quality and effective laboratory diagnosis before treatment.

Nutrition & Food Security Systems

" *We can use it (CornBot) to identify, prevent and control FAW or call for help from government or organizations and this can help us control this pest"*

Muntari Gwarzo
Farmer, Dawakin Kudu LGA, Kano state.

eHealth Africa supports vulnerable communities to build resilience and increase their access to nutritious foods through our Nutrition & Food security program.

This quarter, eHA collaborated with the Bullitt Enviromental Fellow at Washington State University (WSU) to develop and test the CornBot application and dashboard in response to Fall Armyworm (FAW), a major pest of maize and 85 other plant species.

The Fall ArmyWorm destroys crops leading to losses of almost US $5billion globally. These losses could cause 300 million people to go hungry.

CornBot is a mobile application equipped with audio-visual algorithms that help farmers to identify, detect, manage, and control FAW on their farms and in their local languages. The app also provides handy information to enable them to request help from a specialist when needed. By showing CornBot-reported FAW cases as a heatmap, the CornBot dashboard provides real-time information to researchers, decision makers and other stakeholders for surveillance purposes and informed decision making. The Cornbot prototype was tested to assess its usability and effectiveness among small-holder farmers, and has shown positive results as all farmer groups were able to identify FAW on their first attempt, using the app.

100%
farmers reported ease of use of the Cornbot app

100%
of farmers identified FAW at first attempt

Helping Local Farmers Combat Fall Armyworm with CornBot

Food insecurity is a major challenge in Africa. Food production is limited by several factors ranging from environmental causes like desert encroachment and flooding to conflict and the invasion of farm pests. One thing is certain, if urgent steps are not taken, Africa may be plunged into famine and severe malnutrition.

Fall Armyworm (FAW) is a major farm pest capable of destroying 85 plant species including maize, sorghum, and tomato. Projections show that if FAW is not checked, sub- Saharan Africa could lose up to $13 billion worth of food, keeping 300 million people hungry.
Fall Armyworm (FAW) was discovered in Nigeria in 2016 and has currently been reported in 22 states.

For smallholder farmers like Muntari Gwarzo of Dawakin Kudu Local Government Area (LGA), who rely on intercropping and crop rotation to maximize food output, FAW is a very real threat. Unfortunately, Muntari Gwazo and his fellow farmers do not have the required skills or knowledge to control or eliminate the pest from their farms.

eHealth Africa has joined the global effort to curtail the spread of FAW and the resultant destruction of crops. In partnership with the Bulitt Enviromental Fellow at Washington State University, eHA created "CornBot" as an entry for the FAW Tech Prize competition instituted by the United States Agency for International Development (USAID), Nesta UK, Feed the Future Foundation and the Center for Agriculture and Biosciences International (CABI), to reward initiatives that provide the best tech-based solution to FAW. CornBot is a mobile application equipped with audio-visual algorithms that help farmers to identify, detect, prevent, manage, and control FAW on their farms and in their local languages

"The worms attack the leaves and seeds of the maize plant. I see them during planting and after harvesting my maize. When I open the cob, I find that they have eaten through the cob and buried themselves under the seed. They also eat the leaves.

-Muntari Gwazo
Dawakin Kudu LGA Farmer

The application also provides handy information to enable them request specialist help where needed. CornBot also has a dashboard that provides real-time information and a heat map for CornBot-reported FAW diagnosis and detection to researchers, decision makers, and other stakeholders for surveillance purposes and informed decision making.
eHealth Africa tested CornBot among 44 local farmers in Dawakin Kudu LGA of Kano state, where FAW is prevalent. Farmers were taught to use and interact with the app and National Youth Service Corps (NYSC) members were trained to support the farmers who needed assistance.
The app was well-received by the farmers and the results have been positive. The most distinguishing feature for Muntari was that the app could communicate in his local language, Hausa.

"When the eHealth Africa team presented the application to us, I was very happy that it could communicate in Hausa. It makes it easier for me to understand and follow the instructions. The app shows you a picture so even if you have never seen the worm, you will know what to look for."

The results of the testing showed that 100% of the farmers were able to identify FAW on the first attempt. Muntari and his colleagues look forward to using the app.

