



End Neglected Tropical Diseases in Africa

END in Africa

Semi Annual Report

April 1, 2016–September 30, 2016

Submitted to:

United States Agency for International Development (USAID)

Submitted by:

FHI 360

For further information, please contact:

Bolivar Pou
Project Director, END in Africa
1825 Connecticut Ave. NW
Washington, DC
20009-5721
Phone: 202.884.8000 ext. 18010
Email: bpou@fhi360.org



Table of Contents

Acronyms and Abbreviations	4
Executive Summary	6
Project Management	10
Project Implementation	10
Issuance and Management of Grants.....	11
Summary of Sub-Grantee Activities by Country.....	11
Burkina Faso.....	11
Cote d’Ivoire	12
Ghana.....	13
Niger	14
Sierra Leone	15
Togo	15
Technical Assistance/Capacity Building	16
Technical Assistance Requests in FY16.....	17
Supply Chain Management.....	19
Financial Management and Capacity Building.....	21
Collaboration and Coordination	28
END in Africa–General	28
Burkina Faso.....	28
Cote d’Ivoire	28
Ghana.....	29
Niger	29
Sierra Leone	29
Togo	30
Monitoring and Evaluation	30
Support to Sub-grantees and MOHs.....	31
Burkina Faso.....	31
Cote d’Ivoire	31
Ghana.....	32

Niger	32
Sierra Leone	33
Togo	33
Data Management and Dissemination	33
Routine Program Monitoring.....	34
Mass Drug Administration	34
Impact Assessment	37
Training	42
M&E Technical Assistance and Capacity Building.....	42
Knowledge Management.....	42
Major Activities for the Next Six Months.....	48
Travel Plans for Fiscal Year 2017	52
Appendix 1: MDA Reporting of Integrated NTD Control	55
Appendix 2: Country Program Summaries.....	58
Burkina Faso.....	58
Cote d'Ivoire	65
Ghana.....	69
Niger	75
Sierra Leone	83
Togo	93

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Acronyms and Abbreviations

ALB	Albendazole
APOC	African Program for Onchocerciasis Control
ASTHM	American Society of Tropical Medicine and Hygiene
CDD	Community Drug Distributor
CDTI	Community-directed Treatments with Ivermectin
CHW	Community Health Worker
DHMT	District Health Management Team
DQA	Data Quality Assessments
DSA	Disease Surveillance Activity
FPSU-L	Filarial Programmes Support Unit-Liverpool
FTS	Filariasis Test Strip
FOG	Fixed Obligation Grant
GHS	Ghana Health Service
HD	Health District
HDI	Health & Development International
HKI	Helen Keller International
HQ	Headquarters
IEC	Information, Education and Communication
LF	Lymphatic Filariasis
M&E	Monitoring and Evaluation
MDA	Mass Drug Administration
MDG	Millennium Development Goals
Mf	Microfilaremia
MOH	Ministry of Health
MSH	Management Sciences for Health
NTD	Neglected Tropical Disease
NTDP	Neglected Tropical Diseases Program
OAA	Office of Agreements and Acquisition
Oncho	Onchocerciasis
ONPPC	The National Office of Pharmaceutical and Chemical Products (ONPPC in French)
Ov16	Onchocerciasis tests
PCT	Preventative Chemotherapy
PHU	Peripheral Health Unit
PNLSGF	National Program for Schistosomiasis, Lymphatic Filariasis and Soil-transmitted Helminthiasis (PNLSGF in French)
PNSOLO	National Program for Eye Disease and Onchocerciasis (PNSOLO in French)
PPME	Policy, Planning, Monitoring and Evaluation
PZQ	Praziquantel
RPRG	Regional Program Review Group on LF
SAC	School-age Children
SAR	Semiannual Report
SCH	Schistosomiasis
SCM	Supply Chain Management
SOP	Standard Operating Procedures

SSP	Strategic Social Partnerships
STH	Soil-transmitted Helminthiasis
STTA	Short-term Technical Assistance
TA	Technical Assistance
TAS	Transmission Assessment Survey
TF	Trachomatous Inflammation Follicular
TIPAC	Tool for Integrated Planning and Costing
USAID	United States Agency for International Development
UWA	Urban Western Area
WA	Western Area
WHO	World Health Organization

Executive Summary

This semi-annual report outlines the progress made during the third and fourth quarters in year six (FY16) of the eight-year Cooperative Agreement No. AID-OAA-A-10-00050, “End Neglected Tropical Diseases in Africa,” or “END in Africa.” The six countries chosen by the United States Agency for International Development (USAID) for the operational portfolio include: Burkina Faso, Niger, Togo, Ghana, Sierra Leone, and Cote d’Ivoire. These countries have remained in the portfolio with no changes during the period under review. During this reporting period, FHI 360 and its partners undertook the activities outlined in the FY16 work plan (October 2015–September 2016).

FHI 360 worked with other partners in the END in Africa consortium to support and monitor the execution of activities of all sub-grantees and Neglected Tropical Disease Control Programs (NTDPs) within the Ministries of Health (MOHs) to ensure all work plan activities were executed according to technical expectations and that USAID policies and regulations were observed. This included making periodical site visits, reviewing the sub-grantees’ monthly progress reports, monitoring project expenditures and cost-share contributions, project coordination, and addressing implementation issues.

FHI 360 continues to support the work of the NTDPs in 6 END in Africa implementing countries toward the elimination of trachoma, lymphatic filariasis (LF) and onchocerciasis (oncho), and the control of schistosomiasis (SCH) and soil transmitted helminthiasis (STH) as public health problems. This goal is facilitated by robust monitoring and evaluation (M&E) systems. FHI 360 also works closely with implementing partners to guide mass drug administration (MDA) activities and ensure that program impact assessments are implemented in accordance with World Health Organization (WHO) guidelines and that sound data are collected and reported to USAID in a timely manner.

The M&E advisor continued to liaise with country programs and other NTD partners to ensure appropriate execution of M&E activities. As a result, all 6 countries have submitted their FY16 SAR2 workbooks. These are currently being reviewed by USAID and RTI International. The outstanding issues with some of the FY13, FY14 and FY15 workbooks have been addressed and the process of getting MOH approval is ongoing. Most of the countries have submitted signed copies of their respective workbooks.

After receiving all workbooks for FY16 SAR 2, the situation is as follows: As of September 2016, a total of 49,295,100 people were treated for at least one NTD and 90,209,282 treatments were provided in the second half of FY16. This is an increase of 69% and 41% over FY15 coverage for people treated and treatments provided, respectively. The cumulative number of people treated for at least one NTD through END in Africa since 2010 is 202,553,398 and the cumulative number of treatments provided is 429,949,541. The sizeable year-over-year and cumulative increases are primarily due to new program implementation in Cote d’Ivoire, which began in FY16.

The following disease surveillance activities (DSAs) were conducted in the 6 countries in FY16, consisting of transmission assessment surveys (TAS) and pre-TAS for LF; epidemiological and entomological surveys for oncho; impact assessment surveys for trachoma; and impact assessment for SCH and STH:

END in Africa SAR: April 1, 2016–September 30, 2016

- *Pre-TAS and TAS for LF:* Burkina Faso conducted Pre-TAS in 7 health districts (HDs) and all are eligible to conduct TAS 1 in FY17. TAS 1 took place in 5 HDs (4 were USAID funded); all 5 will stop MDA as of FY17. TAS 2 surveys in 15 HDs and TAS 3 surveys in 11 HDs started at the end of September 2016. In Cote d'Ivoire a sentinel site survey was conducted in 39 HDs to determine the prevalence of LF in the population. Ghana conducted Pre-TAS in 6 districts and only one out of the 6 districts passed the Pre-TAS. It also conducted TAS in 69 districts (grouped into 28 evaluation units (EUs)), all of which passed. Of these, 5 districts that passed TAS 1 (for stopping MDA) subsequently stopped LF MDA. Niger conducted Pre-TAS in 11 HDs, but the results are not yet available. All 9 HDs in the Zinder and Diffa regions that underwent sentinel site and control site surveys for LF had microfilaraemia (mf) prevalence of less than 1%, indicating they may proceed to TAS 1 in FY17.
- *Trachoma impact surveys:* Ghana's trachoma pre-validation survey was completed and all 18 districts surveyed met the required elimination target of less than 1% trachomatous inflammation follicular (TF) prevalence. In addition, every district except Yendi met the required elimination target of less than 0.1% prevalence of trachomatous trichiasis (TT). Niger's FY15 trachoma impact survey conducted in N'guigmi showed TF prevalence of 11.24% and TT prevalence of 0.58%. Based on the International Trachoma Initiative (ITI) decision-making tree, this HD will need to continue MDA for at least 3 years before conducting a new impact survey.
- *Onchocerciasis epidemiological (epi) & entomological surveys:* Cote d'Ivoire conducted oncho epi surveillance in 4 HDs. Niger conducted onchocerciasis entomological surveys in 4 HDs; epi surveys in the same HDs will begin shortly. None of these HDs have ever required MDA; however, they all received treatment through LF MDA. Togo conducted its epidemiological evaluation in 18 districts. Results for all 3 countries are still pending.
- *SCH/STH impact assessments:* Burkina surveyed 18 out of 19 HDs in which SCH endemicity has declined generally, with just two regions recording prevalence above 10% at sentinel sites. STH prevalence was below 1% at all sites where integrated assessments were conducted. Niger's National SCH and STH Control Program (PNLBG) began conducting sentinel site evaluations for SCH at 17 sites. In Sierra Leone, DSAs for SCH and STH were conducted in 12 and 14 HDs, respectively. The results of the DSAs were used to redefine the FY17 treatment strategy. Prevalence of *Ascaris lumbricoides* and *Trichuris trichiura* infections in 2016 was 4.4% and 0.7%, respectively, compared with 4.6% and 2.1% at baseline in 2008/9. Overall prevalence of hookworm infections was 14.9%, compared to overall prevalence of 35.7% in 2008/9.

In this reporting period, 136,584 people were trained to conduct and/or supervise MDAs, or to perform M&E-related activities. Training sessions were cascaded and organized mainly around MDA or DSA activities. All countries disaggregated trainee data by gender. Available data shows that about 25% of the trainees were female.

Over the past six months, END in Africa conducted the following main MDA activities:

- Burkina Faso—The NTDP conducted 4 MDAs: LF MDA in 26 HDs; the first round of SCH MDA in 59 HDs; STH MDA in 64 HDs (integrated with either SCH or LF MDA); Trachoma MDA in 19 HDs; and the first round of Oncho MDA in 4 HDs (with USAID Funds; this is in addition to the 2 HDs supported by Sightsavers).
- Cote d'Ivoire—The NTDP conducted two MDAs, both funded by USAID: An LF-Oncho MDA in

May 2016 in 41 HDs and an STH MDA conducted that same month in 16 HDs. This represents 90.82% programmatic and 71.88% therapeutic coverage.

- Ghana—In June and July 2016, the NTD Control Program conducted an integrated LF-Oncho-STH community-based MDA in 105 districts. The school-based treatment for SCH-STH in 216 districts is currently ongoing.
- Niger—The NTDP treated people for LF in 23 HDs; SCH in 14 HDs; STH in 28 HDs; and trachoma in 9 HDs. In addition to the support from END in Africa, The Carter Center provided approximately 150,000 tubes of tetracycline eye ointment 1% (TEO) to treat children ages 0–6 months for trachoma.
- Sierra Leone—Helen Keller International (HKI) supported the NTDP in conducting an LF-STH MDA campaign in Western Area (WA) in May 2016 and an integrated LF-Oncho-STH MDA in 12 HDs in May–July 2016. End process independent monitoring for the integrated MDA showed that 86% of eligible persons in the 12 HDs consumed the drugs.
- Togo—The NTDP conducted a nationwide integrated MDA to treat STH, SCH, and onchocerciasis in May–June 2016.

A number of supply chain management (SCM) activities took place over the course of this reporting period to strengthen and institutionalize supply chain and drug management systems and accountability, which are essential for successful MDAs. The key SCM events during this period were as follows:

- END in Africa implementing partners worked with respective program countries to complete forecasting of the Praziquantel (PZQ) needs for FY17. Procurement of PZQ for FY17 is based on the numbers obtained through this process. The procurement process was finalized in May 2016 and drug deliveries are scheduled for FY17 Q1 and Q2.
- Management Sciences for Health (MSH), under the USAID-funded Systems for Improved Access to Pharmaceuticals and Services (SIAPS) project, conducted a week-long workshop on supply chain management and NTD drug distribution. The workshop was held on August 28–September 2, 2016 in Cotonou, Benin. This training was designed for four Francophone West African countries – Niger, Benin, Côte d’Ivoire, and Cameroon.
- With USAID’s facilitation, Cote d’Ivoire END in Africa program received donated PZQ drugs from WHO/Burundi in FY16 Q3.

In the financial management (FM) and capacity building (CB) component, Deloitte continued to strengthen the long-term capacity of NTD Programs in the 6 END in Africa countries. Deloitte worked with country teams to enable stronger strategic planning for NTD programming. Special emphasis was placed on considering the financial needs for program execution and effective uses of financial and program data for evidence-based decision-making.

This work has included providing guidance on implementing the Tool for Integrated Planning and Costing (TIPAC), collaborating on financial sustainability planning, reinforcing the NTDPs’ capabilities in developing, managing and implementing the FOG funding mechanism, and improving financial management systems in the END in Africa countries. The specific activities Deloitte has been engaged in include:

- Expanding the platform for managing Fixed Obligation Grants (FOGs):
 - *Ghana*: Between April and September 2016, END in Africa continued to provide feedback on the proposed Public Financial Management Standard Operating

Procedures (SOPs) drafted by Ghana Health Service (GHS). This activity is ongoing with the plan to assist the GHS/NTD Finance team to disseminate the SOPs in 2017.

- NTDP Master Plan completion and budgeting:
 - *Sierra Leone, Ghana, and Togo*: END in Africa supported NTDP Master Plan budgeting to maximize the efficient use of available resources for greater public health impact in NTD programming, including the review of associated technical assistance (TA) plans.
 - *Togo*: Deloitte held a country workshop in June 2016 to identify inputs and parameters for the future Togo Finance Strategy through discussions on the maturity model results and TIPAC data, followed by two days of meetings with NTDP leadership. The draft Finance Strategy is a work in progress and will be finalized in FY17.
- TIPAC implementation and data use for policy and program decision-making:
 - END in Africa analysed the TIPAC data for each of the six program countries and created PowerPoint decks tailored to the presentation and advocacy needs of each country, summarizing findings for each respective NTDP. The PowerPoint decks were finalized and submitted to the country teams in FY16 Q4.
 - The Niger TIPAC was updated at a workshop held in April 2016.
 - The Togo sustainability workshop on using TIPAC data output for decision-making took place June 6–10, 2016.

In the next six months, FHI 360 and its partner, Deloitte, will continue to implement END in Africa project activities as outlined in the FY17 annual work plan. The two entities will support Helen Keller International (HKI) and Health & Development International (HDI) in the implementation of activities in each of their respective countries, including MDAs and second tier sub-agreements. Lastly, FHI 360 will continue to ensure that sub-grantees and partners remain compliant with all approved sub-agreements regarding financial reporting and project implementation.

Project Management

During the period under review, FHI 360 executed various activities to ensure continued progress toward the goals outlined in the FY16 END in Africa work plan. This section outlines some of the key activities related to project management.

- Weekly conference calls and/or meetings have been held between the USAID NTD team and the END in Africa team to exchange information, consult on various issues, and keep all stakeholders up-to-date on project implementation.
- The END in Africa team submitted the respective FY17 country workplans to USAID for review and approval and four of six were approved in September 2016. The pending two approvals are anticipated at the beginning of FY17.
- The END in Africa FY17 work plan was submitted to USAID in September 2016 and approved the same month.
- The END in Africa project team conducted routine monitoring and planning visits in Burkina (April 4 – 9, 2016), Niger (April 9 – 15, 2016) and Togo (April 24 – 29, 2016):
 - Burkina Faso – Meetings with the USAID representative in Burkina Faso, HKI Burkina Faso team, courtesy visit to the General Secretary of the MOH, the Director of Disease Control and the Director General of Health, field visit in the Center-East region to observe NTD activities, and meeting with the MOH NTD program to discuss progress of FY16 project implementation and challenges.
 - Niger – Meetings with HKI staff, NTDP representatives, management of the central medical store to discuss how to avoid expiration of NTD drugs, and field visit in the outskirts of Niamey to observe transmission assessment survey.
 - Togo – Field visit to Atakpamé to observe integrated NTD training for the Plateaux region and meetings with HDI staff and NTDP representatives. The Togo NTDP recently submitted a dossier for verification of LF elimination to the World Health Organization (WHO).
- The END in Africa project team developed a PowerPoint presentation on the new WHO guidelines for onchocerciasis elimination, translated the presentation into French, and presented the guidelines during work planning sessions to develop FY17 work plans and budgets.
- The END in Africa project team facilitated in-country logistics for the USAID project evaluation team, including setting up meetings with key NTDP stakeholders in the select program countries (Ghana and Burkina Faso).
- The END in Africa team facilitated FY17 in-country work planning sessions in five of the six program countries – June (Sierra Leone, Burkina, Niger) and July (Ghana, Cote d’Ivoire) 2016. The Togo NTDP changed the scheduled date one week before the session to a new date which coincided with the Ghana session. Hence, FHI 360 was not able to participate in the Togo session.

Project Implementation

This section details the major accomplishments in project implementation in the past six months. It highlights activities related to the issuance and management of grants, summaries of sub-grantees, technical assistance/capacity building, collaboration and coordination, and M&E activities in each country.

END in Africa SAR: April 1, 2016–September 30, 2016

Issuance and Management of Grants

During the period under review, the FHI 360-led team executed the following activities in support of sub-grantees and MOHs:

- Monitored all sub-agreements to ensure compliance with USAID reporting, spending and cost-share requirements and regulations.
- Processed sub-grantee monthly financial reports and accruals.
- Reviewed budgets and FOGs submitted by sub-grantees. There are 39 FOGs to be issued in FY17 – 13 first-tier FOGs (in Ghana and Cote d’Ivoire) and 26 second-tier FOGs (in Niger, Burkina Faso, Sierra Leone, and Togo). The table below lists each country’s estimated FY17 cumulative FOG totals:

Country	Number of FOGs	Total (USD)
Ghana	6	\$2,008,302
Togo	3	\$690,525
Sierra Leone	3	\$1,044,143
Niger	12	\$1,479,828
Burkina Faso	8*	\$1,088,702
Cote d’Ivoire	7	\$2,194,124

**Burkina might issue additional FY17 FOGs depending on districts that pass/fail the trachoma impact assessment to inform need for FY17 MDA. All 19 districts currently undergoing Trachoma MDA are near the cutoff point where MDA will no longer be required (TF<5% among children 1-9 years).*

Ghana and Cote d’Ivoire FOGs are FHI 360 first-tier sub-awards and require approval from the Agreement Officer Representative; second-tier sub-awards for Togo, Niger, Burkina Faso, and Sierra Leone are reviewed and approved by FHI 360.

Summary of Sub-Grantee Activities by Country

Competitively selected sub-grantees are currently supporting the NTDPs/MOHs of the six END in Africa countries: HKI in Burkina Faso, Niger and Sierra Leone; HDI in Togo; and FHI 360 in Ghana and Cote d’Ivoire.

Burkina Faso

After an initial half-year characterized by low activity completion rates due to delays in FY16 FOG approvals and problems associated with drug purchases, among other reasons, activity levels increased during the second half of the year. These focused primarily on MDA, M&E activities, and technical assistance.

- Four MDA campaigns were conducted for the 5 PCT NTDs. The second round of the SCH MDA campaign in the Centre-Est region and of the LF/oncho MDA campaign in the Sud-Ouest region is planned for November 2016. This will become the first round of MDA for these regions under the FY17 work plan.
- Pre-TAS in 14 sentinel sites in 7 HDs (Manga, Po, Sapone, Kombissiri and the rural areas of the HDs of Boulmiougou, Signoghin, and Nongre-Massom) took place in June 2016 with USAID support. All of these HDs are eligible to conduct TAS 1 in FY17.
- TAS 1 took place in 5 HDs (Zabré, Dédougou, Boromo, Sapouy, and Léo) in August 2016. All 5 HDs will stop MDA as of FY17. END in Africa supported 4 of the 5 HDs.

- TAS 2 surveys in 4 evaluation units (EUs) comprising a total of 15 HDs and TAS 3 surveys in 4 EUs (representing 11 HDs) started at the end of September 2016.
- NTDP conducted integrated sentinel site surveys for SCH and STH in 18 out of 19 planned HDs in June–July 2016 (the last survey is planned for October 2016). SCH endemicity declined generally, with just two regions (Centre-Nord and Est) recording prevalence above 10% at the sentinel sites. STH prevalence was below 1% at all sites where integrated assessments were conducted.
- Training for health system personnel took place prior to MDA implementation—56 regional health directorate members, 229 HD management team members, 1,593 head nurses, and 28,999 community drug distributors (CDDs) were trained.
- Data quality assessment (DQA) training for 47 regional and HD staff took place in 2 sessions: August 31–September 3, 2016 in Bobo Dioulasso and September 5–8, 2016 in Tenkodogo.
- Workbook assistance was provided by the FHI 360 M&E advisor for the END in Africa project team on April 29–May 4, 2016.
- Technical assistance was provided by HKI’s senior scientific advisor to the national NTDP team on using the Filariasis Test Strip (FTS) for TAS 1 in two EUs on June 23, 2016 in Ouagadougou.
- Workshops were held in Koudougou on June 27–29, 2016 and August 22–26, 2016, to develop and validate the first draft of the 2016–2020 NTD Strategic Plan.
- The FY17 END in Africa project work plan development workshop was held on May 16–20, 2016 in Kombissiri; the work plan was validated on June 21–23, 2016 in Ouagadougou.
- The oncho elimination sub-committee met from April 21–22, 2016 in Ouagadougou, with support from Sightsavers. Participants assessed the 2011–2015 community-directed treatments with ivermectin (CDTI) and the surveillance activities in the Cascades region. They also validated the impact evaluation protocol and drafted recommendations and suggestions.
- The NTD control technical committee met on August 3–4, 2016 in Ouagadougou (with funding from END in Africa and the World Bank) and identified several areas for improving efforts against LF and SCH.

Further details on activities in Burkina Faso are noted in Appendix 2.

Cote d’Ivoire

- Cascade training of health professionals at all levels of the health pyramid (central, regional, district, and community) on conducting MDAs was held in Agboville, Yamoussoukro, Daloa, and Daoukro on May 3–17, 2016.
- Integrated LF-Oncho-STH MDA was conducted on May 20–24, 2016 in 41 HDs, with program coverage of 90.82% and therapeutic coverage of 71.88%.
- The FY17 END in Africa project work plan was developed and validated during a work planning session on July 18–22, 2016 in Abidjan.
- A workshop to validate MDA data with regional health advisors was held on July 18–22, 2016 in Yamoussoukro.
- Sensitization and social mobilization activities for LF-Oncho-STH MDA and SCH MDA took place on May 10–25, 2016. These included engaging 41 local radio stations, distributing

28,143 T-shirts, duplicating and hanging 2,063 posters in the targeted HDs, and producing and distributing 28,143 flyers in the communities.

- An MDA kick-off ceremony took place in Tiebissou on May 20, 2016. This was a high profile event attended by the MSHP (the Director General for Health), three representatives from USAID/Cote d'Ivoire, religious leaders, local leaders, and local health and Ministry of Education representatives.
- During this semester, the following capacity building sessions were conducted for NTDP staff: Integrated NTD Database (BDIM) training for data managers in Agboville, March 21–25, 2016; data quality assessment (DQA) training for heads of health service was conducted in Yamoussoukro August 8 – 14; TIPAC training in Yamoussoukro, February 22–26, 2016; and Directorate General for Health staff were trained on supervision of MDAs in Agboville on February 1–3, 2016.
- An MDA data quality assessment was conducted on August 15–21, 2016 in four districts, following a training session on performing data quality audits in Yamoussoukro on August 8–14, 2016.

Further details on activities in Cote d'Ivoire are noted in Appendix 2.

Ghana

- A one-day Oncho Review Meeting was held on July 7, 2016 as part of the FY17 work planning meeting in Accra. The purpose of the meeting was to present and review proposals to conduct a comprehensive epidemiological and entomological assessment using the tools (Ov-16, Pool screen and skin snip) described in the new WHO guidelines to guide activities as the program moves towards elimination.
- All 18 districts surveyed for trachoma pre-validation in the first half of FY16 met the required elimination target of less than 5% trachomatous inflammation follicular (TF) prevalence, and all districts except Yendi met the required elimination target of less than 0.1% prevalence of trachomatous trichiasis (TT).
- The NTDP conducted TAS in 69 districts grouped into 28 evaluation units (EUs) in April–July 2016. All 28 EUs passed the TAS, including 5 districts where TAS 1 for stopping MDA was conducted; hence, these 5 stopped LF MDA.
- The NTDP conducted integrated, community-based LF-oncho-STH MDA in 105 districts in June and July 2016. Treatment for SCH-STH is currently ongoing in 216 districts.
- Key social mobilization activities implemented over the period included production and procurement of 13,000 branded polo shirts for CDDs in 105 districts and production of 20 large billboards to be mounted in all 10 regions (2 in each region) of the country to improve the visibility of NTDs and program interventions.
- END in Africa conducted a 2-day training for the Strategic Social Partnership (SSP) unit of the Ghana Health Service (GHS) to provide foundational knowledge on how to initiate, secure and manage strategic partnerships for sustainable, impactful health programs. The training took place in Ada, Greater Accra Region, on April 28–29, 2016.
- The FY17 END in Africa project work plan development workshop was held on May 16–18, 2016 and the work plan was validated on July 5–7, 2016 in Accra.
- A meeting was held on August 26, 2016 in Accra to discuss the results of the SCH and STH impact assessment survey that was conducted in October–November 2015. The meeting

proposed that the NTDP continue with the current treatment strategy in 2017 while a small team of experts review the survey data to advise on a revised treatment schedule post 2017.

- With support from the American Leprosy Mission and Effect: Hope, the NTDP organized a 4-day workshop on July 12–15, 2016 to develop a strategic document for Integrated Management of Morbidity Associated with NTDs in Ghana.
- To ensure adherence to the guidelines for using TAS, the program conducted training on use of FTS for 12 laboratory personnel and program staff at the national level on March 24, 2016 before starting TAS in the 28 EUs.
- The NTDP conducted a 2-day training-of-trainers workshop on May 19–20, 2016 for key regional level staff involved in the integrated LF-oncho-STH MDA in 105 districts. A similar training of trainers reviewing FY15 school-based SCH/STH MDA was conducted on September 15–16, 2016, prior to the FY16 treatment in 216 districts.

Further details on Ghana's activities are noted in Appendix 2.

Niger

- In July 2016, the national-level evaluation workshop was held to review the overall results of the MDA campaigns. Any identified errors were revised and the results were then validated.
- The FY17 END in Africa project work plan development workshop was held in Dosso in May 2016 and the validation meeting was held in June 2016.
- In April 2016, Deloitte provided technical assistance to update the TIPAC in Dosso. This exercise enabled the NTDP to generate information that will be used in finalizing the new NTD Master Plan for 2016–2020, which is planned for the end of September 2016.
- Fly capturers were trained to capture the 6,000 flies needed for the onchocerciasis entomological survey (in 4 HDs: Téra, Say, Kollo and Boboye), which is currently underway and will be finished shortly.
- Training of trainers for the FY17 MDA has begun. This training will focus on MDA strategy, proper dosing, filling out report, and on management of the drugs.
- In April 2016, the NTDP conducted TAS 1 in 2 EUs in Niamey II and III; results indicate both EUs passed and can stop MDA.
- The FY16 Pre-TAS is just being completed in Aguié, Tessaoua, Madarounfa, Mayahi, Bouza, Keita, Konni, Illéla, Tahoua, Tchintabaraden and Gaya, but results are not yet available.
- The FY15 trachoma impact survey in N'Guigmi was finalized in March 2016 and results show the HD will require three additional years of MDA. These results were not available for inclusion in FY16 SAR 1.
- The FY16 trachoma impact assessments began in 4 HDs (Magaria, Matamèye, Gouré, and Zinder Commune) in September 2016 and will be done in October 2016. In addition, the FY16 surveillance surveys in 4 HDs (Kollo, Boboye, Dosso, and Illéla) will take place in the same period.
- The second phase of the 2015 MDA was carried out in the four remaining regions (Diffa, Maradi, Niamey and Tahoua) in May–June 2016.

Further details on activities in Niger are noted in Appendix 2.

Sierra Leone

- An advocacy meeting was held on May 10–11, 2016 for the LF-STH MDA in the Western Area (WA), with participation of key stakeholders.
- An advocacy meeting with private medical practitioners for the LF-STH MDA was held in the WA on May 13, 2016.
- Advocacy meetings were held on September 3–10, 2016 for the SCH MDA in 7 HDs, with participation of key stakeholders.
- Special advocacy meetings were held on April 25–28, 2016 in the 3 HDs (Bombali, Koinadugu and Kailahun) that failed the Pre-TAS in 2013. The purpose of the meetings was to mobilize community support to improve MDA coverage.
- Social mobilization at community level was held on February 20–27, 2016 for LF-Oncho-STH MDA in 12 HDs, with participation of key stakeholders who pledged their support and made commitments. This was not captured in the previous semi-annual report.
- Sierra Leone's NTDP held cross-border meetings with representatives from the NTD programs in neighboring Liberia and Guinea. The meetings were held in the Kambia and Pujehun HDs on March 8 and 10, 2016, respectively, to discuss strategies to improve MDA along border crossing points.
- The LF-STH MDA in the WA was launched at the Hastings community center on May 27, 2016 and presided over by the acting Minister of Health. Other high-level participants, HKI and Sightsavers also participated. The WA LF-STH MDA was conducted on May 27–31, 2016.
- The LF-Oncho-STH MDA was held in 12 HDs from May 5 to July 31, 2016.
- A series of trainings were conducted during this reporting period: training of community health workers for the LF-STH MDA in WA; training of survey teams for the SCH-STH impact assessment; training on TIPAC; training on DQA, the integrated NTD database (BDIM), and WHO joint request and reporting forms for NTD drugs; training of supervisors for SCH MDA in 7 HDs; refresher training of PHU staff for the LF-STH MDA in WA; refresher training of CDDs for the LF-Oncho-STH MDA in 12 HDs; and refresher training of PHU staff for the SCH MDA.

Further details on activities in Sierra Leone are noted in Appendix 2.

Togo

- In May/June 2016, the MOH implemented its sixth nation-wide integrated MDA to treat oncho, SCH, and STH (the seventh large-scale integrated MDA under USAID funding).
- In preparation for the MDA, the MOH organized supervisor training sessions in all five geographic regions, followed by training for the nurses and CDDs.
- The integrated MDA began in mid-May 2016 and continued through mid-June 2016. The drug distribution report forms were collected from all of the districts in August 2016 and data entry is underway.
- Planning for the second round of MDA that will take place in October 2016 has begun. The second round of treatment will be delivered to areas with high rates of STH (6 districts), schistosomiasis (21 districts), and/or onchocerciasis (15 districts).
- Two onchocerciasis elimination committee meetings were held during this six-month

period, one of which included external experts. These meetings, which were very successful, involved compilation and review of all available data and identification of data gaps. Another meeting will occur in several months.

- The MOH worked with HDI, USAID, FHI 360, and other partners to develop a work plan for FY17, and the MOH generated drug orders for the upcoming fiscal year.

Further details on activities in Togo are noted in Appendix 2.

Technical Assistance/Capacity Building

As the lead partner in the END in Africa consortium, FHI 360 was responsible for coordinating technical and administrative support related to capacity building with all the sub-grantees and NTDPs. It took the lead in providing assistance related to compliance with USAID requirements. In this regard, it strengthened the NTDPs' and sub-grantees' capacity to manage projects, work planning, M&E, data management, SCM, and quality assessment. Deloitte is the lead partner in financial management systems and reporting, including budgeting.

NTD Technical Assistance

Throughout the period under review, FHI 360 and its partners assisted MOHs in identifying TA requirements, creating assessment plans, and implementing a variety of capacity building activities. The main activities planned and/or executed by the FHI 360–led team are outlined below:

Table 1
Technical Assistance Requests in FY16

Country	TA requested	Justification	Technical skills required	Number of days required	Suggested source	Status
Burkina Faso	Orientation on DQAs and the National NTD database roll-out	The NTDP has indicated the need to train on the DQAs and the NTD database to help strengthen the national data management system for effective M&E	Expertise on the DQAs and database management	2 weeks	END in Africa	Done
	Capacity building on project implementation for program managers and other key personnel from selected NTD programs	The MOH needs to improve its ability to effectively manage NTD country programs.	Expertise in project management and mentoring.	2 weeks	END in Africa	This was not done because the NTDP had many other competing priorities.
Cote d'Ivoire	Training of NTDP personnel on the TIPAC for strategic planning	The TIPAC has to be introduced to the NTDP in Cote d'Ivoire to strengthen strategic planning skills	Expertise on the TIPAC	2 weeks	END in Africa (Deloitte)	Done
	Capacity building on evidence-based program management - training for program managers and other key personnel from selected NTD programs	The MOH has requested training on evidence-based program management	Expertise in management training/evidence-based program management (to be determined)	1 week	END in Africa	This was not done because the NTDP had many other competing priorities.
	Capacity building on FOG - training for regional accountants	The MOH has requested refresher training on working with FOGs	Expertise on Fixed Obligation Grants (Deloitte)	2 days	END in Africa	Done
	Training on the work books	The workbooks are new to NTD program staff at all levels, and both central and regional NTD program staff have to be trained to be able to complete the workbooks for reporting and planning purposes	Expertise on the workbooks	1 week	END in Africa	Done
	TA during situational analysis to identify districts that have to be mapped for trachoma	The 10 districts being mapped by the Global Trachoma Mapping Program are located along the border with Ghana and Burkina Faso. However, the NTDP is convinced there are other districts that are also endemic. Since the districts do not have resident ophthalmologists that can provide concrete information on trachoma, teams will have to go to the districts and obtain information on trachoma with DHMTs and from treatment facilities.	Expertise in conducting situational analysis with good knowledge of trachoma	2 weeks	END in Africa	Done
Ghana	To train 20 laboratory staff on onchocerciasis epidemiological and entomological surveys	The NTDP staff that had been conducting these surveys retired and are currently engaged on a contract basis.	Expertise in oncho epidemiological & entomological surveys including black fly dissection– Council for Scientific and Industrial Research	2 weeks	END in Africa	This was not done because the NTDP had many other competing priorities.
	To provide quality assurance for pre-TAS slide reading	An expert external to the NTPD is required to examine 10% of negative slides and all positive slides as a quality assurance measure.	Noguchi Memorial Institute for Medical Research/CSIR/School of Public Health	Based on quantity of slides. FY16 Q2	TA provided by an expert from the University of Ghana	Done
	To provide quality assurance during the SCH survey	An expert external to the NTPD is required to observe preparation of slides and examine 10% of slides during the SCH survey to ensure that the survey is well implemented, as slides are not kept after such surveys.	Noguchi Memorial Institute for Medical Research/CSIR/School of Public Health	Based on quantity of slides. FY16 Q1	TBD	Did not take place as planned although the survey was conducted
	To provide quality assurance for the trachoma pre-validation survey	An expert external to the NTPD is required to be with the survey team for at least 2 weeks when the survey is started to ensure all members of the research team master the procedures. This expert will be needed also at the end to help with data analysis.	Skills in assessing for TF and TT in targeted communities, especially in determining the different stages of trachoma.	4 weeks	TA provided by an expert from the University of Ghana	Done

Country	TA requested	Justification	Technical skills required	Number of days required	Suggested source	Status
Niger	Update the FY16 TIPAC (Strategic Planning)	To adapt the TIPAC to the new NTD Strategic Plan of Niger for 2016–2020. The NTDP indicated it cannot update the tool on its own.	Expertise on the TIPAC	1 week	END in Africa (Deloitte)	Completed in February 2016. Output will be used for data analytics/decision making in subsequent quarters.
	DQA training	Shortcomings in data collection, quality assessment and processing	DQA expertise	2 weeks	END in Africa	Planned for FY17
	Integrated NTD database (BDIM)	Current NTD program does not have a comprehensive database to store data.	Database expertise	5 days	END in Africa	Planned for FY17
Sierra Leone	SCH expert committee meeting	To review current treatment strategy for SCH in 7 HDs	Experts to make an informed decision about SCH	2 days	Project Technical Director attended the SCH review meeting in Freetown with other local and international NTD experts.	Done
	Update the TIPAC for FY16 and train the NTDP to raise funds locally	The NTDP indicated it cannot update the tool on its own. The national program will also ask Deloitte to help with training to raise funds locally.	Expertise on the TIPAC and in fundraising	2 weeks	END in Africa (Deloitte)	Done
	Orientation on DQA and WHO joint reporting and joint drug request formats, and the national NTD database and roll-out	The NTDP has indicated the need for training on the DQA and WHO drug request and reporting forms to help strengthen the national data management system	Expertise on the DQAs, the use of the WHO reporting and request forms, and in database management	2 weeks	END in Africa	Done
	Review of the 2011–2015 NTD master plan and development of a new one (2016–2020)	The current NTD master plan expired in 2015 and there is a need to develop a new one.	Expertise on PCT NTDs	1 week	WHO	Done
Togo	Capacity building on evidence-based program management—training of program managers and other key personnel from selected NTD programs	MOH has requested training on evidence-based program management	Expertise in management training/evidence-based program management	2 week	END in Africa	Completed in October 2015
	Capacity building on developing and implementing an advocacy plan to mobilize resources for the NTD program—training of program managers and other key personnel from selected NTD programs	The MOH wishes to improve its advocacy skills and its ability to mobilize resources	Expertise in advocacy and resource mobilization	1 week	END in Africa (Deloitte)	Completed in February 2016
	Training on supply chain management at the district level (SCM, capacity building)	Supply chain issues have occurred within districts	Expertise in supply chain management	1 week	MSH	Training planned for August 2016 by MSH but did not take place.
	Review and revision of the Togo Oncho Program's Five Year Plan for Oncho Elimination, in conjunction with Togo's new Oncho Elimination Committee	New WHO guidelines on onchocerciasis elimination became available in June/July 2016; Togo's strategy needs to be updated to align with these new guidelines.	Expertise in Oncho control and elimination and familiarity with the new WHO Oncho guidelines (FHI 360)	1 week	Project Technical Director attended the Oncho Elimination Committee meeting in Lomé	Done. An oncho elimination committee has been set up and has had 2 meetings in April and July 2016 to review and advise the NTDP on all planned interventions.

Supply Chain Management

END in Africa undertook the following activities to strengthen and institutionalize supply chain and drug management systems and accountability, which are essential for successful MDA.

Burkina Faso

The national NTDP received several drug shipments during the second half of FY16 for conducting MDA, among which were the 28,552,805 Praziquantel (PZQ) tablets that FHI 360 procured for the FY16 SCH MDA. END in Africa funds were also used to purchase 14,400 ICT cards for TAS 2 and 3 evaluations and 1,700 Kato-Katz kits for SCH sentinel site surveys.

The post-MDA logistics audit (funded by the World Bank) will be conducted before the end of the fiscal year. The results of this audit will provide consolidated data on quantities used and problems managing the logistics chain.

In addition, END in Africa supported a seven-person team (five from the NTDP and two from HKI), who received training in Conakry, Guinea (August 22–26, 2016) on SCM and mass distribution of NTD drugs (with funding from MSH).

Cote d'Ivoire

During this reporting period, the Cote d'Ivoire NTDP received the delivery of 528 SD Bioline Ov16 rapid test kits (25 tests/kit), which FHI 360 purchased to evaluate the progression of oncho from control to elimination, as well as 26,100 (HCl 1% 5g) tubes of tetracycline eye ointment for the treatment of trachoma in children under six months, and 3.4 million PZQ tablets, which WHO Burundi donated to Cote d'Ivoire.

In addition, five NTDP staff received training in Cotonou, Benin (August 28–September 2, 2016) on SCM and mass distribution of NTD drugs (with funding from MSH).

Ghana

The NTDP received 17,577 bottles (1,000 tablets/bottle) of PZQ, donated by Merck through WHO for the 2016 school-based and community-based SCH treatment. The consignment was delivered to the Central Medical Stores (CMS) in the first week of April 2016. The program also received 21,092,500 tablets of Ivermectin (IVM), donated by the Mectizan Donation Program (MDP) through WHO for lymphatic filariasis and onchocerciasis MDA in 2016. The consignment was delivered in two batches to the CMS in the last week of April 2016.

During the NTD SCM training organized by MSH under the USAID-funded Systems for Improved Access to Pharmaceuticals and Services project, the NTDP identified reverse logistics for NTD medicines as the most important SCM problem. In FY17, the NTDP will implement an action plan to address the problem, which was developed by the NTDP, the procurement unit of the GHS, and the CMS.

Niger

The Zithromax application was sent to the International Trachoma Initiative (ITI). Delivery is scheduled for October 2016. The Zithromax physical inventory must be sent to ITI before the green
END in Africa SAR: April 1, 2016–September 30, 2016

light is issued for delivery.

The FY17 schistosomiasis application for PZQ was initially sent to the WHO in June 2016. Subsequently, it was included as part of the joint request submitted to the WHO in August 2016, along with requests for ALB and IVM. It should be noted the PNLBG requested PZQ for both adults and school-age children (SAC). However, the WHO has stated that it will only provide drugs for SAC.

Four MOH personnel and two HKI staff were invited to participate in a training on SCM and the distribution of NTD drugs in Cotonou, Benin, held by MSH on August 28–September 2, 2016. The objectives of this training were to explain the components of effective NTD MDA management and how to develop a NTD drug supply system that complies with WHO standards.

To avoid past issues with lack of data on leftover drugs following MDAs and to avoid allowing large quantities of drug to expire, several measures have been taken and are in effect as of the end of FY16. First, following the FY16 MDA, all health centers must return the remaining drugs to the health HDs or to the national or regional office of pharmaceutical and chemical products warehouses. Once this has been finalized, the drugs will be counted and taken into account in HDs' drug requests for the FY17 MDA. These data will also be used to determine the quantities and locations of drugs that are at-risk of expiring; HKI and the NTDP will work with the HDs to ensure these drugs are distributed in the first part of the FY17 MDA, planned for November 2016. As a second control measure, HKI's newly hired logistician is also analyzing the data on drug left after the FY16 campaign and will compare this to the counted data. This will help show where problems are being made in reporting leftover drug.