'We hope the tool will be given to us permanently. It has already helped many of us to identify, prevent, and control this pest or call for help from the government or other organizations. We can also use the knowledge we have gained from the application to assist our fellow farmers"

Improving food production outputs is essential to alleviate food insecurity, hunger, and poverty globally. Muntari's story validates Cornbot as a giant step towards achieving this goal.

Public Health Emergency Management Systems

Emergency Operations Centers (EOCs)

This quarter, the Kano State Emergency Operations Center played host to the Honorable Commissioner of the Ministry of Health, Dr. Ibrahim Getso, who shared updates on the Ministry's activities during a press engagement. One key activity highlighted during the engagement was the pivotal role the Kano Polio Emergency and Operations Center plays in providing a platform where partners converge to support the state in incident and disease Management.

" With the EOC in place, there is no doubt that Kano State will continue to maintain its polio free-status and ensure eventual eradication from Nigeria at large

Dr Imam Wada Bello
Incident Manager, Kano EOC

The Polio Emergency Operations Center programs have strengthened the capacity of the state to effectively prepare and respond to polio and other public health emergencies that may occur within the state. The data-driven approach adopted by the Kano EOC data team also provides an innovative way of tracking polio-related incidents in Kano state.

Polio tracking in Borno

eHealth Africa continues to support the Borno State Primary Health Care Development Agency (BSPHCDA) in its efforts to eradicate polio from the state by ensuring that every eligible child is vaccinated, despite the insurgency that has troubled the North East. This is in tandem with the efforts to eradicate the virus from Nigeria, the African continent, and the world at large.

In order to achieve herd immunity, eHA supports BSPHCDA to ensure that every eligible child in Borno State is vaccinated. eHA uses satellites images and other forms of geospatial data collection to gather information on settlements, health facilities, and other points of interest which are then used to develop base maps that guide vaccination campaigns.

This quarter, eHA focused on supporting the state's efforts to generate population estimates in order to aid logistics planning for vaccination campaigns. This was accomplished in partnership with other organizations such as the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), International Organization for Migration (IOM), World Food Programme (WFP), U.S. Centers for Disease Control and Prevention (CDC), and Solina Health, under the auspices of the Borno State Polio Emergency Operation Center (EOC).

1.4M+
children in accessible areas vaccinated

28,421
children in security-challenged areas vaccinated with the oral polio vaccine

Infrastructure

Renovations and Constructions

Last quarter, eHealth Africa constructed state of the art conference rooms at the zonal offices of the National Primary Healthcare Development Agency (NPHCDA).

eHealth Africa, funded by the Bill and Melinda Gates Foundation (BMGF), renovated and upgraded the administrative block of the three NPHCDA zonal offices.

The insufficient amount of workspaces is a perennial problem that has plagued the agency and hindered staff from delivering on tasks.

eHA also installed solar panels to combat the issue of power outages. Solar panels are an effective source of electricity that will not be financially burdensome on the agency in the long run. This initiative not only creates a good working environment but also ensures that the NPHCDA is better positioned to achieve its mandate.

120 solar panels installed in the three NPHCDA zonal offices

3 Administrative blocks renovated in three NPHCDA zonal offices

World Food Programme & Logistics Sector, Nigeria Warehouses

eHealth Africa has continued to manage three warehouse locations for the World Food Programme (WFP). This has contributed to the delivery of food aid to vulnerable populations in Northeast Nigeria.

Predicting difficulties in transporting food to remote parts of Borno, WFP put extra storage space in place at the Ngala warehouse and prepositioned food to support communities in those locations through the lean season. eHA managed the prepositioning process and took quick action by constructing the required structures for additional storage space.

The advent of the rainy season resulted in the deterioration of the untarred roads leading to remote parts of Borno State, making navigation difficult for the trucks taking food supplies.

To overcome this challenge, food supplies had to be transported using lighter and more powerful trucks. Lighter commodities, such as supplements for children, and pregnant and lactating mothers, were airlifted to the locations.

2,300 tons of food and non-food items (NFIs) handled by Borno Common Storage facilities

54,000 tons of food and non-food items handled by Kano Warehouses

Our Solutions

Geographic Information Systems (GIS)

This quarter, eHA's GIS team developed and deployed a Missed Settlement Tracking and Analysis (MISTA) tool to solve the lingering challenge of missed settlements and to aid the Borno Emergency Operation Center (BEOC) team track visitation status for settlements that were planned for as well as settlements missed on a daily basis. This will enable BEOC to track the visitation status of settlements on a daily basis and address any missed settlement immediately without waiting for a vaccination campaign activity.