Sierra Leone

A total of 6,055,000 tablets of ALB and 16,963,500 tablets of IVM arrived in Sierra Leone at the end of March 2016 for the LF–Oncho–STH MDA in 12 HDs and the LF–STH MDA in the WA. Prior to the two MDAs, drugs were supplied to the DHMTs based on the district CDD census, which was done in March 2016 and compiled by peripheral health unit (PHU) staff for the 12 HDs for LF–Oncho–STH and based on DHMT-WA projected population data in WA. Drugs were supplied to the DHMT-WA in May 2016, just before the MDA. The DHMTs supplied the PHUs with drugs based on PHU CDD census data, and the PHUs gave the drugs to the CDDs in the various communities based on village census data. Other supplies, such as the dose poles, pencils, pens, and polythene bags, were distributed to the various DHMTs and onward, to the communities two weeks prior to the MDA. Also, SCM topics were part of the MDA training for PHU staff, CDDs and community health workers (CHWs) at all levels.

Following MDA in the WA for LF–STH, the remaining drugs were quantified and returned to the district drug store. Drugs remaining in the communities and PHUs from the LF–Oncho–STH MDA in 12 HDs and the SCH MDA in 7 HDs will be returned to the district drug store and onward, to the NTDP warehouse in Makeni after the SCH MDA in October 2016.

In April 2016, MSH, through the END in Africa project, met with HKI, NTDP staff, and representatives from the Sierra Leone Pharmacy Board and the National Pharmaceutical and
END in Africa SAR: April 1, 2016–September 30, 2016

Procurement Unit to discuss action points from the SCM workshop held in Accra in February 2016.

Togo

SCM is generally a strength of the Togo MOH Integrated NTD Program. Once the Togo MOH received all of the medications, it delivered them to the regions according to a drug distribution plan that was generated collaboratively by the Togo MOH and HDI. Once in the regions, the drugs were then distributed to the districts and PHUs. At each step of the process, the number of drugs being distributed was documented and inventory forms were signed. Once the MDA was completed, the remaining drugs and reporting forms flowed back up the chain from CDD to PHU, district, region, and ultimately back to Lomé. At each step, drug distribution records were checked against the number of drugs received, and any losses were documented.

During the May/June 2016 MDA, the MOH and HDI identified an issue in the management of unused drugs. When there were partially used bottles of medication remaining after the MDA, tablets were combined together to create bottles with a full complement of tablets. However, under that approach, it was possible that pills from different lots may have been combined. This poses a problem because different lots may have different expiration dates, and in the event of an adverse event, the lot number of the tablets involved must be known. The training for the FY17 MDA will explicitly emphasize that drugs from different containers can only be combined into one container if they are from the same lot.

Financial Management and Capacity Building

Between April 1, 2016 and September 30, 2016, the Deloitte team continued to make progress toward building more sustainable NTD programs in our six West African counterpart countries. Deloitte's sustainability approach continues to look beyond resource mobilization; it is based on the strengthening of four foundational "building blocks:" organizational development, financial strategy and analysis, advocacy and communications, and strategic social partnerships (SSPs). During the reporting period, END in Africa continued to support sustainability efforts through increased mentoring and coaching, with specific emphasis on TIPAC data analysis for decision-making to inform future advocacy and partnership efforts. This section demonstrates the alignment between key activities undertaken over the past six months and the aforementioned building blocks and demonstrates the connection between our activities and sustainability. It also provides success stories from the past six months and proposed work for the coming six months.

A. Organizational Development

END in Africa continues to work with the NTDPs to increase self-awareness of program performance and improve their capacity for self-directed programming. We continued our work around skills building, mentorship, and institutionalization of best practices and new tools, particularly in using TIPAC data proactively. Organizational development work with each NTDP has focused on public financial management, government leadership, performance management, and data use for decision-making.

In this reporting period, END in Africa continued to work toward reinforcing the NTDPs' capabilities for developing, managing and implementing the FOG funding mechanism as well as improving

END in Africa SAR: April 1, 2016–September 30, 2016

their project financial management system. The majority of our work around FOG management focused on inputting annual FOG data into the Tool for Integrated Planning and Costing (TIPAC), (see Financial Strategy and Analysis section). Our capacity building work around FOG management has been mostly in Ghana and Togo, although the Cote d'Ivoire team has requested additional technical assistance and training on the FOG, and our team supported FOG data entry into the Niger TIPAC this Spring.

Burkina Faso: Our support for financial management and capacity building in Burkina Faso has waned in the past year, given the additional funding for NTDs that the country has received. The Deloitte team submitted a sustainability concept note at the beginning of April for the Burkina Faso NTDP, identifying and prioritizing areas where we could provide technical assistance to their team. We proposed implementing the maturity model to help better assess the organization's readiness and capacity to manage and coordinate interventions in the multi-partner environment. The team has not received feedback on the concept note or any requests for additional TA. As a result, Burkina Faso will not be prioritized as a country of focus for technical assistance from Deloitte in FY17.

Ghana: The NTDP financial management system sits within the broader GHS under the Finance Directorate. Our approach continues to involve close collaboration with this division to define and implement operational performance measurement indicators as well as provide support for FOG management, planning and program performance management. Between April and September 2016, we continued to work toward the institutionalization of improved Public Financial Management (PFM) Standard Operating Procedures (SOPs) by providing feedback on the proposed SOPs drafted by GHS. This activity will carry over into FY17, when we plan to assist the GHS/NTD Finance team in disseminating the SOPs to budget management centers.

Togo: In Togo, the 2016 TIPAC implementation reinforced needs identified in 2015, related to financial planning and resource tracking, increasing the use of financial data for planning and decision-making, performance management around operational procedures, and articulating sustainability plans. The introduction to sustainability and maturity model workshop in February and the TIPAC training and data entry workshops in March 2016, responded to these needs. The remaining technical assistance in Togo during this reporting period has focused around work planning, partnership management, and capacity building around using TIPAC data outputs for decision making and finance strategy (see Financial Strategy and Analysis section).

B. Financial Strategy and Analysis

END in Africa provided the following financial strategy and analysis support in the second half of FY16: TIPAC implementation and data use for policy and program decision-making in Cote d'Ivoire, Ghana, Togo, and Niger; Support the implementation of Ghana's NTD Finance Strategy; and NTDP Master Plan completion and budgeting for Sierra Leone, Ghana, Togo, Niger, and Cote d'Ivoire. END in Africa continued to work with NTDPs to incorporate TIPAC outputs into master plan updates while also advocating for the continued use of the TIPAC and incorporation into country program work plans. The team will continue to provide ad hoc support to country programs to further institutionalize data and information use for decision-making.

TIPAC Implementation and Data Use for Policy and Program Decision-making

Ghana, Sierra Leone, Cote d'Ivoire, Togo, and Niger: During this reporting period, one of the key outputs of our work involved analyzing TIPAC data outputs to support the NTDPs in data use for decision-making. TIPAC capacity building trainings and data entry workshops took place in Ghana, Sierra Leone, Cote d'Ivoire, Togo, and Niger between January and April 2016. Despite technical difficulties with the TIPAC and some gaps in non-PCT data, we analyzed the TIPAC data for each of the five countries and created PowerPoint decks summarizing our findings to debrief each NTDP. The PowerPoint decks were tailored to the presentation and advocacy needs of each country, and they were finalized and submitted to the country teams in Q4 of FY16.

TIPAC analysis is a valuable tool for supporting and establishing data-driven decision-making within the NTDPs. The data analysis and visualization supports NTDPs in identifying finance objectives, creating new finance strategies, and validating or updating current finance strategies. The analyses provide a program overview, a historical view of the TIPAC data over the past five years, a current state assessment, and a forward-looking call to action for program sustainability. Deloitte will continue to mentor and coach the NTDPs in how to perform the analysis and use it for effective decision-making, so that the NTDPs will be able to perform TIPAC workshops and analysis on their own in future years. This will include reinforcing past coaching and performing additional in-country coaching around Microsoft Excel and PowerPoint skills. RTI is currently reviewing the reported bugs with the TIPAC tool.

Niger: Although Niger was de-prioritized as a focus country for Deloitte TA in FY17, the TIPAC update was cited by the Ministry of Health (MOH) General Secretary at the annual work planning meetings as a critical area where Niger needs assistance in 2017. The 2016 TIPAC update workshop, held in April, provided a valuable and productive platform for facilitated discussion around the challenges of MDA planning and implementation. The NTDP managers agree that there is a need to host additional coordination meetings where the NTDP can work on harmonizing sources and data used for MDA planning, come to a firm decision on data sourcing and forecasting methods, and assess whether to maintain an integrated MDA or have a separate MDA for trachoma.

Support the Implementation of Ghana's NTD Finance Strategy

Ghana: Kingsley Frimpong has been leading our team's efforts to operationalize and implement the Ghana Finance Strategy that was completed in FY15. This had led to tailored proposal support with several new partners, culminating in a successful mobilization of resources from UniBank, with a letter of commitment of \$41,560. During the period under review, Deloitte provided mentoring and coaching to support the implementation of the UniBank LF project, including financial management. We assisted the NTDP to develop the project implementation plan and facilitated start-up meetings to agree on timelines.

In collaboration with the newly created Strategic Social Partnership (SSP) Unit of GHS, we will continue to support NTDP proposal development with other potential partners, such as Ecobank Ghana, Standard Charter Bank (SCB) and Stanbic Bank Ghana Limited. Resource mobilization and

SSPs in Ghana are discussed in more detail in the Strategic Social Partnership section below.

NTDP Master Plan Completion and Budgeting

Sierra Leone, Ghana, Togo: During the last reporting period in this fiscal year, our team supported NTDP Master Plan budgeting to maximize the efficient use of available resources for greater public health impact in the area of NTD programming in Sierra Leone, Ghana, and Togo, including the review of associated TA plans.

Sierra Leone, Ghana, Togo, Niger, Cote d'Ivoire: As an extension of the master planning efforts in this reporting period, Deloitte was requested to support annual work planning efforts in Sierra Leone (June 6–10), Niger (June 13–17), Togo (June 27–July 1), Ghana (July 2–8), and Cote d'Ivoire (July 11–15).

Effective work planning is vital to program success. Almost all NTDP activities (MDAs, capacity building, advocacy and engagement with partners) are implemented with decentralized regional and district health administrations who have to implement multiple public health interventions, including immunization campaigns and interventions for malaria, TB, HIV/AIDS, infant and child nutrition, and maternal and reproductive health, among others. Gaining the full attention of districts and regional health administrations to implement NTD interventions requires meticulous planning to synchronize activities. NTDP activities must be planned and coordinated with many competing public health interventions at the regional and district levels. Additional details on planning and coordination activities in Togo and Ghana are outlined below.

Togo: In June 2016, Deloitte held a country workshop in Togo to identify inputs and parameters for the future Togo Finance Strategy through discussion of the results of the maturity model and TIPAC data, followed by two days of meetings with NTDP leadership. The inputs for the Finance Strategy that were agreed upon during this three-day workshop include strategic financing priorities, planned interventions, and a short list of potential new partners. The draft Finance Strategy is a work in progress and will be finalized in FY17.

Additionally, Deloitte facilitated interactive discussions with the NTDP to set up an ongoing planning and coordination mechanism to better operationalize partner contributions to the five-year Master Plan. This is the first time that Togo NTDP leads had come together to build consensus and agree upon the necessity of joint planning to avoid duplication of efforts and ensure the efficient use of resources. The discussion around the use of resources and the need for transparency and information sharing among NTDP leads is a key input for the Finance Strategy.

As a result of the discussions, the Togo NTDP included a two-day joint planning activity on the FY17 work plan to create an annual coordinated NTD Operational Plan under the direction of the NTDP leadership. The requested two-day workshop, which will convene all Togo NTDP leads, will review progress on implementing the five-year Master Plan and plan the upcoming year's activities. END in Africa and other partners will contribute to the operational plan, which will also consider MOH work plans. The Togo NTDP will use the TIPAC matrix of activities (detailed work plan) as a basis for the exercise and refine it to capture partner and program activities that are not normally included

in the NTDP Master Plan. This two-day planning activity is similar to the annual planning meetings that take place in Ghana, outlined below.

Ghana: The absence of a well-structured plan synchronized with other GHS activities, has adversely affected effective implementation of NTDP activities. To address this challenge, the NTDP in Ghana conducts an annual two-day planning meeting in Accra to produce an annual activity schedule.

To prepare for this work planning meeting, Kingsley Frimpong traveled to Kumasi in May to review the 2016 work plan and plan the FY17 work planning meeting. The output of this meeting was the draft FY17 work plan submitted by the GHS/NTDP during a July meeting in Accra. In addition to NTDP portfolio review, these meetings were used to review annual MDA and to "train trainers" for MDAs.

Kimberly Switlick-Prose flew to Accra for the annual work planning meetings in July 2016. Participants included NTDP staff, the GHS Policy Planning and Monitoring and Evaluation (PPME) Division, regional and district health administration staff, and partners. The work plan will be shared with the regional and district health administrations to assist them in planning NTDP interventions. This planning tool can be used to request that the GHS PPME block specific periods for the NTDP to carry out major nationwide activities, such as MDAs.

C. Advocacy and Communications

Advocacy and communications articulate NTDP value and communicate the importance of NTD control and elimination to stakeholders. Advocacy and communications can be powerful enablers of stakeholder engagement, investment, and partnership development. Accordingly, advocacy activities increase awareness of NTDs and help to win support for the program among influential government decision makers, public opinion leaders, and communities.

Introducing Sustainability Planning and Advocacy to Diversify Partners and Mobilize Resources

Ghana: Deloitte and the Ghana NTDP collaborated on finalizing the Ghana Advocacy and Communications Strategy 2016–2020 during this reporting period, ensuring that it aligned with the NTDP's advocacy needs. Deloitte has worked closely with END in Africa Advisors and local Ghana NTDP stakeholders to complete detailed advocacy action plans, including identification and validation of change agents, values, messages, and vehicles for achieving NTDP advocacy objectives. In the Advocacy and Communications Strategy, the team included required actions and a timeline to carry out action plan activities, a summary of advocacy materials to be developed by the NTDP, indicators through which to monitor the execution of the Advocacy and Communications Strategy, and the costs of carrying out the Strategy. At this point, the Deloitte team is awaiting final comments and input from Dr. Nana and Dr. Marfo, which we hope to attain in FY17 Q1. While the Ghana Advocacy and Communications strategy is largely finished from Deloitte's perspective, it does need these remaining inputs, and other events (e.g. morbidity management strategy development) have delayed their receipt. We are concurrently awaiting the completion of the Integrated Case Management Strategic Plan, which must be aligned with the Ghana Master Plan and Advocacy and Communications Plan.

Togo: Togo is an excellent case study of a country that has gone through each of the pre-requisite steps in capacity building to position itself for successful advocacy work. The maturity model workshop held in February 2016 specifically highlighted the Togo NTDP's request and need for technical support in the area of advocacy. A follow-up workshop on advocacy for program sustainability was originally requested for June 2016, but we advised that the next sustainability workshop in Togo should focus on developing inputs for the Finance Strategy, to inform future efforts around advocacy. The June 2016 workshop opened with a review of our sustainability framework and the results of the maturity model workshop, and then dove into discussions around using data for decision-making, the 2016 TIPAC analysis and results, and identifying finance objectives to inform a future finance strategy. The second day of the workshop continued to refine those finance objectives and focused on the organizational development needed to achieve finance objectives, value chain analysis, ecosystem mapping, and communication. The outputs of the workshop included a prioritized list of target partners from the ecosystem mapping exercise. Ecosystem mapping will be an exercise that Togo will continue to build upon as it develops its advocacy goals based on the finance strategy. Now that this capacity building has taken place, Togo's advocacy efforts will be targeted toward specific stakeholders with a tailored message.

Another important output of this workshop was the decision to postpone the Togo Partners Meeting, which was initially scheduled for June 22–23, 2016. Through our facilitated discussions, Togo's NTDP leadership realized that it would be more beneficial to finalize its strategy around future financing and advocacy and to better identify how and why to engage future partners. Togo is targeting late September/early October 2016 for the next sustainability mentorship meeting facilitated by Deloitte, focused around advocacy and aligned action. During the working sessions, Deloitte will help Togo identify and prioritize advocacy objectives, support the finalization of Togo's draft Finance Strategy, and help plan and prepare for the upcoming Partners Meeting, tentatively scheduled for FY17 Q1.

Cote d'Ivoire: Additional technical assistance in the area of advocacy and communications has been requested by Cote d'Ivoire's NTDP. The 2016, TIPAC analysis performed during this reporting period helped the NTDP to better assess their current gaps and funding profile. The analysis will be used by the NTDP to better communicate progress made in FY16 with potential partners and internal stakeholders within the MOH. The outputs of the data analysis will additionally be used to advocate for maintaining or increasing advocacy efforts to enable the country to build on this year's momentum and maintain or increase program results.

D. Strategic Social Partnerships

NTDP Sustainability Planning and Advocacy to Create Diverse Partners and Mobilize Resources

Togo: During this reporting period, Deloitte supported the initial development of the statement of work (SOW) and agenda for the Togo Partners Meeting, which was originally scheduled for June 22–23, 2016. As discussed above, Deloitte facilitated discussions in June 2016, which led to the Togo NTDP leadership's decision to postpone the partnership meeting until FY17 Q1. Aside from finalizing the Finance Strategy and preparing via additional advocacy working sessions, the extra

time will allow Togo to mobilize high-level MOH officials, representatives of the Ministry of Finance, technical and financial partners, and private sector institutions. During the FY17 work planning session, three members of the NTD technical committee and a WHO representative demonstrated high interest in participating in and supporting the implementation of the partners meeting. During the upcoming reporting period, Deloitte will continue to support the Togo NTDP in preparing for the meeting.

The output of the stakeholder mapping and ecosystem mapping exercises performed during the Togo workshop in June 2016 provided a prioritized list of target partners that the NTDP hopes to engage moving forward. Participants in the June 2016 meetings also shared new lessons learned among the NTD programs. For example, the oncho program shared that it has reached out to specific partners such as the Postal Service to gain logistics support. As a result of the June meetings, Togo's NTD programs will collaborate on partnership activities and generating support, rather than working singularly.

Cote d'Ivoire: Discussion around the 2016 TIPAC outputs and related gaps has generated further discussion on domestic resource mobilization. As a result of these discussions, the NTDP has included two key resource mobilization activities in the FY 17 work plan: (i) developing SSP with two private sector companies and (ii) advocating for more support within the MOH and MOF. Deloitte has captured these activities in the FY17 TA work plan and will collaborate with the Cote d'Ivoire team to define a strategy to support the NTDP in getting tangible results from planned advocacy and partnership initiatives.

Ghana: During the reporting period the END team and NTDP staff continued to engage with the GHS Policy, Planning, Monitoring and Evaluation (PPME) Division to enable resource mobilization. Kate McNabb and Henry Ennis traveled to Accra to facilitate a Strategic Social Partnership Sustainability Planning workshop April 25–29, 2016 with GHS/PPME Division, GHS/NTDP, and other GHS/Public health Directorate representatives. The purpose of the workshop was to build foundational knowledge and expertise to effectively pursue, secure, and manage strategic partnerships for sustainable, impactful health programs. The workshop highlighted the concepts and tools of value chain analysis, ecosystem mapping, and shared value articulation. The team's presentation was well received, and as a result of the workshop, GHS has finalized a formal point of contact for partnership work, the Director of Planning in PPME Division. Outputs of the workshop include:

- Articulated partnership objectives, which have been used as inputs to inform the GHS SSP Strategy and action plan, which are advancing due to the initiative from PPME Division. Deloitte will continue to support the editing and finalization of the SSP strategy in FY17, in collaboration with GHS.
- GHS and NTDP Ecosystem Maps, to be used to inform partnership pursuit and the strategy and action plan.
- A prioritized list of potential new GHS partners, identified through ecosystem mapping and value chain analysis exercises.
- Draft business case messaging for potential GHS and NTDP partners.

Another success of this workshop is that the work accomplished there was highlighted by the END in Africa SAR: April 1, 2016–September 30, 2016

director of PPME at a resource mobilization conference in Cote d'Ivoire on September 1–2, 2016, demonstrating that the GHS is taking ownership of its work and sharing knowledge with other countries.

Collaboration and Coordination

END in Africa—General

FHI 360 continued to coordinate with USAID, the MOH in each country, and existing USG-funded NTD programs to ensure effective program execution. END in Africa's NTD Technical Advisor continued to collaborate with NTD partners and NTDPs to plan for the 'End Game' and prepare countries for the final DSAs needed for trachoma and LF before countries start preparing their respective dossiers for verification of elimination.

Country-specific activities carried out by our sub-grantees and supported by END in Africa are summarized below:

Burkina Faso

- Continued efforts by the government of Burkina Faso to combat NTDs by making NTD control and elimination a health priority are envisaged in the PNDS 2011–2016, which outlines the National Health Policy (NHP) strategy. One of these strategies is "Promoting Health and Disease Control, and the Control, Elimination and Eradication of NTDs as Priority Actions in the Country." Creating a specific program to combat NTDs (the national NTDP) within the Disease Control Directorate also captures this commitment.
- The HDs contribute financially to the success of the MDA through health training management committees, for example by covering fuel costs for health workers and CDDs so that they can travel during the trachoma and SCH MDA. In addition, thanks to advocacy efforts by the government and its partners, Burkina Faso has received funding from the World Bank to combat NTDs and seasonal malaria in 2016–2019.
- In addition to the quarterly coordination meetings, to which the partners are invited, the August 3–4, 2016 technical committee meeting in Ouagadougou provided an opportunity to assess efforts to combat NTDs and to draft recommendations. The onchocerciasis elimination subcommittee also met during the reporting period. The steering committee met on August 30, 2016.
- The number of national NTDP staff increased with the hiring of specialized employees in the M&E unit (two public health doctors and two health assistants) and one physician/entomologist. New staff members also helped to strengthen the laboratory unit.

Cote d'Ivoire

- The government's commitment to the fight against NTDs continued during the second half of FY16. The Director General of Health represented the Minister of Health and Public Hygiene at most events and activities organized with USAID funds. At each meeting, he restated the government's commitment to the fight against NTDs.
 - There continues to be very good collaboration between END in Africa and other NTD
- END in Africa SAR: April 1, 2016–September 30, 2016

partners working in Cote d'Ivoire. During this semester, Schistosomiasis Control Initiative supported a SCH MDA in 23 HDs, in collaboration with FHI 360. Expenses to support activities were shared in 3 HDs, where prevalence surpassed 50% and treatment was provided to adults as well as school aged-children (SAC). FHI 360 supported treatment for adults, while SCI supported treatment for SAC.

Ghana

- The government continued to let the NTDP use the health system structures at all levels—national, regional, district and sub-district to support NTDP activities. Medical stores at all levels keep NTD medicines and health system vehicles are used to support NTD activities.
- The American Leprosy Mission, in collaboration with Effect: Hope, FPSU, Anesvad and MAP, supported the NTDP in developing an integrated NTD morbidity management guide for the morbidity management of LF, buruli ulcer, yaws, human African trypanosomiasis, leishmaniasis and leprosy.

Niger

- On September 22, 2016, the NTD focal point, the disease coordinators, and HKI held a meeting with the new Minister of Health, Dr. Kalla Moutari. He was interested to hear about the extent of the program and the value of the drugs leveraged by END in Africa's and other partners' contributions. He asked for a briefing paper on the program.
- Niger's MOH developed and shared the new 2016–2020 NTD master plan and called for creating an NTD coordination unit within the Ministry of Health, which would provide additional staff and infrastructure.
- In connection with national M&E of NTD activities, the MOH's NTD program developed an M&E plan to evaluate the current NTD plan. The M&E plan was validated in August 2016 at a workshop, with participation from the MOH and HKI.
- Similarly, NTDs were given priority in the new 2016–2020 health development plan and the NTD budget line was doubled from 100 million CFA to 200 million CFA per year.
- An NTD Task Force is currently being created and will be supported by the World Bank NTD project. No new staff was assigned to the NTD program.

Sierra Leone

- Four coordination meetings were held to discuss timelines for the LF–STH MDA in the WA, the SCH MDA in 7 HDs, the NTD Master Plan (2016–2020) and the SCH–STH program review.
- The MoHS annual work plan includes a budget line to cover administrative costs for the NTDP secretariat.
- In early January 2016, a \$6,700 increase in funding was allocated for morbidity management in the annual budget by the GoSL. Nevertheless, these funds have not yet been used by the MoHS to support morbidity control.
- With the exception of funds from Sightsavers, no additional funding was received by the NTDP from other partners during the reporting period. No new staff was assigned or additional space was provided during the reporting period.

- Several meetings were held during the reporting period with the National School and Adolescent Health Program (NSAHP), the NTDP, WHO, and other partners to coordinate activity implementation and strengthen collaboration with partners in the country. These meetings aimed to promote cooperation and coordination, strategic planning, and the use of best practices, and to avoid duplication of activities.

Togo

- The government of Togo continues to be strongly supportive of the Integrated NTD Control Program. The MOH has held numerous coordination meetings over the past six months to discuss the May/June 2016 MDA implementation and NTD elimination.
- The Togo MOH is also developing its data management and analytical capabilities and has convened a committee on the elimination of NTDs. The MOH organized two meetings to discuss the elimination of onchocerciasis during this period, one of which involved external experts.
- The MOH is developing partnerships within the government (e.g., WASH, malaria, education, etc.), as well as with other non-governmental organizations (UNICEF, Sightsavers, Red Cross, Plan Togo, etc.) to participate in integrated NTD activities. Collaborations among the Integrated NTD Program, HDI-Togo, and the Onchocerciasis Program are being strengthened as a step to moving toward onchocerciasis elimination.
- The MOH, HDI, and Onchocerciasis Program are developing ways to further integrate onchocerciasis into the integrated platform, including collaborative development of detailed and integrated implementation plans for the distribution of medications and data analysis.
- The MOH and HDI are also working to bring together other partners (CDC, the Taskforce for Global Health) to support onchocerciasis surveillance and elimination activities, and operational research on onchocerciasis.

Monitoring and Evaluation

FHI 360 and partners continued to support the selected six countries in developing sustainable M&E systems for NTD Country Programs. FHI 360 works closely with implementing partners to ensure that MDA activities and program impact assessments are implemented in accordance with WHO guidelines and that sound data are collected and reported to USAID in a timely manner.

Key M&E activities undertaken within the last six months are classified into the following sub-sections:

- Support to sub-grantees and MOHs to develop and implement quality M&E systems
- Data management and documentation
- Routine program monitoring
 - MDA
 - Impact assessments
 - Training
- Technical assistance/capacity building on M&E

Support to Sub-grantees and MOHs

The M&E advisor continued to liaise with country programs and other NTD partners to ensure appropriate execution of M&E activities for NTD Programs. The main accomplishments for this reporting period were as follows:

- All FY16 SAR2 workbooks were submitted to USAID and RTI for review; the review process is ongoing. The M&E advisor, in collaboration with USAID and RTI, is actively participating in the review of the FY16 SAR2 workbooks for the six END in Africa-supported countries. USAID, RTI and FHI 360 review the workbooks separately, put all comments into a single feedback file, discuss the feedback in a group, and send joint USAID/RTI/FHI 360 feedback to the countries. The M&E advisor provides country background/specifics, as necessary.
- Outstanding issues from FY13, FY14 and (some of) FY15 have been addressed and MOH approval is being sought. Most countries have submitted signed copies of their workbooks.

Country-specific details are below:

Burkina Faso

There were numerous M&E activities during the reporting period for LF:

- Pre-TAS took place in June 2016, in 14 sentinel sites in 7 HDs under USAID support (Manga, Po, Sapone, Kombissiri and the rural areas of the HDs of Boulmiougou, Signoghin, and Nongre-Massom). All of these HDs are eligible to conduct TAS 1 in FY17.
- TAS 1 took place in 5 HDs (Zabré, Dédougou, Boromo, Sapouy, and Léo) in August 2016. All 5 HDs will stop MDA as of FY17.
- TAS 2 surveys in 15 HDs (grouped into 4 EUs)
- TAS 3 surveys in 11 HDs (grouped into 4 EUs) are planned to start near the end of September 2016.
- NTDP planned to conduct integrated sentinel site surveys in 21 sites for SCH and STH.
- Trachoma surveillance surveys will take place in the HDs of Do, Léna, Zorgho, Boussé, Ziniaré, Banfora, and Boulmiougou before the end of the fiscal year.
- DQA training for 47 regional and HD staff took place in 2 sessions: August 31–September 3, 2016 in Bobo Dioulasso and September 5–8, 2016 in Tenkodogo.
- Workbook assistance provided by the END in Africa project M&E advisor took place on April 29–May 4, 2016.
- Technical assistance for the national NTDP team on using FTS for the TAS 1 in 2 EUs took place on June 23, 2016 in Ouagadougou, provided by HKI's senior scientific advisor.

Cote d'Ivoire

The main activities in this period were to develop a monitoring and evaluation plan to leverage NTDP staff capacities on the BDIM and DQA. DQA training was conducted on August 8–14, 2016 and the DQA was performed on August 15–20, 2016 in the health regions of Goh (Gagnoa HD) and South-1 Abidjan (Grand Lahou HD). This DQA was conducted after the LF-Oncho-STH MDA that took place in May 2016; it was based on data verification and systems assessment. The DQA yielded sufficient results insofar as the quality of reported data. Some DQA recommendations included:

- Initiate a process to archive MDA documents in health facilities and district.
- Lay out procedures for data backup at district offices and health regions.
- Empower one community drug distributor per area to compile first-level data and conduct quality control before transmission to the supervisors.

In April 2016, the country conducted LF mapping and sentinel site surveys in 14 and 39 HDs, respectively; and onchocerciasis epidemiology surveillance was conducted in 4 HDs over a span of 3 months, July–September 2016.

Ghana

Following release of the new *WHO Onchocerciasis Guidelines for Stopping Mass Drug Administration and Verifying Elimination of Human Onchocerciasis*, the Ghana NTDP held a series of meetings to align oncho activities with the guidelines and re-orient the current oncho control program into an elimination program. A 3-day meeting held on March 21–23, 2016 was attended by NTDP managers, program officers, and the partners supporting onchocerciasis elimination in Ghana—FHI 360 and Sightsavers. The meeting reviewed all available oncho data (mapping, treatment, epidemiological and entomological) since the inception of oncho intervention in Ghana to understand the current position of the program. The data indicated reduced microfilarial prevalence and black fly infectivity that varied widely across the country. Participants concluded it would be necessary to conduct a comprehensive epidemiological and entomological assessment using the tools prescribed in the new WHO guidelines (Ov-16, PCR & skin snip) to guide activities as the program moves towards elimination.

Niger

A national evaluation workshop on the MOH's FY16 MDA campaigns was held in Maradi in July 2016. Workshop attendees included participants from the central level (MOH, NTD programs, Direction des Etudes et de la Programmation, the department of pharmacies, laboratories and traditional medicine, and the national office of pharmaceutical and chemical products (ONPPC)) and the eight regions (regional delegation of public health or its representative, regional focal point, and one HD per region). The MDA results were presented and discussed, as was the FY17 activity programming. Overall, coverage rates were found to be satisfactory (above 80% for all diseases).

Another workshop was held in August 2016 to validate the M&E plan for the NTD Master Plan for 2012–2016. Participants included the MOH central directors, NTD programs, regional representatives, and HKI. The goal was to provide Niger's national NTD program with a formalized system to evaluate performance of activity implementation during the previous five years toward achieving Niger's NTD elimination and control objectives.

In addition, an FY15 trachoma survey was completed in the N'Guigmi sub-district (Diffa region) in March 2016, and a TAS 1 survey was conducted in the Niamey II and III HDs in April 2016. The onchocerciasis entomological survey planned for FY16 is underway in the Téra, Say, Kollo and Boboye HDs. For SCH, the PNLBG plans to conduct sentinel site evaluations in 17 sites in September–October 2016.

Sierra Leone

In order to improve the M&E activities of the DHMTs, HKI reviewed and updated questionnaires to evaluate the knowledge gained during community sensitization meetings and the effectiveness of health workers and CDD training. A poster on the results of this evaluation will be presented at the NTD annual review meeting in December 2016.

Disease-specific assessments (DSAs) for SCH and STH were conducted in April 2016 in 12 and 14 HDs, respectively. Results from the assessment and action-oriented conclusions can be found in the FY16 program workbook. The results of the DSAs were used to redefine the FY17 treatment strategy, as described in the MDA section.

In order to ensure M&E needs are successfully met, the NTDP received training on DQA, BDIM, and the WHO joint application package for NTD drugs in August 2016. This training will also be cascaded to the NTD focal persons in FY17 Q1 before the implementation of the DQA. The DQA will allow the National Program to assess the quality of reported NTD data and the ability of current data management systems to collect, transmit, document and report quality data. Also during the DQA training, an orientation on the use of the WHO Joint Reporting Forms and Joint Request Forms was discussed and the FY17 drug application package was reviewed by the FHI 360 technical lead before submission. Furthermore, BDIM training will ensure that all data are compiled in one place, which will help the NTDP prepare its elimination dossiers for LF and Oncho.

Togo

The Togo MOH is continuing to use the existing M&E framework and tools supplied by FHI 360. Every year, supervisory teams from the Togo MOH and from HDI-Togo attend trainings at every level and implement spot-checks at locations that have previously had problems during the MDA. These supervisory visits have been helpful to maintain the high quality of the MDA activities, and have identified problems that needed resolution.

Data Management and Dissemination

All 6 countries have submitted their FY16 SAR 2 workbooks, which are currently being reviewed. There was no challenge encountered this time with workbook submission. The outstanding issues with the FY 13, FY 14 and FY 15 workbooks have been addressed and the review process is ongoing. Some countries submitted to FHI 360 their respective MOH workbook approvals.

Three abstracts submitted by the Sierra Leone END in Africa program were accepted and presented at the poster session of the biennial conference of the Royal Society of Tropical Medicine and Hygiene in Cambridge, United Kingdom on September 12–16, 2016:

- Y. M. Bah, A. Conteh, Paye J, M. S. Bah, I. Savage, M. Sonnie, M. Hodges. *“Maintaining effective mass drug administration for neglected tropical diseases post Ebola in Sierra Leone” (poster).*
- Y. M. Bah, A. Conteh, Paye J, M. S. Bah, M. Sonnie and M. Hodges. *“Schistosoma mansoni infection following 6 years of mass drug administration (MDA) in Sierra Leone” (poster).*
- Y. M. Bah, A. Conteh, Paye J, M. S. Bah, M. Sonnie and M. Hodges. *“Progress towards soil-transmitted helminth control in Sierra Leone” (poster).*

Routine Program Monitoring

FHI 360 recognizes the importance of sound data management in ensuring continuous performance improvement and thus, it provides TA to sub-grantees and NTDPs in END in Africa countries to strengthen data management skills among M&E staff and program managers. The M&E advisor monitored country M&E activities on a regular basis, collecting information through phone calls, monthly reports, workbooks, work plans and emails. All planned M&E TA (the WHO joint reporting template, the integrated national database and DQA) in FY 16 was provided with regular follow-up.

Mass Drug Administration

Burkina Faso

MDA activities began in April 2016 in the Sud-Ouest (LF and oncho), with financial support from END in Africa. Two rounds of LF and oncho MDA are held in this region annually. The LF MDA involved 5 HDs (Gaoua, Diébougou, Batié, Kampti and Dano) and oncho MDA was included in 4 of those (there are no onchocerciasis-endemic villages in Kampti). A 10-day oncho MDA using the CDTI strategy was held on May 2–11, 2016 and a 5-day LF MDA was held on May 2–6, 2016.

To date, LF MDA has been completed in 22 of 26 HDs and preliminary LF MDA data from 17 of the 26 HDs supported by the END in Africa project has been transmitted to the NTDP at the central level. This is because some health regions did not conduct the LF MDA at the same time this year because of the TAS 1 survey. In addition, the Zabré HD in the Centre-Est region and the Pô, Manga, Kombissiri and Saponé HDs in the Centre-Sud region, which receive FPSU-L funding, have not yet carried out LF treatment. For oncho, preliminary data have been transmitted for the 4 HD targeted under the END in Africa project; 156,780 persons were treated. In addition, the 2 HDs supported by Sightsavers have completed their oncho MDA.

The SCH MDA, which was funded entirely by END in Africa, was held in July and August 2016 in all 59 planned HDs in 11 regions. Out of the targeted 9,180,034 people (including 4,855,176 SAC), preliminary data indicate 8,612,312 people (including 4,539,540 SAC) were treated during this campaign. The second round of the SCH campaign, which involves only the Centre-Est region, is scheduled before the end of December 2016 (exact dates have not yet been determined).

All of the 19 HDs scheduled to conduct trachoma MDA in FY16 have done so, but preliminary data have been transmitted for only 11 HDs, to date.

Efforts to combat STH are carried out through the LF and SCH campaigns and took place during those MDAs. Deworming has been conducted in 59 out of 64 HDs in 11 regions. The remaining 5 HDs will be treated for LF with FPSU-L support.

Cote d'Ivoire

During this period, two MDAs were conducted by the NTDP with support from END in Africa (USAID funds): LF-Oncho MDA was conducted on May 20–24, 2016 in 41 HDs. A total of 9,351,299 people were treated (4,700,776 males and 4,650,985 females). The reported primary data shows

that treatment coverage was 90.82% (people treated divided by the target population) and epidemiologic coverage was 71.88% (people treated divided by the population at risk for LF and Oncho).

SCH MDA was conducted in March 2016 in 3 HDs and 363,869 adults were treated. The reported validated data show program coverage of 82.85% (people treated over the target population) and therapeutic coverage of 69.24% (people treated over the population at risk for SCH). This activity was not reported in the SAR 1, as it occurred at the end of the SAR 1 reporting period. In addition, the SCH MDA conducted by SCI treated 1,010,676 SAC (also not included in the SAR 1).

STH MDA conducted at the same time as LF-Oncho MDA in 16 HDs treated 749,830 people.

Ghana

Integrated LF/oncho/STH community-based MDA with ivermectin (IVM) and albendazole (ALB) was conducted in 105 districts in June and July 2016. Twenty-two LF-endemic districts received both medicines, while 85 districts endemic for oncho only received IVM. Two districts were co-endemic for LF and oncho. A few districts with large Muslim populations were treated in August due to Ramadan, which was ongoing during the treatment period. School-based treatment for SCH/STH should be completed in all 216 districts by the first week of October.

The Program conducted MDA for: LF in 22 districts targeting 1,461,756 people; Oncho in 85 districts treating 6,282,922 people; and SCH (for SAC & HRA above 5 years)/STH (SAC 5–14 years) in 216 districts. A total of 8,435,769 SAC and adults were treated for SCH and 7,028,381 SAC were treated for STH.

Niger

The FY16 MDA, which was originally planned to take place in November 2015, was split into two separate MDAs: four regions (Agadez, Dosso, Tillabéri and Zinder) held MDA in January–February 2016; the other four regions (Tahoua, Niamey, Maradi and Diffa) held MDA in April–May 2016. There were two primary reasons for this: 1) a large quantity of PZQ was set to expire in early 2016 and 2) Zithromax had arrived in Niger in November 2015, but the other drug was not expected to arrive until much later.

Following the official MDA launch on May 20, 2016, presided by the Deputy General Secretary of the Ministry of Public Health, other MDA activities started, such as social mobilization and advocacy. Then, MDA cascade training was held. In addition, a sensitization caravan traveled to 22 villages in the regions of Tahoua and Maradi to mobilize populations to participate in the MDA. Radio, community liaisons, and public criers were also used to encourage participation.

In addition to support from END in Africa, the Carter Center provided approximately 150,000 tubes of tetracycline eye ointment 1% (TEO) to treat children 0–6 months of age for trachoma. In addition, the Carter Center also provided support to move drugs from Zinder and Maradi, when it was discovered that the HD of Aguié had miscalculated its drug needs.

Three different drugs packages were distributed during the MDA: IVM+ALB, PZQ+ or -ALB;

END in Africa SAR: April 1, 2016–September 30, 2016

Zithromax + TEO 1%. A total of 7,189,384 persons were treated for LF in 23 HDs; 1,908,710 against SCH in 14 HDs; 8,340,596 against STH in 28 HDs; and 2,842,501 against trachoma in 9 HDs. However, it should be note that the data for the HD of Aguié (Maradi region) are not yet available.

Sierra Leone

The integrated LF-Oncho-STH MDA was conducted in 12 HDs from May 5–July 31, 2016. The NTDP report showed 4,202,381 eligible persons were treated, with an epidemiological coverage of 77% for LF & STH; and 2,709,504 eligible persons were treated for Oncho, with an epidemiological coverage of 76%. End-process monitoring results (IM) showed that 8,345 out of 9,734 persons interviewed (86%) recalled taking ivermectin (IVM) and albendazole (ALB).

The LF-STH MDA in WA was conducted from May 27–31, 2016. One additional week was also allowed to provide treatment for missed eligible persons. The DHMT-WA report showed that a total of 1,443,139 out of 1,854,284 eligible persons were treated, with an overall epidemiological coverage of 78%. The end-process IM results show that 6,521 out of 9,600 persons interviewed (68%) recalled taking IVM and ALB. There was a significant difference in coverage between DHMT reports versus IM. IM reports indicate that some households were not covered. This may be because some community health workers (CHWs) were not motivated to assist in the MDA, as they had just supported another health activity and payment was delayed. These issues were discussed with the DHMT-WA post MDA and operational actions have been taken to avoid similar problems in future MDAs.

In addition to HKI through the END in Africa project, Sightsavers and APOC have historically supported the NTDP for the oncho MDA in 12 HDs. Since APOC closed in December 2015, Sightsavers' support, which formerly solely supported the implementation of onchocerciasis activities, has been channeled into "a single funding basket" for all three co-endemic diseases (onchocerciasis, LF and STH).

Pre-MDA activities for SCH in the targeted 7 HDs commenced with HKI technical support and supervision through the END in Africa project during the reporting period. The MDA is scheduled for October 10–16, 2016 and will target 1,282,075 eligible persons. HKI, through the END in Africa project, is the sole partner for SCH MDA.