In addition, the GIS team supported the Acute Flaccid Paralysis (AFP) Surveillance working group to aggregate data from various partners on areas with AFP surveillance informants. The collated data was represented visually using a heat map to aid planning, coordination and monitoring of AFP surveillance activities and investigations.
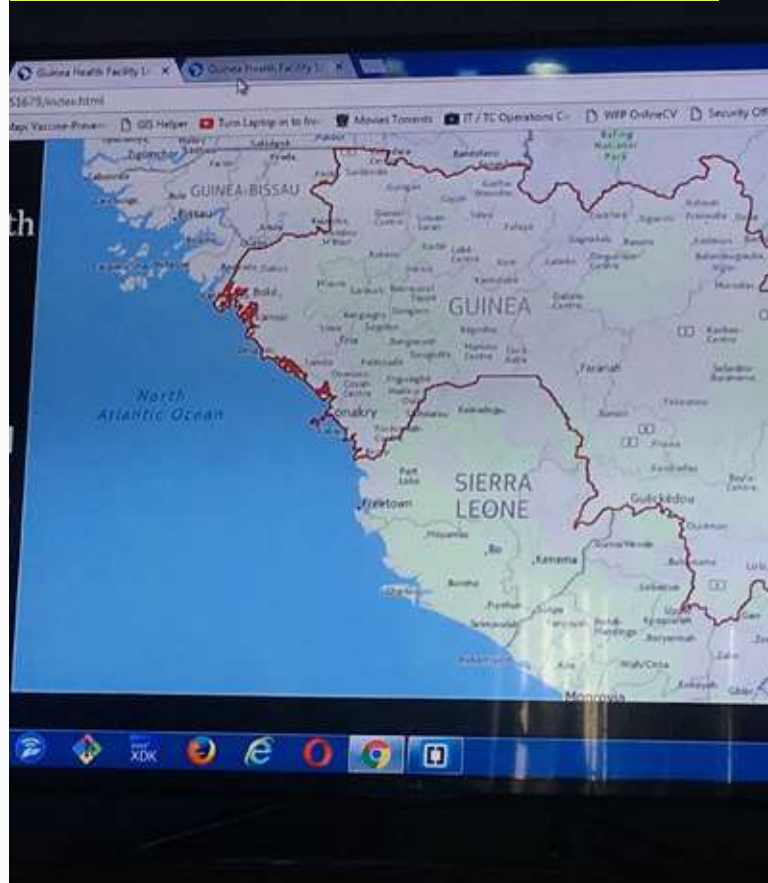
"The MISTA tool has helped in tracking missed settlements on a daily basis and allows the LGA teams to immediately address them before the end of the campaign."

- Borno EOC team

> *We are glad that the recent efforts have seen over 90% of AFP surveillance locations identified and mapping is improving. Good job!*
>
> **Dr. Musa Audu**
> **(WHO State Coordinator, Borno)**

91% Settlement visitation during IPDs in Borno increased from 84%

90% of missed settlements addressed before the end of the campaign

1,280 AFP surveillance community-informant locations completely mapped

7,800 planned settlements visited.

2,359 unique AFP surveillance community-informant locations identified

170 reporting wards mapped

Logistics Management Information System (LoMIS) Suite

LoMIS Suite is a suite of mobile and web applications, LoMIS Stock and LoMIS Deliver, built by eHealth Africa to address logistics and supply chain challenges.

To address the challenges of under-reporting by facilities with poor or non- existent data network, this quarter, eHealth Africa and the Kano State Primary Healthcare Management Board (KSPHCMB) worked with mobile network providers to initiate and develop a USSD reporting medium for LoMIS Stock.
The USSD solution will be piloted among personnel of the Pharmaceutical Unit and will also allow for a scale-up across ministries, departments and agencies as health workers will be able to report on key indicators without needing a smartphone or CUG package.

LoMIS Deliver was developed by eHA to make the process of third party vaccine logistics services more efficient and accurate.

"

Piloting LoMIS Stock to report on drug consumption will go along way to ensure availability of tracer drugs in Kano State

Pharm. Hamisu Abdulazeez
**Director, Pharmaceutical KSPHCMB**

This quarter, the upgraded version of the LoMIS Deliver application, Version 2.0 was launched. The new version has the ability to exclude public holidays, or duplicated entries. In addition, health delivery officers can select and update records from past dates.