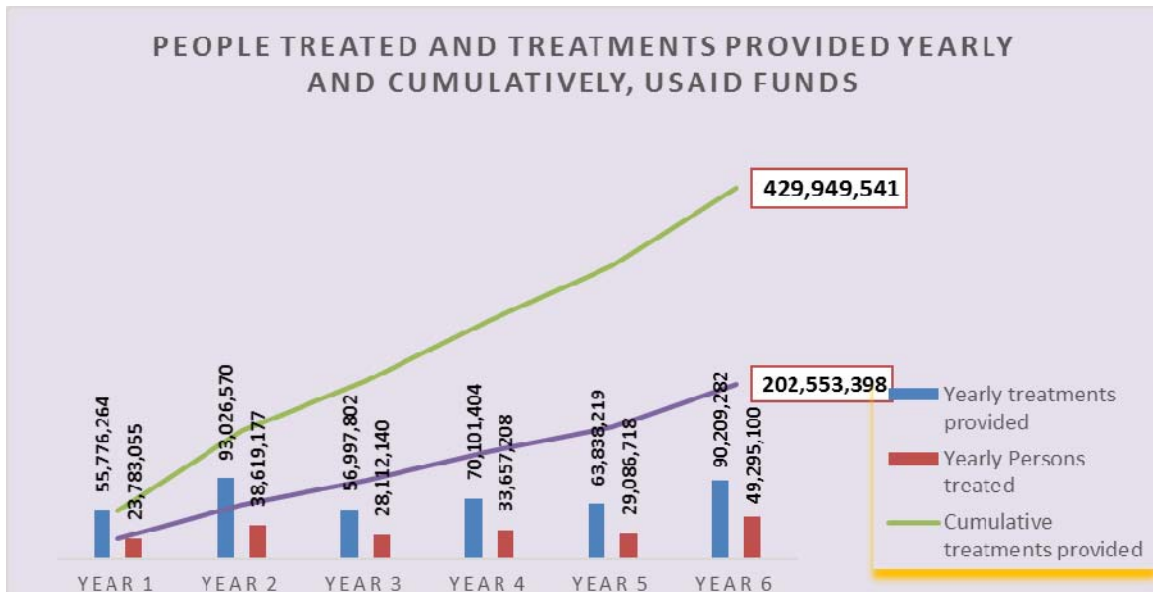
The NTDP relies on CDD census figures in rural settings and WHO-estimated numbers from national immunization days (NIDs) in urban settings to estimate MDA target populations and drug needs. The 2004 national population census was conducted just after the civil war, when many Sierra Leoneans were either internally or externally displaced. The census figures are not representative of the current population, which presents a significant challenge for the NTDP and partners working in the country. A national population and housing census was conducted in December 2015; the preliminary results show that the population is well over seven million. It is anticipated that the results of this census will reflect the true population of Sierra Leone and address issues regarding inaccurate population denominators in urban settings. However, it is not yet known when the results of the census will be available.

Togo

A nationwide integrated MDA to treat STH, SCH, and onchocerciasis was conducted in May/June 2016. The total of 1,952,032 people were treated for SCH, 1,962,590 for STH, and 2,903,894 for Onchocerciasis.

The graph below provides the total number of people treated and the number of treatments provided since the inception of the END in Africa project, by year and cumulatively.

Figure 1: Annual and Cumulative Treatments



The cumulative number of people treated for at least one NTD through END in Africa (USAID Funds) is 202,553,398 and the cumulative number of treatments provided is 429,949,541. The numbers of people treated and treatments provided increased by 30% and 25%, respectively, as of the last reporting period. The bulk of the increase is attributed to start-up of Cote d'Ivoire MDA (LF, SCH, STH, and Trachoma) in FY16. See Table 7.

During the June–July 2016 integrated community-based MDA for LF-Oncho-STH in Ghana, an SAE was reported involving a 4-year-old child who ingested one IVM tablet (3 mg) in an oncho endemic district. The child was diagnosed with Stevens-Johnson Syndrome four days after taking the medicine. He was admitted to hospital for treatment and subsequently discharged. An SAE report form was completed and the medicine's manufacturer, WHO, and the Federal Drug Administration were duly informed.

Impact Assessment

Disease-specific assessments (DSAs) conducted during the second half of FY 16 included: pre-TAS and TAS for LF; epidemiological and entomological surveys for oncho; impact assessment surveys for trachoma; and impact assessment for SCH and STH.

Burkina Faso

Pre-TAS took place in June 2016, in 14 sentinel sites in 7 HDs under USAID support (Manga, Po, Sapone, Kombissiri and the rural areas of the HDs of Boulmiougou, Signoghin, and Nongre-Massom). All of these HDs are eligible to conduct TAS 1 in FY17. FPSU-L and the World Bank were also each programmed to support 14 sites in 7 HDs. Because funding was not available to purchase supplies and materials for these surveys, END in Africa provided support for supplies/materials in an additional 10 sites in the FPSU-L HDs and in all 14 World Bank sites. Those partners did provide funding for field costs.

TAS 1 took place in 5 HDs (Zabré, Dédougou, Boromo, Sapouy, and Léo) in August 2016. All 5 HDs will stop MDA as of FY17. END in Africa supported all TAS 1 except in Zabré. Though as with the pre-TAS, END in Africa provided supplies and materials and FPSU-L paid the field costs in Zabré. TAS 2 surveys in 4 evaluation units (representing 15 HDs) and TAS 3 surveys in 4 EU (representing 11 HDs) are planned to start near the end of September 2016.

Under FY16 END in Africa support, the NTDP of Burkina Faso had planned to conduct integrated sentinel site surveys in 19 sites for SCH and STH. Eighteen HDs were surveyed in June–July 2016, with the last site planned for October 2016. SCH endemicity declined generally, with just two regions (Centre-Nord and Est) recording prevalence above 10% at the sentinel sites. STH prevalence was below 1% at all the sites.

The 7 HD that had planned trachoma impact surveys under END in Africa could not conduct the surveys in FY16 because WHO guidelines state that impact assessments must take place at least six months following the MDA (the FY16 MDA was delayed due to late arrival of Zithromax in the country). However, the funds reserved for the trachoma impact surveys were reprogrammed to support trachoma surveillance surveys. The surveillance surveys will take place in the HDs of Do, Léna, Zorgho, Boussé, Ziniaré, Banfora, and Boulmiougou before the end of the fiscal year.

Cote d'Ivoire

A sentinel site survey was conducted on April 3–22, 2016 in 39 health districts using Filariasis Test Strips (FTS) to determine the prevalence of LF in the population. Baseline data on microfilariae load is required to monitor the effectiveness of MDA. It was collected by assessing microfilaria in calibrated thick blood smears from samples collected between 10 pm and 2 am from people over 5 years of age in selected sentinel sites. A total of 10,928 people were surveyed; 53% males and 47% females.

Onchocerciasis epidemiology surveillance using skin snip, rapid test OV-16 and palpation of nodes was performed on July 17–August 4, 2016 and September 1–19, 2016 in 4 health districts. Forty villages per district were visited, with the target of examining between 6,400 and 9,600 people per village. The report for this activity is not yet ready.

Ghana

The trachoma pre-validation survey started in November 2015 and was completed at the end of March 2016. The final report was completed in May 2016. All 18 districts surveyed met the

required elimination target of less than 1% prevalence of trachomatous inflammation-follicular trachoma (TF) and all districts except Yendi met the required elimination target of less than 0.1% of total population testing positive for trachomatous trichiasis (TT). A TT case search in the remaining district is scheduled to start in October 2016 and preparations for putting together a Trachoma Elimination Dossier are ongoing. A trachoma elimination committee has been set up to guide dossier preparation and the process toward the declaration of trachoma elimination in Ghana.

The NTDP conducted TAS in 69 districts (28 EUs) in FY16. Due to the large number of districts involved, 7 EUs were completed in April 2016, and the rest were done when school resumed in May 2016 and completed in July 2016. All 28 EUs passed the TAS and results are being entered into a database before submission to the Regional Program Review Group (RPRG) for LF. Five of the districts conducting TAS 1 for stopping MDA later stopped MDA for LF. Pre-TAS was conducted in 6 districts in the second quarter of the year using the night blood survey method. Only one out of the six districts passed the pre-TAS. A consultant was hired to conduct quality control by re-examining all positive samples and 10% of negative samples. The results indicated that initial reading was valid. Recommendations were given to guide the NTDP on sample preservation, storage and identification. The installation of a laboratory information management system was also recommended.

Niger

During the reporting period, Niger received the final results for the FY15 TAS 1, conducted in April 2016 in Niamey II (now Niamey III and IV) and III (now Niamey V). In Niamey II, there were 0 positive cases out of 1,562 children surveyed; in Niamey III, there were 7 positives out of 1,576 children surveyed, though this was still below the critical cut-off. These HDs will stop MDA and begin monitoring as of FY17.

All HDs planned to undergo pre-TAS will finish between September and October 2016 (Aguié, Madarounfa, Tessaoua, Mayahi, Bouza, Keita, Tahoua, Illéla, Konni, Tchintabaraden and Gaya). Results will be shared when they become available. Among the 9 HDs programmed for TAS 1 in FY16, only Gouré will finish by the end of FY16. The others have been carried into FY17 (Matamèye, Magaria, Mirriah, Tanout, Zinder, Diffa, Maine Soroa, and N'guigmi). It should be noted that Tanout was not approved by the RPRG to carry out TAS 1; however, this appears to be due to errors in the TAS eligibility form, and HKI is encouraging the National Onchocerciasis and Lymphatic Filariasis Elimination Program (PNDO/ELF in French) to appeal the decision.

The onchocerciasis entomological surveys planned for FY16 are underway in the Téra, Say, Kollo and Boboye HDs. Prior to the surveys, fly capturers were trained on August 18–20 in the Say HD. Survey results are not yet available. Epidemiological surveys in the same HDs will begin shortly. None of these HDs have ever required MDA (all villages were hypo-endemic and below the treatment threshold); however, they all received treatment through the LF MDA. These surveys will indicate whether transmission has been interrupted. Results for both surveys will be shared when available, and will be used to populate the dossier for elimination validation.

The FY15 trachoma impact surveys concluded in March 2016 in N'guigmi. In the previous semi-END in Africa SAR: April 1, 2016–September 30, 2016

annual report, we did not yet have data to report. TF prevalence was 11.24% and TT prevalence was 0.58%. Based on the ITI decision-making tree, the HD will need to continue the MDA for at least three years before conducting a new impact survey. For FY16, the PNSO had planned impact assessments in 7 HDs. Four HDs will undergo these surveys at the end of September–October 2016 (Magaria, Matamèye, Gouré and Zinder Commune). The other 3 HDs (Aguié, Bilma and Tchirozérine), were carried over into the FY17 work plan. The PNSO had also planned to conduct several pre-validation surveillance surveys in FY16; the HDs of Kollo, Boboye, Dosso and Illéla will be finished by the end of October 2016. Several other HDs (Ouallam, Say and Filingué) were carried over into the FY17 work plan.

In addition, the PNLBG had planned to conduct sentinel site evaluations in 17 sites in FY16 for SCH; they are now planned to take place in September–October 2016.

Sierra Leone

DSAs using Kato-Katz for SCH and STH were conducted in April 2016 in 12 and 14 HDs, respectively. Results from the assessment and action-oriented conclusions can be found in the FY16 program workbook; results are also illustrated in the tables below. The results of the DSAs were used to redefine the FY17 treatment strategy, as described above in the MDA section. A total of 3,632 samples were collected and examined. Overall, *S. mansoni* prevalence was 20.4% (95% CI: 18.7–22.3) in the MDA-treated districts, ranging from 2.7% (95% CI: 1.2–5.3) in Bo, to 39.5% (95% CI: 34.0–45.3) in Kenema. The overall arithmetic mean intensity was 52.76 epg (95% CI: 43.16–62.36 epg). This was a significant reduction from the 2008/09 baseline prevalence of 42.2% (n=1758) and arithmetic mean intensity 100.46 epg (95% CI: 88.71–112.22). In 2016, 73 children had heavy infections (3.7%) and 116 had moderate infections (5.9%), a significant reduction from a respective 6.8% and 14.9% in 2008/09 (p<0.0001). Of the 40 chiefdoms studied in 2016, 5 (13%) had high prevalence, compared with 23 out of 60 chiefdoms (38%) at baseline.

Prevalence of *Ascaris lumbricoides* and *Trichuris trichiura* infections was a respective 4.4% and 0.7% in 2016, compared with a respective 4.6% and 2.1% at baseline in 2008/9. Overall prevalence of hookworm infections was 14.9% (95% CI: 13.8–16.1) in 2016, ranging from 1.2% in Kambia to 33.1% in Bonthe, compared with overall infection prevalence of 35.7% in 2008/9. The arithmetic mean hookworm infection intensity in all children examined was 45.52 epg (95% CI: 35.96–55.07 epg). Only 3 children had heavy and 9 had moderate infections (0.08% and 0.25%, respectively) in 2016. There is no baseline for intensity of hookworm infection due to uncertain data quality.

Togo

Collaboration among the Integrated NTD Program, HDI-Togo, and the Onchocerciasis Program is being strengthened. The MOH, HDI, and the Onchocerciasis Program are collaboratively developing detailed and integrated implementation plans at the central level for distribution of medications and data analysis. In addition, USAID has agreed to fund a number of onchocerciasis surveillance activities, which requires a new level of collaboration among the Onchocerciasis Program, the Integrated NTD Program, and HDI.

Two onchocerciasis elimination committee meetings were held during this six-month period, one of which included external experts. These meetings involved compilation and review of all END in Africa SAR: April 1, 2016–September 30, 2016

available data and identification of data gaps. Specific next steps were outlined for each area of the country; some areas need intensified interventions, some need additional surveillance data, and some are ready for stop-MDA assessment. These meetings were very successful, and the next meeting will occur in several months. The epidemiological evaluation was done in 18 districts, but the results are not yet available.

Three countries (Burkina Faso, Niger, and Sierra Leone) noted challenges with M&E activities:

Challenges in Burkina Faso: The persistent endemicity of certain NTDs (despite several rounds of MDA) and the multiplicity of data collection materials are two remaining M&E challenges. Operational research is also needed to obtain proof of the efficacy of the LF NTD drugs and that there is no resistance by the parasite. Operational research on controlling the reservoir of *Schistosoma mansoni* and the development of a SCH elimination plan are also needed to enable Burkina Faso to eliminate NTDs.

Challenges in Niger: A continuing challenge is the fact that different denominators are being used by different levels in the health systems and even by different disease programs. For example, for the last MDA, certain HDs were using population figures from 2014, 2015, and 2016. For FY17, this will be resolved by asking the statistics bureau to provide population figures to the NTDP and HKI prior to the MDA, and to send those figures to each HD for use in quantifying drugs and calculating coverage.

Another issue is the length of time it takes for data to be transmitted. In FY17, there is a budget line to involve the Regional Epidemiological Surveillance Managers in the MDA. They will be responsible for collecting the data after each disease packet is distributed and sending it to the national level. Previously, the NTD focal points compiled the data in many cases; however, many are not trained in data management and analysis.

Finally, security remains an issue in the region of Diffa, given continued attacks by Boko Haram. This has had a large impact on the ability to supervise activities; however, the Ministry of Health has given the directive that activities are still to be carried out (thus the PNSO and the PNDO/EFL carried out impact assessments and pre-TAS in this region in FY16). The Government supports these activities through the region's administrative authorities.

Challenges in Sierra Leone: A major challenge encountered during the DSAs for SCH and STH was the poor road network, especially in the riverine districts (Pujehun, Moyamba, Bonthe). Survey teams had to hire boats and canoes to access these areas. Additional days were provided for team members to achieve their objective. In addition, communities were resistant to sample collection due to the recent Ebola outbreak and in some cases, teams were unable to collect samples.

Poor road networks also posed challenges for the national program, HKI and other partners, who could not monitor activities in inaccessible communities. In addition, IMs find it very difficult to access villages with inaccurate boundary demarcations and/or misspelled names in the Statistics Sierra Leone (SSL) enumeration listings or sample frame. These issues will hopefully be addressed

by SSL, as a recent national population and housing census was conducted in December 2015.

Training

In this reporting period, a total of 136,584 people were trained to conduct and/or supervise MDAs and to perform M&E related activities. Training sessions were cascaded and organized mainly around MDA or DSA activities. Reported data shows 34,007 women and 102,577 men were trained in the second half of FY16. The number of trainees by category is presented in Table 15 of Appendix 1.

M&E Technical Assistance and Capacity Building

FHI 360 and partners continued to support the countries in developing sustainable NTDP M&E systems. During the reporting period, the END in Africa project continued to collaborate with NTD partners (Task Force for Global Health, WHO HQ, and RTI) to determine the way forward on post-MDA surveillance for LF and Trachoma, based on current WHO guidelines for the two diseases and experiences in post-MDA surveillance in the 6 END in Africa countries. TA was provided for routine activities and requested ad hoc activities, based on country needs.

Technical assistance was provided to the following countries by the END in Africa M&E advisor:

- *Sierra Leone* (August 1–6, 2016): Trained MOH and HKI staff on data quality assessment, the NTD database, WHO reporting and drugs request forms.
- *Ivory Coast* (August 8–20, 2016): The M&E advisor participated in DQA training and implementation in the field. The training was conducted on August 8–14, 2016 and the DQA was conducted on August 15–20, 2016 in the health regions of Goh (Gagnoa HD) and South-1 Abidjan (Grand Lahou HD). The DQA was based on data verification and systems assessment of the LF-Oncho-STH MDA conducted in May 2016. DQA results were sufficient for the quality of reported data and there is room for improvement on data filing systems.
- *Project countries* (May–August 2016): The M&E advisor, project director and associate director (technical) supported the FY17 work planning process for the END in Africa project.

Knowledge Management

END in Africa recognizes the importance of keeping the broader NTD and global health community informed about the project's and countries' progress toward eliminating and controlling NTDs. As END in Africa project lead, FHI360 carefully documents and shares information regularly through multiple formats, in addition to supporting the USAID NTD communications team as well as cultivating partnerships in the NTD and related communities. Specifically, the team:

1. Informs countries, partners, donors and colleagues in the NTD community about the project's progress and impact to date;
2. Creates or contributes to dialogue among the NTD community on shared challenges, issues and concerns;
3. Showcases cost efficiencies, improved equity in healthcare and the public health impact of NTD control efforts and advocates for the expansion of partnerships and funding for such efforts;

4. Multiplies the project's impact by informing NTD control efforts in non-END in Africa countries that are still struggling to control NTD transmission; and
5. Improves awareness about NTDs among global health professionals and the general public.

Major activities completed during the second half of FY16:

- Scripted, filmed, produced and disseminated a 17-minute documentary video on trachoma in Ghana, titled "The End Is Near: Ghana's Trachoma Story," which includes the stories, perspectives, and experiences of Ghana's NTD Coordinator Dr. Nana, an ophthalmological nurse/surgeon, a CDD, and a former trachoma patient, as well as footage of school children learning about trachoma prevention, formerly trachoma-endemic communities, MDA, and surveillance activities.
- Coordinated NTD partner web and social media content sharing and promotion for the month of July 2016, as part of a coordinated 6-month effort leading up to the USAID NTD Program's 10th Anniversary celebration in September 2016. Produced a web content calendar for the month with content from various NTD partners, coordinated outreach on twitter and other social media using agreed and shared hashtags (#NoMoreNTDs and #BeatNTDs). Wrote, produced and disseminated 3 coordination e-newsletter updates to participating NTD partners.
- Provided content for RTI, CDC, HKI's MMDP project and USAID/GH during the months each was with coordinating partner content and social media outreach in the 6 months leading up to the USAID NTD Program's 10th Anniversary celebration. Promoted and participated in the CDC's Twitterchat in June 2016 as well as in the HKI MMDP Project's Twitterfest in August 2016.
- Developed, wrote, designed, edited and produced 6 END in Africa country brochures and 1 END in Africa Project factsheet.
- Updated content on the Approach, Progress, and Impact sections of the END in Africa website. The website is the END in Africa project's most important knowledge management and communication tool. It showcases the project's progress, results, success stories, lessons learned and impact.
- Coordinated, researched, wrote, edited, produced and published 6 success stories, articles or blog pieces. See below for the publication schedule. These included:
 1. [Early Review Enables Quick Learning: END in Africa's Initial Activities in Cote d'Ivoire](#)
 2. [Can Togo meet the 2020 target for elimination of onchocerciasis as a public health problem?](#)
 3. [The Beginning of the End: Ghana's Trachoma Elimination Program](#)
 4. [Sustainability Framework Offers Possible Roadmap to Lasting Impact on NTDs](#)
 5. [Africa's First Generation Free from Lymphatic Filariasis: Togo's Triumph over an Infectious Disease](#)
 6. [Enabling sustainability through advocacy: Key principles to better articulate program value and advance program objectives](#)
- Composed, posted and tracked tweets and tweet conversations on the END in Africa

Twitter account so as to broaden the reach of END in Africa's success stories, progress and news; raise awareness about project results, best practices, and lessons learned; engage and strengthen alliances with partners and colleagues in the NTD community; and increase engagement and information exchange with the public and the NTD community.

- Between March 15, 2016 and September 30, 2016, the END in Africa website had 2,389 total visitors, who viewed a total of 4,534 pages. Of the visitors, 80% were first-time visitors; the remaining 20% were repeat visits from people who had visited the website previously at least once.
- END in Africa's influence in the Twittersphere has grown by 31% between March 15, 2016 and September 30, 2016, increasing from 397 to 519 followers. The project has been using the @ENDinAfrica Twitter feed strategically to increase awareness and engage NTD partners and related communities on issues involving NTD control and elimination. Over this time period, @ENDinAfrica was mentioned 27 times in tweets by other organizations and END in Africa tweets were retweeted 62 times by others.
- Updated END in Africa's SharePoint site with photos and KM-related content.
- Continued work to broaden and maintain collaborative partnerships with organizations in the broader NTD and knowledge management communities, and shared and exchanged information, publications, data, photos or other knowledge products with the same. Worked with the US CDC, HKI's MMDP project team, Sightsavers, the Carter Center, Sabin Vaccine Institute, RTI, IDA Foundation, K4Health Idea Lab, and Merck to share NTD innovations and solutions.
- Provided editorial and quality control services to END in Africa partners and sub grantees on various publications to improve product quality and ensure compliance with USAID publication guidelines and the END in Africa Branding and Marking Plan.
- Updated and expanded END in Africa's contact and information dissemination database; used this database to disseminate key project success stories and articles of interest throughout the semester.
- Continued to coordinate, support and maintain the END in Africa article publication schedule and tracking tool. The tool ensures timely, well-researched, effective dissemination of information on the successes of project implementation in the beneficiary countries, including success stories, lessons learned and best practices. It is used to track publications submitted in peer-reviewed journals, as well as technical articles and blog posts. More specifically, the project team is using the tool to identify, schedule and track the progress of articles as they move from the conception stage to final publication; it is particularly useful for ensuring the integrity and accuracy of articles and publications requiring input, collaboration and approval from multiple parties.
- Contributed to group discussions on the NTD Communicators Google Group, KM4DEV, HIPNET and the Infectious Diseases listserv. These groups aim to increase collaboration among knowledge and communications managers through information and network sharing, cross-promotions, and creation of synergies.
- Worked with staff from RTI, the Sabin Vaccine Institute, the Carter Center, HKI's MMDP project, Merck, and the Trachoma Coalition to expand collaboration and joint communication efforts.
- Responded to public requests for information on the END in Africa project.

- Worked with ENVISION to promote ENVISION’s NTD webinar series.
- Developed, coordinated and produced materials for the September 2016 NNN Partners Meeting in Washington, DC.
- Migrated the END in Africa website to a WP Engine server to improve security and content availability.

Cracking the Nut Health 2016

Kimberly Switlick-Prose and Kate McNabb presented at the first annual flagship *Cracking the Nut Health* conference July 18-19, 2016 in Washington, DC. *Cracking the Nut Health* historically has been a popular agriculture development conference, attended by USAID and the donor community. This year’s *Cracking the Nut Health* focused on transforming how we design global health interventions and channel investments to build resilient health systems that are responsive to clients and communities. Deloitte’s symposium presentation was titled, “From Strategic Partnerships to Sustainable Partnerships: Creating Shared Value to Create Resilient Health Systems and Social Impact.” The presentation involved a discussion around Deloitte’s four-block sustainability framework, and interactive activities to demonstrate value chain analysis, ecosystem mapping, and shared value articulation.

Sustainability Handbook

During this period, we finalized the *Sustainability Handbook*, designed as a reference for country NTDP teams and their organizations to use for sustainability planning. The handbook is organized into sections for each sustainability planning framework building block: financial analysis and strategy; advocacy and communications; strategic social partnerships; and organizational capacity. Each section is further divided into subsections that serve to familiarize the reader with the terms, approaches, and tools required to improve program sustainability. Key terms and concepts are defined in clear language, to avoid using unfamiliar jargon. The handbook contains:

- Step-by-step instructions and recommended approaches for taking action, including examples and illustrative processes
- Supplementary tools and processes
- Key takeaway messages and leading practices
- Practical exercises for applying concepts and approaches, presented through activities and templates.

The handbook and executive summary will be published and available online in FY17.



Table 2: Suggested Topics for Publications in FY2017

No.	Suggested Title	Summary	Type of publication (Peer reviewed paper- PRP; Article-A; Blog-B)			Time frame	Comments
			PRP	A	B		
1.	Elements to consider for NTD Program sustainability	Series of 3–4 blog posts from Deloitte on the main activities required for NTD program sustainability (advocacy, strategic partnerships, etc.)			Yes	Sept/Oct. 2016	Deloitte and Kathy
2.	10th anniversary of USAID’s NTD Program from the perspective of END in Africa	Highlights of END in Africa’s contributions to USAID’s NTD Program portfolio as it marks its 10th anniversary			Yes	Oct 2016	JBK, Kathy and Egide
3.	Plans for FY17 within END in Africa implementing countries	Brief summary of the main activities in the FY17 work plan			Yes	Nov 2016	JBK, Kathy and Egide
4.	Elements to consider for NTD Program sustainability	Series of 3–4 blog posts from Deloitte on the main activities required for NTD program sustainability (advocacy, strategic partnerships, local resource mobilization, etc.)			Yes	Dec 2016	Deloitte and Kathy
5.	Addressing cross border transmission of NTDs in END in Africa implementing countries	This will be an article that will underline the need for strengthening cross border surveillance in light of the recent Ebola outbreak			Yes	Jan 2017	JBK, Kathy and Egide
6.	Witnessing mass drug administration for NTDs in END in Africa implementing countries	A report on field visit			Yes	Feb 2017	JBK, Kathy and Egide
7.	Elements to consider for NTD Program sustainability	Series of 3–4 blog posts from Deloitte on the main activities required for NTD program sustainability (advocacy, strategic partnerships, etc.)			Yes	Mar 2017	Deloitte and Kathy
8.	Surveillance framework for trachoma and LF	This will be a brief summary on the surveillance framework that will be developed for the 2 NTDs			Yes	Apr 2017	Molly, JBK, Kathy and Egide
9.	Implementing TAS in Sierra Leone	A report of the TA that will be provided to the NTDP for the TAS	Yes		Yes	May 2017	JBK, Kathy and Egide
10.	Progress on NTDs in Burkina Faso	An update on progress to date on NTD control and elimination in the country			Yes	June 2017	JBK, Kathy and Egide
11.	Progress on NTDs in Niger	An update on progress to date on NTD control and elimination in the country			Yes	July 2017	JBK, Kathy and Egide
12.	Progress on NTDs in Cote d’Ivoire	An update on END in Africa’s activities in Cote d’Ivoire in the first year (or 18 months) of operations in the country			Yes	Aug 2017	Serge, JBK, Kathy and Egide
13.	END in Africa report card for FY2017	Summary of activities and impact during the year			Yes	Sept 2017	JBK, Kathy and Egide

**Please note some of the topics listed here can also be changed/replaced based on developments within the project. The titles can also be modified based on the final content of the publication.*

Major Activities for the Next Six Months

Program Management and Implementation (FHI 360):

- Continue to provide technical support and leadership to END in Africa sub-grantees and NTDPs in countries where the project is operating, including design, development, planning, implementation, execution, capacity-building, and evaluation of NTD projects and programs at the country and regional levels.
- The project technical advisor will provide technical assistance to address requests from the NTDPs in the END in Africa implementing countries in FY17.
- Continue to improve coordination and collaboration with other organizations and agencies involved in the control/elimination of the 5 NTDs targeted by the END in Africa project.
- Continue to work with sub-grantees, NTDPs and colleagues of the END in Africa consortium to document program successes, best practices and lessons learned, and to improve visibility of the END in Africa project.
- Participation in USAID's NTD partners meeting on December 7–8, 2016 in Washington DC, USA.
- Continue to support general coordination of the END in Africa project by ensuring that the NTDPs in the 6 END in Africa implementing countries submit requests for impact assessment surveys (pre-TAS, TAS, trachoma impact assessment) to the WHO NTD RPRG for approval before the surveys are conducted. We will also ensure that reports from these surveys are submitted to the NTD RPRG for review, acceptance and guidance on the way forward.

Financial Management and Capacity Building (Deloitte):

Anticipated priorities for the next six months (October 1, 2016–March 31, 2017) are listed alphabetically by country below.

Cote d'Ivoire

- Implement a maturity model/intro to sustainability workshop
- Introduce basic data management and planning tools
- Establish a country coordinating mechanism to support NTDP integration, coordination & implementation
- Support TIPAC updating and provide data analysis coaching

Ghana

- Provide ongoing support to the Ghana country team on financial performance/management of the NTD program
- Continue to mentor and train the NTD team in program planning, management, and implementation to support FOGs and financial systems
- Continue dialogue with private firms, NGOs, civil society, and policy makers to identify partners and possibly mobilize resources
- Develop a quarterly review meeting with all partners (both resource and implementation) to assess the performance of the NTDP Finance Strategy and PMP; use the outcome of the reviews to identify areas of the GHS/NTDP financial management system that require strengthening
- Prepare and implement training/mentorship to address financial management and analysis weaknesses
- Support finalization of GHS SSP Strategy and Advocacy and Communication Plan

Togo

- Work with the NTDP to finalize the NTD finance strategy
- Implement advocacy planning work sessions and begin creation of a tailored Advocacy and Communication Plan for the Togo NTDP
- Support the preparation of the partners' meeting
- Support refinement of the NTD Master Plan
- Support TIPAC updating and analysis (targeted for FY17 Q1 to avoid conflicts with MDAs)

Additional anticipated priorities/activities for the next six months (October 1, 2016–March 31, 2017) are listed below by implementing partner.

Burkina Faso (HKI)

- Second round of LF/oncho MDA in the Sud-Ouest (had originally been planned for FY16);
- Second round of the SCH campaign in the Centre-Est (had originally been planned for FY16);
- TAS 2+STH surveys and TAS 3+STH surveys (FY16);
- Trachoma surveillance surveys implemented in 7 HDs (FY16);
- M&E plan finalized for the NTD 2016–2020 strategic plan (FY17);
- Technical assistance for DQA in two regions (FY17);
- Cascade training for the FY17 MDA (central, regional HD, health center and community levels) (FY17);
- A workshop to develop a trachoma elimination plan for 2017–2020 (FY17);
- Trachoma impact surveys in 15 HDs (FY17);
- Training on utilization of the integrated NTD database for 30 staff (FY17);
- Regional and HD advocacy days with administrative, political, traditional and religious authorities before beginning MDA (FY17);
- Pre-TAS in 12 LF sentinel/control sites in 3 HD (FY17)

Niger (HKI)

- Carry out the FY17 MDA in two phases (November 2016 and March 2017):
 - SCH in 28 HDs
 - STH in 11 HDs
 - Trachoma in 7 HDs
 - LF in 21 HDs
- Independent monitoring in 6 HDs during the FY17 MDA.
- Disease-specific assessments:
 - Completion of onchocerciasis epidemiological and entomological assessment in 4 HDs
 - Completion of trachoma impact assessments planned for FY16 and those planned for early FY17 (Magaria, Gouré, Matamèye, Zinder, Bilma, Tchirozérine and Aguié)
 - Trachoma surveillance surveys in 3 HDs (Fillingué, Ouallam, and Say)
 - Sentinel site surveys for SCH (17 sentinel sites)
 - TAS 1 surveys in 8 HDs (Matamèye, Magaria, Mirriah, Tanout, Zinder, Diffa, Maine Soroa, and N'guigmi). NB: The RPRG did not approve Tanout to conduct TAS 1; however, this was because of an error in coverage data transmitted with the TAS eligibility form. HKI is encouraging the PNDO/EFL to submit an appeal.

- Distribution of the new NTD strategic plan
- Onchocerciasis Elimination Committee meeting
- A national workshop to revise the MDA data collection materials
- Coordination meetings
- Meetings with the Governors to sign the FOGs
- Cascade training for MDA

Sierra Leone (HKI)

- Development of NTD curriculum
- Procurement of materials for an NTD survey
- DQA in 4 HDs in November 2016
- An NTD annual review meeting in December 2016
- TAS 1 in 8 HDs in January 2017
- Pre-TAS in 6 HDs in February 2017
- Oncho epidemiological survey in 12 HDs in March 2017

Ghana (FHI 360)

- Pre-TAS in 9 districts using FTS kits.
- TAS in 9 districts grouped into 3 evaluation units (EUs)–TAS for stopping MDA (TAS 1) in 2 districts and first post-MDA TAS (TAS 2) in 7 districts.
- Advocacy meetings in 8 regions to communicate implications for stopping treatment for LF in 81 districts, timelines for TAS after stopping treatment as a post-treatment strategy and how to return unused medicines from communities to the Regional or Central Medical Stores.
- Action plan to address poor SCM of NTD medicines, reduce wastage and improve accountability.
- An impact assessment in 151 districts to determine the status of oncho in the country using a combination of Ov16, O-150 PCR and skin snip tests. The assessment will be conducted in the following categories of districts:
 - 85 districts currently receiving treatment
 - 50 hypo-endemic districts not receiving treatment
 - 16 additional previously untreated districts with indications of infection (to determine if treatment is required).
- Prospection of black fly breeding sites to update sites to be used as assessment sites during the elimination program phase. This will be supported by END Fund.
- Establishment and operationalization of an Oncho Elimination Committee, as required by the new oncho guidelines for stopping MDA and for validation of elimination.
- Assessment of SCH in 2 districts in the catchment area of the recently constructed Bui Hydroelectric dam using Urine Filtration and Kato Katz methods.
- A case search to estimate the trachomatous trichiasis (TT) backlog in one district (which did not meet the TT elimination criteria of $TT < 0.1\%$).
- Training for 5 ophthalmic nurses in TT surgery for the post-elimination phase. This will be funded by Sightsavers.
- Compilation of the trachoma elimination dossier for submission to WHO

Cote d'Ivoire (FHI 360)

- Annual meeting on LF-Oncho-STH-trachoma activities
- Development, testing and validation of communication and social mobilization materials and tools

- Capacity building for staff and volunteers for the FY17 MDA
- Media plan and broadcasting around LF-Oncho-STH-Trachoma
- Development of sensitization materials for SCH and trachoma
- SCH MDA
- Training of assessors and implementation of the trachoma impact survey in Bouna district
- Training for two teams on oncho epidemiological surveillance and assessment in 6 HDs
- International trip for cross-border meeting on synchronized LF-Oncho MDA

Togo (HDI)

- MDA in high-STH-, SCH-, and onchocerciasis-burden areas; Produce report on May/June 2016 MDA; and Onchocerciasis surveillance activities in high prevalence areas in October 2016
- Oncho surveillance activities in high prevalence areas; participate in ASTMH meeting in Atlanta, GA (HDI-Togo and HDI-HQ teams); and Oncho elimination committee meeting in November 2016
- October 2016 MDA data collected, entered, and analyzed in December 2016
- Onchocerciasis elimination meeting; MDA training materials refinement; NTD Program stakeholder meeting; Finalization of MDA microplans and budget in January 2017.
- Reproduction of MDA training materials; Revise, produce, distribute messages for social mobilization; Receive all medication; Community Sensitization in high onchocerciasis prevalence villages in February 2017.
- Preparations for April 2017 MDA; Finalize Praziquantel application; Training of supervisors, nurses, and CDDs; Onchocerciasis surveillance activities in March 2017.

SCM:

- Support NTDPs in receipt of PZQ supplies, FTS, OV16, and TEO procured by the END in Africa project for FY 17.

M&E:

- Coordinate data management, documentation and dissemination within the END in Africa project.
- Roll out the DQA tool in supported countries for data quality improvement.
- Support general capacity building efforts within countries by directly providing TA to countries on M&E-related activities according to approved work plans.
- Train and advise sub-grantees and NTDPs on the use of M&E tools and implementation of M&E processes, including indicators; data collection techniques, methodologies, activities and analysis; and reporting protocols.
- Monitor the design and implementation of DSAs to ensure that they are executed according to WHO guidelines.
- Support general project M&E coordination and ensure that program countries adhere to proper DSA/impact assessment survey timelines and protocols (reviews, approvals and guidance).
- Monitor project performance, including NTDP coverage and progress toward stopping district and/or sub-district MDA.
- Participate in the supervision of MDA campaigns in the 6 END in Africa implementing countries.

Table 3

Travel Plans for Fiscal Year 2017

Traveler	From	To	# Trips	Duration	Month	Purpose
Bolivar Pou, Project Director	W/DC	Burkina S Leone Ghana Ivory Coast	6	1 week each	May June July	FY2017 Country work planning sessions with key stakeholders.
Egide Ndayishimye, M&E Specialist	Ghana	Burkina Niger Togo S Leone Ivory Coast	5	1 week	May June July	Participate as NTD M&E technical resource in the development of country work plans.
Joseph Koroma Assoc. Technical Director	Ghana	Burkina Niger Togo S Leone Ivory Coast	5	1 week	May June July	Participate as NTD technical resource in the development of country work plans.
Bolivar Pou, Project Director	W/DC	Ghana	1	1 week	April	Semi-annual review. Partners Meeting.
Bolivar Pou Project Director	W/DC	Ivory Coast Ghana S Leone	3	1 week each	TBD	Field trip for monitoring project implementation.
Bolivar Pou, Project Director	W/DC	Ghana	1	2 weeks	August	END in Africa Work plan 2017
Yudaya Mawanda, Senior Program Officer	W/DC	Ghana Ivory Coast	2	2 weeks in each country	April August	Preparations for END in Africa Partners Meeting Provide operations management support
Egide Ndayishimye, M&E Specialist	Ghana	Geneva W/DC Niger Burkina S Leone Ivory Coast	10	TBD	TBD	Capacity building on DQA tool & workbooks management prior to semiannual reports submission to ensure data quality and timely reporting. Technical meetings in Washington, DC. International NTD events in coordination with USAID. Special emphasis will be placed on strengthening the program in Niger.
TBD/Project Management Specialist Deloitte	W/DC	Ivory Coast Togo	2	1 week in each country	TBD	Continue support for TIPAC in Ivory Coast. In Togo and Ivory Coast: Mentoring on Project Management. Resources mobilization.
Kimberly Switlick-Prose Resources Mobilization Deloitte	W/DC	Ghana	1	1 week in each country	TBD	Continue capacity building on Resources Mobilization in Ghana.
Joseph Koroma Associate Technical Director	Ghana	W/DC WHO Niger Burkina Togo S Leone Ivory Coast	10	TBD	TBD	Provide technical support for projects implementation. Technical meetings in Washington, DC. International NTD events in coordination with USAID.
MOH NTD Focal Points TBD	Ghana Burkina Niger Togo S Leone	TBD	5	TBD	TBD	Sponsor NTD focal points in WHO AFRO meetings, trainings, International conferences, technical meetings, and workshops. USAID individual approval will be requested for each trip.

Traveler	From	To	# Trips	Duration	Month	Purpose
	Ivory C					
US-based short-term technical assistance (STTA) provider	W/DC	Togo Niger Burkina Niger S Leone Ivory Coast	3	TBD	TBD	Short-term technical assistance according to specific countries needs per MOH requests. This is a place holder for a pool of trips for STTA in response to country requests, upon USAID approval of each individual trip.

Appendices

Appendix 1: MDA Reporting of Integrated NTD Control

Table 7: Number of people treated, All funding, FY16

NTD	Ghana	Niger	Sierra Leone	Togo	Burkina Faso	Côte d'Ivoire	Total treated FY16
LF	1,289,344	7,189,384	5,645,521	NA	4,701,894	12,265,384	31,091,527
Oncho	3,783,260	0	2,709,504	2,903,894	157,521	0	9,554,179
SCH	0	1,908,710	0	1,952,032	8,472,915	1,368,545	13,702,202
STH	315,888	8,340,596	5,645,521	1,962,590	9,276,651	12,265,384	37,806,630
Trachoma	NA	2,842,501	NA	NA	4,387,988	0	7,230,489
Treatments provided	5,388,492	20,281,191	14,000,546	7,605,125	26,996,969	25,899,313	100,171,636
Treated for at least one NTD	4,967,247	8,884,258	5,645,521	3,333,244	11,735,579	18,098,387	52,664,236

Table 8: Number of people treated through USAID funding, FY16

NTD	Ghana	Niger	Sierra Leone	Togo	Burkina Faso	Côte d'Ivoire	Total treated FY16
LF	1,289,344	7,189,384	5,645,521	NA	4,701,894	9,351,761	28,177,904
Oncho	3,783,260	0	2,709,504	2,903,894	157,521	0	9,554,179
SCH	0	1,908,710	0	1,952,032	8,472,915	363,869	12,697,526
STH	315,888	8,340,596	5,645,521	1,962,590	9,276,651	12,265,384	37,806,630
Trachoma	NA	2,842,501	NA	NA	4,387,988	0	7,230,489
Treatments provided	5,388,492	20,281,191	5,645,521	7,605,125	26,996,969	15,943,099	81,854,257
Treated for at least one NTD	4,967,247	8,884,258	14,000,546	3,333,244	11,735,579	14,729,251	57,650,125

Table 9: Gender distribution: Percentage male treated over the females by NTD and by country, FY16

Country	LF		Oncho		SCH		STH*		Trachoma	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Burkina Faso	48.33%	51.67%	49.37%	50.63%	50.00%	53.76%	47.40%	50.61%	47.26%	49.04%
Côte D'Ivoire	50.27%	49.73%	0	0	53.94%	46.06%	34.43%	32.16%	0	0
Ghana	48.10%	51.90%	48.41%	51.59%	0	0	N/A	N/A	N/A	N/A
Niger	49.24%	50.76%	-	-	48.00%	52.00%	49.07%	50.93%	47.24%	52.76%
Sierra Leone	48.95%	51.05%	48.45%	51.55%	-	-	48.95%	51.05%	NA	NA
Togo	N/A	N/A	48.68%	51.32%	47.33%	52.67%	N/A	N/A	NA	NA

*Ghana and Togo did not report the STH treatments data desegregated by gender to determine a percentage of gender distribution.