50% consistent reporting at health clinics

75% Stock visibility in zonal cold stores across Kano

1,976 successful deliveries with LoMIS Deliver

New on the Scene at eHealth Africa
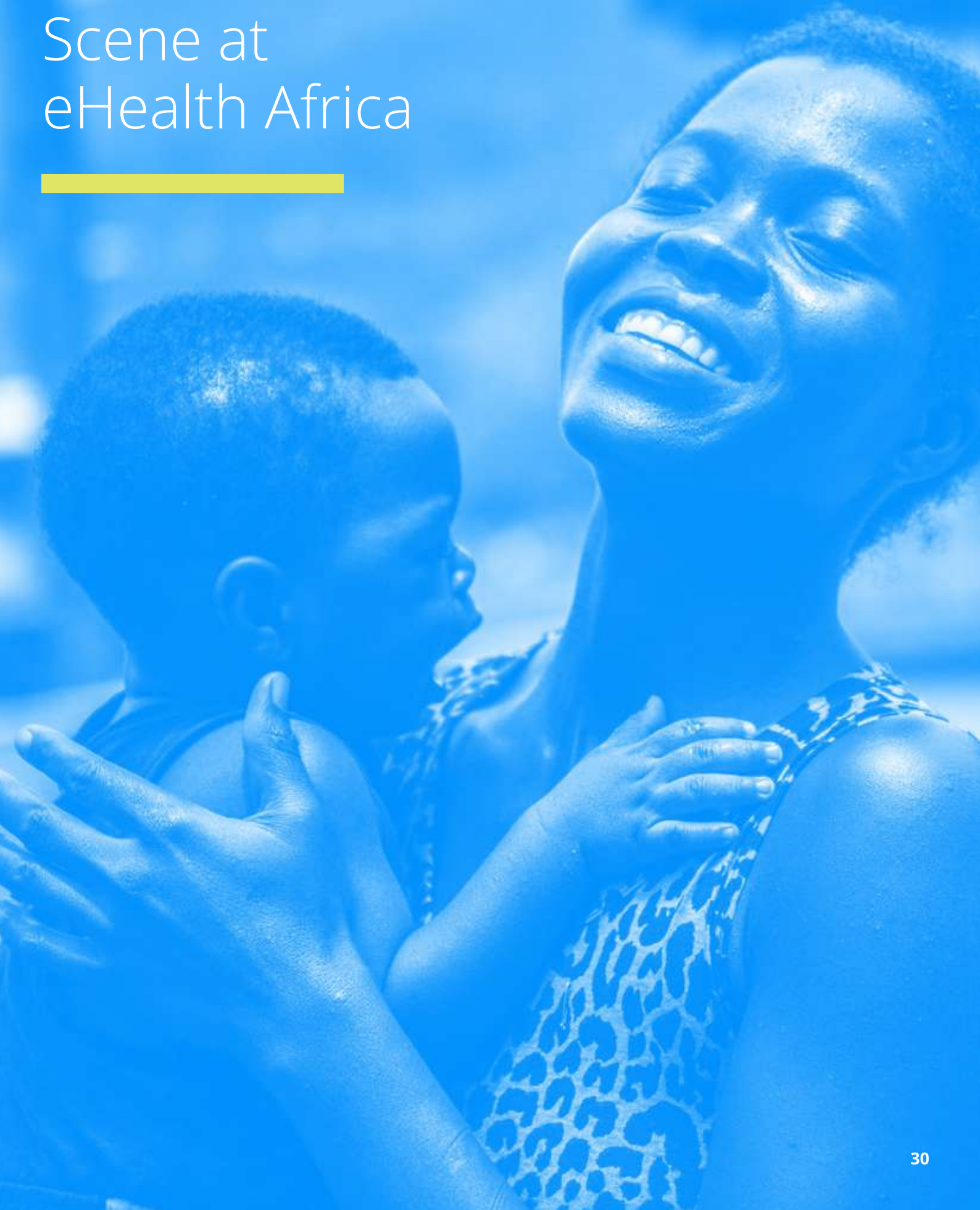
AIDS Impact Survey

The Nigeria AIDS Indicator and Impact Survey (NAIIS) project is a national household survey focused on assessing the prevalence of HIV and Hepatitis B and C in the country. eHealth Africa is supporting Solina Group to design and deploy 'complex' survey questionnaires that will be used to monitor the activities of government deployed field survey teams to ensure that they comply with survey standards. In addition, eHA is providing cloud hosting for this data.