**Table 10: Number of people treated for at least one NTD, USAID funds, annually
accumulative number treated, as of SAR 2 FY16, USAID FUNDS**

Country	2011	2012	2013	2014	2015	2016	Accumulative
Burkina Faso	9,953,928	11,425,882	10,766,545	9,806,303	7,896,218	11,735,579	61,584,455
Côte d'Ivoire	N/A	N/A	N/A	N/A	N/A	14,729,251	14,729,251
Ghana	0	8,932,210	8,260,837	9,620,862	4,845,599	4,967,247	36,626,755
Niger	8,672,220	10,226,100	960,145	9,907,579	9,068,274	8,884,258	47,718,576
Sierra Leone	3,908,514	5,242,394	5,214,790	4,091,497	4,065,939	5,645,521	28,168,655
Togo	1,248,393	2,792,591	2,909,823	230,967	3,210,688	3,333,244	13,725,706
Total	23,783,055	38,619,177	28,112,140	33,657,208	29,086,718	49,295,100	202,553,398

**Table 11: Accumulative Number Treated, as of SAR FY16, USAID Funds
ACCUMULATIVE NUMBER OF TREATMENTS PROVIDED, AS of SAR 2 FY16,
USAID FUNDS**

Country	2011	2012	2013	2014	2015	2016	Accumulative numbers
Burkina Faso	20,842,690	24,460,183	20,094,365	19,815,380	15,988,314	26,990,829	128,191,761
Côte D'Ivoire	N/A	N/A	N/A	N/A	N/A	15,943,099	15,943,099
Ghana	0	20,315,518	14,712,196	14,681,359	5,492,502	5,388,492	60,590,067
Niger	22,417,876	28,004,828	1,822,325	24,523,339	24,920,461	20,281,191	121,970,020
Sierra Leone	10,263,686	14,754,384	14,670,706	10,850,359	10,774,071	14,000,546	75,313,752
Togo	2,252,012	5,491,657	5,698,210	230,967	6,662,871	7,605,125	27,940,842
Total	55,776,264	93,026,570	56,997,802	70,101,404	63,838,219	90,209,282	429,949,541

**Table 12: Districts endemic at baseline and number of districts that stopped MDA,
by NTD SAR 2 FY16**

Country	# Known endemic districts by September 2016				
	# Districts stopped PC (at least at district level for trachoma), by end SAR2, FY16				
	LF	Oncho	SCH	STH	Trachoma
Burkina Faso	70	70	70	70	48
	45	64	0	0	29
Côte d'Ivoire	61	67	80	82	9
	0	0	0	0	0
Ghana	98	85	216	216	37
	76	0	0	0	37
Niger	31	NA	41	41	35
	10	NA	0	0	22
Sierra Leone	14	12	12	14	NA
	0	0	0	0	NA
Togo	8	32	35	28	NA
	8	0	0	0	NA
Total	282	266	454	451	129
	139 (50%)	0 (0%)	0 (0%)	0 (0%)	88 (68.21%)

*#s in red are endemic districts and #s in black are districts that were endemic but have stopped treatment.

Table 13: Number of districts assessed during SAR 2 FY16

Country	Pre-TAS	TAS	TAS 1	TAS 2	SCH	STH	Trachoma	Oncho
Burkina Faso	7	5	15	11	0	0	0	Epi Eva: 0 Ento: 0
Ghana	6	5	64	0	0	0	0	Epi Eva: 0 Ento: 0
Niger	0	0	0	0	0	0	0	Epi Eva: 0 Ento: 0
Sierra Leone	0	0	0	0	12	14	NA	Epi Eva: 0 Ento: 0
Togo	NA	NA	NA	0	0	0	NA	Epi Eva: 18 Ento: 0

Table 14: Program and Epidemiological coverage, SAR 2 FY16, USAID Funds

	Country											
	Burkina Faso		Côte d'Ivoire		Ghana		Niger		Sierra Leone		Togo	
NTD	Program	Epi %	Program	Epi %	Program	Epi %	Program	Epi %	Program	Epi %	Program	Epi %
LF	98.83%	79.34 %	90.82%	72.37 %	88.21%	70.40 %	82.05%	0%	96.77%	77.67 %	-	-
Oncho	79.94%	12.37 %	0%	0%	60.21%	48.17 %	-	-	95.53%	76.47 %	101.12%	84.97 %
SCH	92.30%	52.65 %	82.85%	69.24 %	0%	0%	69.65%	66.09 %	-	-	98.52%	38.42 %
STH	192%	54%	67.41%	67.41 %	88.20%	17.25 %	72.21%	45.02 %	96.77%	77.67 %	74.13%	27.74 %
Trachoma	93.68%	94.30 %	0%	0%	-	-	71.03%	67.63 %	-	-	-	-

Table 15: Total trained during SAR 2 FY16, by country and socio-professional category

Category	Burkina	Côte d'Ivoire	Ghana	Niger	Sierra Leone	Togo	Total
TOT	264	23	86	42	39	691	1,145
Supervisors	3,608	1,726	2,001	260	79	135	7,809
Health Providers	0	0	0	515	1,227	0	1,742
CDDs	35,290	19,729	12,849	36,080	31,370	11,616	146,934
Others (Lab & Program Staff)	111	78	24	48	62	97	342
Total	39,273	21,556	14,960	36,945	32,777	12,539	158,050
Total female	11,252	9,185	4,029	7,335	8,670	2,701	43,172
Total male	28,021	12,371	10,931	29,610	24,107	9,838	114,878

Appendix 2: Country Program Summaries

Burkina Faso

Helen Keller International (HKI) continued to provide support to the Ministry of Health (MOH) in carrying out activities to control and combat NTDs in Burkina Faso. The general goal of this support, primarily mass drug administration (MDA) and monitoring and evaluation (M&E), is to help achieve the objective of eliminating and controlling NTDs by 2020. To that end, during fiscal year 2016 (FY16), the national NTD program (NTDP) has implemented several activities, including MDA against the five preventive chemotherapy NTDs (PC NTDs) (lymphatic filariasis (LF), onchocerciasis (oncho), schistosomiasis (SCH), trachoma and soil-transmitted helminthes (STH)) and M&E.

After an initial half-year characterized by a low rate of completion of activities, due, among other reasons, to delays in approvals of the FY16 fixed obligation grants (FOGs) and problems associated with drug purchases, the level of activities increased during the second half-year and were primarily focused on MDA, M&E activities for the different diseases and technical assistance. Despite the delay, nearly all activities planned for FY16 have been completed; the exceptions include the LF MDA in health districts (HDs) that just completed the transmission assessment surveys (TAS) 1 and; the second round of MDA for LF and oncho in the Sud-Ouest region; the second round of SCH MDA in the Centre-Est region; the TAS 2 and 3 + STH; and community-self monitoring for oncho. In addition, the trachoma surveillance surveys and the SCH sentinel site surveys are still underway. It should also be noted that while we have provided some MDA and survey results in this report and in the workbooks, data have not yet been validated by the NTDP and are subject to revision following the validation meetings planned in October.

1. MDA Assessment

The MDA campaign data are updated regularly as they become available and are provided by the NTDP. The MDA data validation sessions scheduled for 19-26 September 2016 (for the MDAs already conducted) will provide final, validated data for FY16. The data will continue to be updated based on the second rounds of MDA in the Sud-Ouest (LF/Oncho) and Centre-Est (SCH).

2. Changes in MDA Strategy

Three districts (Boromo Dédougou, Léo Sapouy, Zabré) passed TAS 1 in August 2016 and have stopped LF MDA.

3. Training

A number of trainings were held during the second half of FY16—Four trainings on how to conduct and supervise/manage MDA, training on how to conduct a DQA, and training survey teams on how to conduct TAS 1 in five HDs (Sapouy, Leo, Dédougou, Boromo and Zabré). The planned training for the 10 surveyors who were to conduct the trachoma impact survey was not held as the activity was postponed to FY17. In total 28,021 people were trained during this reporting period with 28.65% of all those trained being women. In addition, a seven-person team (five from the NTDP and two from HKI) received training in Conakry, Guinea (22-26 August 2016) on supply chain management and mass distribution of NTD drugs (with funding from Management Sciences for Health).

4. Community Mobilization, IEC materials, Registers, Publications and Presentations

END in Africa SAR: April 1, 2016–September 30, 2016

Mobilization activities were carried out in all the HDs and health facilities before and during the MDA campaigns. At the HD level, radio programs and TV spots were broadcast in relation to the MDA campaign dates and objectives to inform the populations about the campaigns and the importance of taking the medications, thus helping to achieve coverage targets. TV spots were broadcast on the national channel 12 times for LF, SCH and trachoma and 20 times over the radio. The radio spots were also broadcast at the HD level in those HD with MDA. Two films on LF and one on oncho were broadcast on the national TV station.

At the communities and health center level, public criers and community health workers contributed significantly to achieving the MDA objectives. In zones with a large convergence of populations (e.g. gold-mining sites of Pama and Gaoua; refugee camps (Sahel); and difficult to access sites (farming hamlets) public criers were used to ensure participation and high therapeutic coverage. They informed the populations about the MDA periods, targets and goals. In order to encourage women to participate, female leaders were also involved in mobilizing their peers in all HDs. Moreover, films addressing LF were also shown during the MDA in two villages with the lowest prior coverage rates.

In addition, HDs received IEC materials, i.e. 11,475 posters (2,050 for LF; 1,500 for onchocerciasis; 4,550 for SCH; and 3,375 for trachoma). This helped to strengthen social mobilization and increase awareness among the population during the MDA. These posters are used by CDDs and public criers to show the populations the different diseases so that they better understand the reasons for the MDAs and encourage higher participation.

No articles were published during the reporting period.

5. Supervision

The supervision activities were conducted on a cascade basis during the MDA. Supervision checklists incorporating the campaign guidelines were developed and were administered by the national, regional, HD and health center supervisors. The checklists also incorporate the WHO guidelines, such as the target populations and treatment strategy for each disease. The national supervisors participated in debriefings organized by the regional health directorates during the MDA. Exchanges were held during these meetings and addressed inadequacies, problems encountered, and corrective strategies to be implemented.

Enhanced supervision was conducted in specific areas (small-scale gold mining sites, refugee camps, cross-border areas and low-coverage areas) and supplemental teams were deployed in these areas to ensure proper coverage. Data collection at the peripheral level was emphasized during this supervision. In addition, the M&E unit, which is responsible for data management, participated actively in this supervision at all levels. The availability of materials and health workers' understanding of the items are taken into account during this activity. Data consistency—between primary sources (data collection forms and treatment registers) and secondary sources (health and HD facilities) - is also verified. In FY16, the health facilities received treatment registers, which facilitated data collection in the villages. Drug stock-outs in the MDA HDs were managed with support from the supervision teams by redeploying inventories in areas where they were needed.

6. Supply Chain Management

The national NTDP received several drugs during this second semester for conducting the planned END in Africa SAR: April 1, 2016–September 30, 2016

FY16 MDA. Of a projected 29,634,491 PZQ tablets for the SCH MDA, 28,552,805 tablets were received. For STH, a total of 5,220,000 ALB tablets were received as part of the LF MDA and 2,289,000 tablets were supplied for STH treatment during the SCH MDA. The program received 17,502,500 IVM tablets to combat LF and oncho. The national NTDP received 20,863,243 azithromycin tablets, 200,243 bottles of azithromycin suspension, and 187,375 tubes of tetracycline eye ointment for the trachoma MDA.

END in Africa funds were also used to purchase 14,400 ICT cards for the TAS 2 and 3 evaluations and 1,700 Kato-Katz kits for the SCH sentinel site surveys.

The post-MDA logistics audit, funded by the World Bank, is scheduled to be conducted before the end of the fiscal year. The results of this audit will provide consolidated data on quantities used and problems managing the logistics chain.

Supply Chain Challenges

Drugs were supplied to the health centers in all of the MDA HDs, allowing MDA to start when planned for the LF and oncho MDAs. However, it should be noted that the delayed delivery of azithromycin tablets, tetracycline eye ointment and praziquantel led to the postponement of the trachoma and SCH MDA campaigns. They were thus implemented late, during the rainy season, and treatment in the planned HDs was divided into two phases. In addition, a number of IVM and ALB tablets were expired and the inventories of drugs remaining post-MDA were also returned late. However, no storage or management problems were noted during this semester.

7. Program Monitoring and Evaluation

LF, SCH/STH, trachoma and oncho M&E activities were conducted during the reporting period and the workbooks have been updated accordingly.

- **LF**–Pre-TAS surveys were carried out at 14 sentinel and control sites in 7 HDs and an additional 28 sites in 14 HDs also underwent pre-TAS, with 10 sites co-supported by END in Africa and FPSU-L and 14 sites co-supported by the World Bank. The preliminary results show that certain sites remain above 1%, specifically at the following sites: Bena (5.2%), in Tenkodogo HD (supported by END in Africa); Zanga (1.53%) in Bogodogo HD (also supported by END in Africa); and, in the Sud-Ouest region, where microfilariae (mf) prevalence at the sites in three HDs (Kampti, Gaoua, and Batié (supported by FPSU-L)) is above 1%. In addition, results are not yet available for 7 HDs (14 sites). The rest of the sites were <1% and the NTDP will submit a request to the RPRG for these HDs to undergo TAS 1.

TAS 1 surveys were conducted in five HDs from 7-26 August 2016 (Boromo-Dédougou, Sapouy-Leo and Zabré), representing 3 EU; the Zabré HD was supported by FPSU-L (though materials and supplies were provided through END in Africa) and the other two EUs were fully supported by END in Africa. The preliminary results show that all EUs passed and will stop MDA starting in FY17.

- **SCH/STH**–A total of 18 sentinel and control sites were assessed out of the 19 planned. For SCH, other than Nagbingou in the Est region (23.90% prevalence), and Tougouri in the Centre-Nord region (20.75% prevalence), results from the other sites show prevalence below 1%. For STH, the overall average prevalence in all the sites is 0.31%.
- **Trachoma**–In the FY16 workplan, 7 HDs were planned for impact assessment with END in Africa support (Pô, Reo, Nanoro, Leo, Tenado, Nongre-Massom Houndé). However, due to a delay in receipt of Zithromax, the MDA started very late in the fiscal year, and given the fact

that a six-month window must occur between MDA and impact assessments, the NTDP realized that the impact assessments could not take place within FY16. Therefore, the funds were reprogrammed to support trachoma surveillance surveys in 7 HDs, which are required for elimination validation. The 7 HDs are: Banfora, Boussé, Zorgho, Ziniaré, Do, Boulmiougou and Léna.

- **Assessment of coverage post-oncho MDA**—The goals of this assessment were, first, to compare treatment coverages reported between the peripheral level and the central level and, second, to obtain a reliable estimate of treatment coverage in the population. The survey results revealed regional treatment coverage of 83.54% in the Sud-Ouest region. However, this figure hides disparities. Some villages, such as Batiélé, in Dano HD, and Kankouera, in Batié HD, had coverages of 76.7% and 67.3%, respectively. In addition, 16.3% of people in the region did not receive treatment and of those untreated individuals, 78.3% did not receive treatment because they were absent.
- **DQA**—Since the first half of FY16, the DQA implementation process has begun with training for national and regional trainers and continues with training, over those six months, for actors at the regional and HD levels. Implementation is scheduled for FY17, with financing from the World Bank.

M&E Challenges

The persistent endemicity of certain NTDs (despite several rounds of MDA) and the multiplicity of data collection materials are two remaining M&E challenges. Operational research is also needed to obtain proof of the efficacy of the LF NTD drugs and that there is no resistance by the parasite. Operational research on controlling the reservoir of *Schistosoma mansoni* and the development of a SCH elimination plan are also needed to enable Burkina Faso to eliminate NTDs.

8. Transition and Post-Elimination Strategy

In 2004, Burkina Faso experimented with an approach that involved resource mobilization by the programs. This led to establishing a line in the government's budget for efforts to combat LF. This line is currently used for all NTDs; advocacy efforts continue in an effort to increase it.

In anticipation of the end of financial support from the END in Africa project to control NTDs, a multi-sectoral planning meeting to combat NTDs is planned for FY17. This meeting will identify post-USAID funding opportunities and will help to create synergies among key stakeholders in the NTDs control. Possible treatment platforms for these NTDs are currently being explored.

With financial support from the World Bank, passive surveillance will continue in HDs that stopped LF treatments and have already conducted the TAS 3 successfully.

Given the limits of parasitological surveillance in the case of low parasite density, entomological surveillance will be conducted. This is particularly relevant at this step of the elimination process and will provide solid arguments at the time of certification. Entomological surveillance will thus be instituted very soon in the Haut Bassins and Boucle de Mouhoun regions. The objective will be to assess LF transmission within vector populations. Four (4) villages (two sentinel sites and two control sites) will be chosen as study sites in each region.

Trachoma surveillance activities will be conducted in FY16 (in seven HDs) with financial support from END in Africa and in FY17 (in 11 HDs) with financial support from the World Bank. These assessments are intended to detect any resurgence of the disease. The assessments of SCH END in Africa SAR: April 1, 2016–September 30, 2016

integrated with STH and the oncho-related entomological and epidemiological assessments will continue.

9. Short Term Technical Assistance

During the reporting period, HKI's Senior Scientific Advisor provided technical assistance in using the FTS to 15 NTDP staff in Ouagadougou. The purpose of the TA was for those personnel to master the techniques in preparation for implementing the FY16 TAS 1, as they had only previously used ICT cards.

Support to resolve pending questions regarding the FY13, FY14 and FY15 workbooks, and updating of the MDA and DSA matrix was provided via technical assistance provided by the FHI 360 M&E Advisor. Thanks to this support, the HKI Burkina Faso M&E Manager for the END in Africa project and other team members learned more about certain database items and were able to completely update those workbooks. The FY13 and FY14 workbooks have now been approved by USAID and are awaiting signature from the NTDP.

Technical assistance on DQA has not yet been provided. However, the DQA training for trainers was held on 9-11 March 2016. It involved primarily the members of the NTDP. The other NGOs working in Burkina that were invited—Handicap International and Fund for Community Development—could not attend. Two training sessions were held for regional and HD personnel in Bobo Dioulasso and Tenkodogo; 47 of the 102 total planned participants attended the first training session.

The other additional technical assistance sessions planned for FY16 were not completed. This included support to revise the STH control strategy; support for capacity-building for two biomedical technicians, support to optimize storage space for NTD drugs; support to conduct a DQA; and support for a sustainable mechanism for resource mobilization.

10. Government Involvement

The government of Burkina Faso has long been involved in efforts to combat NTDs by making NTD control and elimination a health priority. The PNDS 2011-2016 outlines the strategic orientations of the National Health Policy (NHP). One of these strategic orientations is “Promoting Health and Disease Control, and the Control, Elimination and Eradication of NTDs as Priority Actions in the Country.” Creating a specific program to combat NTD (the national NTDP) within the Disease Control Directorate also captures this commitment.

The health HDs contribute financially to the success of the MDA through the health training management committees, for example, by covering fuel costs for health workers and CDDs so that they can travel during the trachoma and SCH MDA. In addition, thanks to advocacy efforts by the government and its partners, Burkina Faso has received funding from the World Bank to combat NTD and seasonal malaria for 2016-2019.

In addition to the quarterly coordination meetings, to which the partners are invited, the technical committee meeting in Ouagadougou (August 2016) provided an opportunity to assess efforts to combat these NTD and draft recommendations. The oncho elimination subcommittee also met during the reporting period. The steering committee met on August 30, 2016.

The number of national NTDP staff increased with the hiring of specialized employees in the M&E
END in Africa SAR: April 1, 2016–September 30, 2016

unit (two public health doctors and two health assistants) and one physician/entomologist. New staff members also helped to strengthen the laboratory unit.

11. Proposed Plans for Additional Support to National NTD Program

To ensure synergy of actions, a participatory meeting to plan NTD control activities will be held in FY17. This meeting will provide an opportunity for the sectors involved (including water and sanitation, agriculture and education) to take NTD control activities into account in the various sectoral plans. Advocacy actions are continuing to strengthen the collaboration among these sectors.

The Morbidity Management and Disability Prevention (MMDP) project, which is involved in efforts to control morbidity in the Centre-Nord, plans to expand its activities in FY17 into two other regions in the Hauts-Bassins and the Centre-Ouest.

12. Lessons Learned/Challenges

The joint visits by the END in Africa project staff and the HD and regional staff to oversee monitoring/ supervision of the training activities helped to identify weaknesses in CDDs' interpersonal communications during the MDA. The messages delivered at certain health facilities were overly technical and some of the CDDs could not understand the explanations or explain to community members about the NTDs (particularly the modes of transmission of the different NTDs). This had a negative impact on interpersonal communications during the MDA. In addition, certain practical aspects, such as the use of dose poles, were not adequately explained in the training. This often led to inadequate administration of the medications. HD management team supervision of training activities could help solve these problems, which were shared during the MDA supervision and assessment meetings. While awaiting possible funding for this supervision, it was recommended that each HD identify additional resources for supervision of the trainings in order to improve MDA quality.

Similarly, the team noted that delays in producing the deliverables sometimes resulted from limited involvement of the staff responsible for compiling and writing up the data at the HD level in the preparatory activities, and the fact that those compiling reports are not identified prior to activity implementation. As a recommendation, HDs should determine the personnel responsible for each deliverable before the beginning of the MDA campaign in each HD to ensure that deliverables are transmitted in a timely fashion.

Furthermore, lack of information, based on the calculation of the budget lines, was most often the cause of complaints related to inadequate resources. In that regard, it was suggested that the national NTDP's parameters for calculating MDA funding rubrics be disseminated widely at all levels. As a result, insufficient monitoring of MDA data cleaning/analysis for all campaigns at the health center level, coupled with the non-daily data transmission by health centers to the HDs, MDA coverage trends cannot be monitored daily. This makes it difficult to take timely corrective actions during the campaign. This has especially been evident during the LF MDA because of inaccessibility of or lack of resources to transmit data, given the treatment registers in which data are recorded. To remedy this, those in charge of the MDA at the HD levels should put more pressure on the health center.

13. Major Activities for the next six months

The main activities planned for the first semester of FY17 include:
END in Africa SAR: April 1, 2016–September 30, 2016

- Second round of LF/oncho MDA in the Sud-Ouest (had originally been planned for FY16);
- Second round of the SCH campaign in the Centre-Est (had originally been planned for FY16);
- TAS 2+STH and TAS 3+STH surveys (FY16);
- Trachoma surveillance surveys implemented in 7 HDs (FY16);
- M&E plan finalized for the NTD 2016-2020 strategic plan (FY17);
- Technical Assistance for DQA in two regions (FY17);
- Cascade trainings for the FY17 MDAs (central, regional HD, health center and community levels) (FY17);
- A workshop to develop a trachoma elimination plan for the period 2017-2020 (FY17);
- Trachoma impact surveys in 15 HDs (FY17);
- Training on utilization of the integrated NTD database for 30 staff (FY17);
- Hold regional and HD advocacy days with administrative, political, traditional and religious authorities before beginning MDA (FY17);
- Pre-TAS in 12 LF sentinel/control sites in 3 HD (FY17)

Cote d'Ivoire

FY16 is the first year of USAID support to the NTD program in Cote d'Ivoire through the END in Africa project. This semi-annual report outlines the progress made during the period April 2016 to September 2016, the second half of FY16. As of September 2016, the epidemiological situation in Cote d'Ivoire is as follows: 61 districts are endemic for onchocerciasis, 61 for LF and 54 are co-endemic for the 2 diseases (LF and Oncho); all 82 districts are endemic for soil transmitted helminthiasis (STH); 80 out of 82 are endemic for SCH but only 23 were treated in FY16 based on the frequency of treatment determined using the prevalence for each district¹; 9 districts are known to be endemic for trachoma but only 4 were treated in FY16.