Addis Clinic

Leveraging on our expertise with content management and our existing eLearning platform, Addis Clinic is partnering with eHealth Africa to deliver eLearning services to frontline health workers operating in low resource settings across the globe. The education of these frontline health workers ranges from basic medical training to professional nursing education.

Nigeria Center for Disease Control and Prevention (NCDC) Data Portal

Efficient data retrieval and archiving remains a major issue with most government agencies and parastatals. eHealth Africa is currently supporting the Nigeria Center for Disease Prevention and Control (NCDC) to create a data portal which will serve as a repository for all datasets that are relevant to NCDC's scope of operations. NCDC is a parastatal of the Federal Ministry of Health (FMoH) that provides technical support for detecting, responding, and preventing disease outbreaks in Nigeria.

Innovative Problem Solving at eHealth Africa

Public health interventions rely strongly on the timely availability of accurate medical data. However, the lack of data collection tools able to curate data, the difficulty of the integration of different ehealth solutions, and the scarcity of proper processes for data workflows, privacy and security protection, have slowed down data sharing processes and undermined the sustainability of ehealth solutions.

We decided to solve this problem once for all by creating an innovative set of products: **Aether and Gather.**

Aether

Aether is a reliable and secure development platform for data curation, exchange and publication. Aether facilitates the flow of data between data-producing and data-consuming applications, enhances data security and privacy, and accelerates the transmission of data between organizations. Basically, Aether is a framework of best practices for ehealth systems design.

Gather

Gather is a versatile software tool for data collection. Being built on top of Aether, Gather can also perform data curation tasks and connect with other ehealth solutions for data analysis and visualizations such as Kibana or CKAN.

Our People

Iheanyichukwu Uzoma

The Chief PRINCE2 Ambassador

Iheanyichukwu Uzoma, Associate Manager, Technical Project Management, works with our Geographic Information Systems (GIS) team, and one of his major responsibilities is to provide GIS tracking support and analysis of polio vaccination coverage for settlements in Borno and Yobe State.

Following the organization's decision to adopt Projects in Controlled Environments (PRINCE2) as its official method of delivering successful projects earlier this year, some project managers and departmental leads including Iheanyi were selected to be trained by Phillips Consulting. After the initial training, Executive Management selected a group of individuals as PRINCE2 ambassadors to take forward the adoption of the PRINCE2 methodology across the organization. One of the major objectives of the adoption program was to train additional mid-level employees from the various departments. Iheanyi was unanimously selected to lead the adoption program.

In collaboration with the Human Resources Unit in our Nigeria office, employees were selected from all departments to participate in the PRINCE2 Adoption training. Following the success of the Knowledge Transfer Training, the participants registered for the certification exams. Iheanyi organized, led, and coordinated a training schedule for certification candidates. Finally, from the 12th to 14th of September 2018, 20 eHA staff took the PRINCE2 Foundation, Practitioner and Agile examinations. The examinations were successful and we recorded 93% success rate.

eHA recognizes and appreciates Iheanyi's hard work, passion, and commitment to see his colleagues grow and to ensure that the organization excels in its effort towards successful project management and delivery. In appreciation for his efforts, the PRINCE2 ambassadors have christened him the "Chief PRINCE2 Ambassador".

Our Partners

Addis Clinic	Bayero University, Kano	Bill and Melinda Gates Foundation (BMGF)	Clinton Health Access Initiative (CHAI)
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Emory University	Federal Ministry of Health, Nigeria	Foundation for Innovative New Diagnostics (THINKMD/FIND)
GFA Consulting Group	Intellectual Ventures/Global Good	International Foundation Against Infectious Diseases in Nigeria (IFAIN)	John Snow International (JSI)
Kaduna State Bureau of Statistics	Logistics Cluster	Nigeria Center for Disease Control and Prevention	National Population Commission (NPC)
National Primary Health Care Development Agency	SightSavers International	Solina Group	State Ministries of Health (SMOHs)
State Primary Health Care Management Boards	University of Nebraska Medical Center UNMC)	Washington State University	World Food Programme (WFP)
World Health Organization (WHO)			

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