During this period, END in Africa supported the NTDP to conduct LF-Oncho mass drug administration (MDA) in 41 health districts (HDs) while the rest of the districts were supported by other NTD partners. In May 2016 a total of 9,351,761 people were treated for LF-Oncho in the 41 HDs (4,700,776 males and 4,650,985 females). Twenty-three districts were treated for schistosomiasis (SCH) but the END in Africa only supported treatment of adults (≥ 15 years) in 3 of the 23 districts. Out of a total 1,368,545 people who received SCH treatment, only 363,869 adults were treated with support from END in Africa in 3/23 HDs. The END in Africa project also supported treatment for trachoma in 4 HDs but the results of this MDA are not yet available.

Other main activities included a series of workshops to update MDA tools; developing a monitoring and evaluation plan; coordinating and preparing the FY16 operational action plan; leveraging NTDP staff capacities on the Integrated Database NTD (IMDB) and DQA; training a team from Directorate General of Health (DGS) on supervision of NTDP activities; building NTDP capacity on use of Tool for Integrated Planning and Costing (TIPAC); Capacity building at all levels (i.e., Regional, district, community health) of the health pyramid to conduct MDAs.

The next six months will be marked by activities such as coordination, capacity building, preventive chemotherapy and Disease surveillance activities. Finally, the program will hold an annual review meeting for the purpose of preparing and submitting the FY2017 END in Africa project Workplan to USAID.

1. MDA Assessments

An assessment of MDA data quality took place August 15-21, 2016 in four different districts followed a training session on performing data quality audits in Yamoussoukro from August 8-14, 2016. This assessment allowed the project to verify the quality of the collected and transmitted data. Some recommendations of this DQA were drafted as follows:

- Initiate process to archive MDA documents in health facilities and district;
- Layout procedures for data backup at district offices and health regions;
- Empower one community drug distributor by area for the compilation and first level data quality control before transmission at the data to the supervisors

2. Changes in MDA Strategy

Not Applicable

¹ Districts with prevalence between 1% and 9.9% are treated once every 3 years; districts with prevalence between 10% and 49.9% are treated once every 2 years and those with prevalence $\geq 50\%$ are treated once every year.

3. Training

During this semester, many different capacity building sessions were organized of which a training for NTDP staff on Integrated NTD Database (BDIM); training on Data Quality Audit (DQA); training session on the Tool for Integrated Planning and Costing (TIPAC); and a training for Directorate General for Health staff on supervision of MDAs. For a target of 21,556 people to be trained, among which 9,185 (42.6%) females and 12,371 (57.4%) males were trained.

4. Community Mobilization, IEC materials, Registers, Publications, and Presentations

Sensitization and social mobilization activities were implemented between May 10–25, 2016 as part of the integrated LF-Oncho-STH MDA and SCH MDA. Forty-one local radios broadcasted messages on the type of MDA and dates, 28,143 T-shirts were distributed, 2,063 posters duplicated and stick in different places and 28,143 flyers were produced and distributed to people in the communities.

An MDA kick-off ceremony took place in Tiebissou on May 20, 2016. This ceremony gathered high representatives from the MSHP (The Director general for Health), three representatives from USAID (Acting Health director and Infectious disease team lead) and the US embassy (Acting USAID country representative) in Cote d'Ivoire, religious leaders, local leaders, and local health and Ministry of Education representatives.

5. Supervision

A number of supervision activities were performed between April–Sept 2016. LF-Oncho-STH MDA supervision activities were performed in May 2016. Supervision was observed at the different levels. Indeed, the central level participated in the supervision activities. They supervised the series of training sessions conducted for MDA supervisors and community drug distributors. They also participated in supervising the distribution in the communities as well. Indeed, supervision is performed in two phases.

During the training of district end peripheral level actors: the central level supported by regional oversees the training of nurses, midwives and other health staffs at the district level and the district level supervises the training of community drug distributors peripherally; During the distributions, the central level and the regional level supervise organization and monitoring of distribution at district level and the district level supervises the organization at the peripheral level and distribution at Community level. The peripheral level mainly oversees the distribution in the community.

6. Supply Chain Management

An agreement for the management of the drugs donated by pharmaceutical companies to support MDAs has been signed in May 12, 2016 between the NTDPs (PNSOLO and PNLSGF) and the national warehouse named New Pharmacy of Public Health of Côte d'Ivoire (NPSP-CI).

7. Program Monitoring and Evaluation

Sentinel site survey—Conducted from April 03 to 22, 2016 in 39 health districts. The survey consisted of a questionnaire used for interviews, Filariasis Test Strip (FTS) was used to determine the prevalence of LF in the population. The baseline data on microfilariae load required to monitor the effectiveness of MDA was collected by assessing microfilaria in calibrated thick blood smears from samples collected between 22H00 and 02H00 on people above 5yo on selected sentinel sites. A total of 10 928 people among which 53% males and 47% females were surveyed.

Mapping for LF—Conducted from April 3 to 22, 2016 in 14 Health Districts. Sampling was conducted in accordance with New WHO guidelines on LF mapping surveys. One village was randomly selected in

each district. Only people above 5yo were selected and the Immuno Chromatographic Test (ICT) was used to screen for circulating filarial antigen (CFA). In all, 12 districts were found to have prevalence above 1%. The most endemic HDs were found in three neighboring districts Danané (45%), Man (27,5%) and Biankouman (23%) directly bordering Liberia and Guinea; and in two districts Ferkessedougou (26,4%) and Boundiali (26%) bordering Burkina-Faso and Mali.

Onchocerciasis epidemiology surveillance—Performed during period July 17 to August 4, 2016 and September 1-19, 2016 in 4 Health Districts. Some 40 villages per district were visited where between 6400 and 96 people were supposed to be examined per village. Skin snip, rapid test OV-16 and palpation of nodes were practices on the different people examined. The report for this activity is not ready by the time this SAR-2 is being submitted.

A data quality assessment (DQA)—Conducted from 8-14 August 2016 for the training and the DQA itself was performed on period August 15-20, 2016 in the health regions of Goh (Gagnoa HD) and South-1 Abidjan (Grand Lahou HD). This DQA was consecutive of the LF-Oncho-STH MDA conducted in May 2016.

8. Transition and Post-Elimination Strategy

None

9. Short Term Technical Assistance

During this period, the technical assistance provided to the NTDP was mainly performed by a consultant from RTI and one from FHI 360.

- International Trachoma Initiative (ITI) provided a consultant who provided support through a training on Supply Chain Management System for ZYTHROMAX management in Cote d'Ivoire. This workshop was conducted during period of May 30 to June 04, 2016 in Yamoussoukro.
- FHI 360 consultant participated in conference call on triangulation of Trachoma pre-mapping survey data on August 23, 2016. The consultant conducted an analysis of field data, assessment report and other documents to provide orientation of districts to be mapped through USAID funds for FY2017.

10. Government Involvement

The government's commitment was again high during this second half of FY16. Indeed, the Director General of Health himself represented the Minister of Health and Public Hygiene in most events and activities organized with USAID funds. At each of these meetings, he restated the government's commitment in the fight against NTDs.

11. Proposed Plans for Additional Support to National NTD Program

Not applicable

12. Lessons Learned/Challenges

The introduction of use of markers to mark fingers of people who receive treatment is well-perceived by the populations. This allows confirmation of treatment for evaluators and also distributors to know who has received drugs while progressing on distribution in the community.

13. Major Activities for the next six months

Activities to be implemented October 1, 2016–March 31, 2017 include:

- Annual meeting on LF-Oncho-STH-trachoma activities (2 days)
- Development, testing and validation of communication and social mobilization materials & tools

- Capacity building of staffs and people in preparation for the FY2017 MDAs
- Media plan and broadcasting /LF-Oncho-STH-Trachoma
- Development of sensitization materials for SCHISTO and TRACHOMA
- Conduct SCH MDA
- Training of assessors and conducting Trachoma impact survey in Bouna district
- Training of two teams on oncho epidemiological surveillance and assessment in 6 HDs
- International trip for cross-border meeting on synchronized LF-Oncho MDA

Ghana

The Neglected Tropical Diseases Program (NTDP) held a series of meetings with partners to align the onchocerciasis program with the new World Health Organization (WHO) Onchocerciasis Guidelines for Stopping Mass Drug Administration and Verifying Elimination of Human Onchocerciasis. The meetings recommended demarcation of oncho endemic areas into transmission zones, conduct prospection of black fly breeding sites in the transmission zones, assess onchocerciasis situation in the country especially in hypo-endemic districts and set up an Onchocerciasis Expert Review Committee. Similarly, the NTDP held schistosomiasis (SCH)/soil-transmitted helminthiasis (STH) review meetings to advise the program on treatment strategy after significant improvement in the prevalence and intensity of SCH/STH was recorded in the impact assessment conducted in the first quarter of FY16. It was recommended that the NTDP continue with the current treatment strategy in 2017 while a smaller team of experts review the survey data to advise on a revised treatment schedule after 2017. The American Leprosy Mission and Effect: hope supported the NTDP to develop a strategic document for integrated management of morbidity associated with NTDs in Ghana. NTDs targeted were Lymphatic Filariasis, Buruli Ulcer, Yaws, Leprosy, Human African Trypanosomiasis (HAT) and Leishmaniasis.

The trachoma pre-validation survey report was completed in May 2016. All 18 districts surveyed met the required elimination target of less than 5% trachomatous inflammation-follicular (TF) and all districts except Yendi district met the required elimination target of less than 0.1% of total population for trachomatous trichiasis (TT). A TT case search will be conducted in the Yendi district for surgery while preparations for putting together a Trachoma Elimination Dossier is ongoing under the guidance of the Trachoma Elimination Committee. The NTDP conducted transmission assessment survey (TAS) in 69 districts grouped into 28 evaluation units (EUs) in FY16. All 28 EUs passed the TAS including five districts where TAS 1 for stopping mass drug administration (MDA) was conducted hence these 5 stopped MDA for lymphatic filariasis (LF). Pre-TAS was conducted in 6 districts in the second quarter of the year using night blood survey method. Only one out of the six districts passed the pre-TAS.

The NTDP conducted integrated LF/oncho/STH community-based MDA in 105 districts in June and July 2016. Treatment for SCH/STH in 216 districts is currently ongoing. One child who suffered severe adverse event during the LF/oncho/STH MDA has recovered. Key social mobilization activities implemented over the period included production and procurement of 13,000 branded polo shirts for community drug distributors (CDDs) in 105 districts and production of 20 large billboards to be mounted in all 10 regions (2 in each region) of the country to improve visibility of NTDs and program interventions. END in Africa conducted a 2-day training for the Strategic Social Partnership (SSP) unit of the Ghana Health Service (GHS) to provide foundational knowledge on how to initiate, secure and manage strategic partnerships for sustainable, impactful health programs.

1. MDA Assessment

The NTDP introduced Data Quality Improvement methods in one of the districts, Birim North, where treatment reports had been inconsistent. The process involved review of MDA data in the district for 2010–2015, identifying areas requiring improvement, developing change ideas to address the problems, implementing the change ideas in the FY16 MDA and evaluating for improvement. Results indicated improvement in data quality, population registered and treatment coverage. The NTDP will be extending this intervention to the 17 LF hot spots in FY17.

2. Changes in MDA Strategy

No changes have been made to the MDA strategy over the period under review. However, the following 5 LF endemic districts passed TAS 1 and MDA has been stopped.

District	Disease	Description of Change	Rationale for Change
Techiman Municipal	LF	Stopped MDA	LF-TAS conducted in March, 2016
Techiman North	LF	Stopped MDA	LF-TAS conducted in March, 2016
Builsa North	LF	Stopped MDA	LF-TAS conducted in March, 2016
Kassena-Nankana	LF	Stopped MDA	LF-TAS conducted in March, 2016
Builsa North	LF	Stopped MDA	LF-TAS conducted in March, 2016

3. Training

During the second half of FY16 Ghana conducted three trainings—12 laboratory personnel and program staff at the national level where trained on use of filarial test strips (FTS), and in turn they trained regional and district level laboratory and program staff; Training of Trainer’s workshop for key regional level staff involved in the integrated LF/oncho/STH MDA in 105 districts across 9 regions; and Deloitte conducted a workshop for the GHS Strategic Social Partnership team on the foundational knowledge on how to initiate, secure and manage strategic partnerships for sustainable, impactful health programs. In total 14,960 people were trained during this reporting period, with 26.93% of all those trained being women.

4. Community Mobilization, IEC Materials, Registers, Publications, and Presentations

FHI 360 facilitated the production and procurement of 13,000 branded polo shirts for CDDs during the integrated LF/oncho/STH MDA in 105 districts conducted in June-July 2016. This was to motivate CDDs, identify them to communities, and also facilitate the social mobilization drive to increase demand for MDA. The NTDP mounted an exhibition at the Annual Health Summit Organized by the Ministry of Health. The Health Summit is the MOH premium health event hosted by the Minister of Health and attended by all directors of health from regional level, program managers, ministry of health, partners and heads of missions supporting the health sector in Ghana. The 2016 Health Summit was held on April 25-26, 2016 at the La Palm Hotel under the theme “Working together towards universal health coverage—consolidating the gains of the health-related MDGs”.

In FY15 NTDP started development of 20 billboards to improve visibility of target diseases, interventions, and celebrate successes. However, the process delayed and was rolled over into FY16. The billboards are currently being mounted in all 10 regions. The NTDP continued to use FM radio, community public address (PA) systems, vehicle-mounted PA systems and community durbars as the main channels for social mobilization during the community-based LF/oncho/STH MDA in 105 districts.

5. Supervision

The NTDP was supported through the budgeting and work planning process with resources to conduct supervision of MDAs at all levels of the health system including communities. Funds for fuel and transportation were provided in MDA budgets for cascaded supervision where the regional MDA teams supervised the districts which in turn supervised the sub-districts. Sub-districts also supervised the community level activities by CDDs. The NTDP team at the national level also sent out program staff to supervise MDAs in all target regions. Partners working with the NTDP including FHI 360, Sightsavers and GES/SHEP also conducted supervisory visits during MDAs. All supervisors were trained on standard protocols for the MDAs. Supervisors provide onsite advice to address challenges observed and also reported field observations to regional and district teams for immediate redress.

6. Supply Chain Management

The NTDP received 17,577 bottles (equivalent to 17,577,000 tablets) of Praziquantel (PZQ) donated by

Merck through WHO for the 2016 schistosomiasis school-based and community-based SCH treatment. The consignment was delivered to the Central Medical Stores (CMS) in the first week of April 2016. The program also received 42,185 bottles (equivalent to 21,092,500 tablets) of Ivermectin donated by the Mectizan Donation Program (MDP) through WHO for LF and oncho MDA in 2016. The consignment was delivered in two batches to the CMS in the last week of April 2016.

During the NTD SCM training organized by Management Sciences for Health (MSH) under the USAID funded Systems for Improved Access to Pharmaceuticals and Services, the NTDP identified reverse logistics for NTD medicines as the most important SCM problem. In FY17 the NTDP will implement an action plan developed by the NTDP, procurement unit of the GHS and the CMS to address the problem. Program Monitoring and Evaluation.

USAID commissioned a technical evaluation of the USAID NTD Program. The 2-member evaluation team visited Ghana on August 22-26, 2016. The team had sessions with the NTDP, Sightsavers, FHI 360 and undertook a field visit to a district endemic for LF and oncho to meet with regional and district health staff as well as volunteers. The team also participated in the SCH review meeting, which discussed the results of SCH and STH impact survey conducted by the program. In addition, the following disease specific assessments (DSA) were conducted during the second half of FY16:

- The trachoma pre-validation survey started in November 2015 was completed at end of March 2016. The final report was completed in May 2016. All 18 districts surveyed met the required elimination target of less than 1% trachomatous inflammation-follicular trachoma (TF) and all districts except Yendi district met the required elimination target of less than 0.1% of total population for trachomatous trichiasis (TT). A TT case search in the remaining district is scheduled to start in October 2016 while preparations for putting together a Trachoma Elimination Dossier is ongoing. A trachoma elimination committee has been set up to guide the dossier preparation and process towards declaration of trachoma elimination in Ghana.
- The NTDP conducted TAS in 69 districts (28 EUs) in FY16. Due to the large number of districts 7 EUs were completed in April 2016 and the rest was done when schools resumed in May 2016 and completing finally in July 2016. All 28 EUs passed the TAS and results are entered into a database before submission to RPRG. Five of the district were conducting TAS 1 for stopping MDA hence these 5 stopped MDA for LF.
- Pre-TAS was conducted in 6 districts in the second quarter of the year using night blood survey method. Only one out of 6 districts passed pre-TAS. A consultant was hired to conduct quality control by re-examining all positive samples and 10% of negative samples. The results indicated initial reading was valid. The key findings were in respect to sample identification processes used. Recommendations were given to guide the NTDP in sample preservation, storage and identification. A laboratory information management system was recommended to be set up.

7. Program Monitoring and Evaluation

The trachoma pre-validation survey started in November 2015 and was completed at the end of March 2016. The final report was completed in May 2016. All 18 districts surveyed met the required elimination target of less than 1% prevalence of trachomatous inflammation-follicular trachoma (TF) and all districts except Yendi met the required elimination target of less than 0.1% of total population testing positive for trachomatous trichiasis (TT). A TT case search in the remaining district is scheduled to start in October 2016 and preparations for putting together a Trachoma Elimination Dossier are ongoing. A trachoma elimination committee has been set up to guide dossier preparation and the process toward the declaration of trachoma elimination in Ghana.

The NTDP conducted TAS in 69 districts (28 EUs) in FY16. Due to the large number of districts involved, 7 EUs were completed in April 2016, and the rest were done when school resumed in May 2016 and completed in July 2016. All 28 EUs passed the TAS and results are being entered into a database before submission to the RPRG for LF. Five of the districts conducting TAS 1 for stopping MDA later stopped MDA for LF. Pre-TAS was conducted in 6 districts in the second quarter of the year using the night blood survey method. Only one out of the six districts passed the pre-TAS. A consultant was hired to conduct quality control by re-examining all positive samples and 10% of negative samples. The results indicated that initial reading was valid. The consultant provided recommendations to guide the NTDP on sample preservation, storage and identification. The installation of a laboratory information management system was also recommended.

8. Transition and Post-Elimination Strategy

Nothing to document this reporting period.

9. Short Term Technical Assistance

Three short term technical assistance needs were planned for the period under review. A consultant was hired to conduct quality control for pre-TAS (using night blood survey method) conducted in 6 districts. Another consultant was hired to conduct quality control by re-examining all positive samples and 10% of negative samples. The results indicated that initial sliding reading was valid. The key findings were in respect of sample identification processes used. Recommendations were given to guide the NTDP in sample preservation, storage and identification. A laboratory information management system was recommended to be set up. In addition, a communication consultant has been recruited to support the NTDP develop flip charts to facilitate training of CDDs, and also to be used by CDDs and teachers to educate community members and pupils respectively. Outstanding technical assistance to train 30 laboratory and program staff on oncho DSA has been delayed because the program intends to conduct the training just before the proposed assessment scheduled for FY17.

10. Government Involvement

The government continued its support to the project by letting the program use the health system structures at all levels—national, regional, district and sub-districts to support NTDP activities. Medical stores at all levels keep NTD medicines and health system vehicles are used to support NTD activities.

11. Proposed Plans for Additional Support to National NTD Program

The new set up of the Strategic Social Partnership unit in the GHS with support of END in Africa is expected to initiate contacts with the private sector to obtain additional support for NTDP areas not covered by currently partners.

12. Lessons Learned/Challenges

Nothing to document during the period under review.

13. Major Activities for the next six month

- Conduct pre-TAS in 9 districts using FTS kits.
- Conduct TAS in 9 districts grouped into 3 evaluation units (EUs)—TAS for stopping MDA (TAS 1) in 2 districts and first post-MDA TAS (TAS 2) in 7 districts.
- Conduct advocacy meetings in 8 regions to communicate implications for stopping treatment for LF in 81 districts, timelines for TAS after stopping treatment as a post-treatment strategy, and how to return all unused medicines from communities to the Regional/Central Medical Stores.

- Implement Action Plan developed to address poor SCM system for NTD medicines to reduce wastage and improve accountability.
- Conduct an impact assessment in 151 districts to determine the status of oncho in the country using a combination of Ov16, O-150 PCR and skin snip tests. The assessment will be conducted in the following categories of districts:
 - 85 districts currently receiving treatment
 - 50 hypo-endemic districts not receiving treatment
 - 16 additional previously untreated districts with indications of infection to determine if treatment is required.
- Conduct prospection of black fly breeding sites to update current breeding sites to be used as assessment sites at the elimination program phase. This will be supported by END Fund.
- Establishment and operationalize an Oncho Elimination Committee as required by the new oncho guidelines for stopping MDA and for validation of elimination.
- Conduct assessment of SCH in 2 districts in the catchment area of the recently constructed Bui Hydroelectric dam using Urine Filtration and Kato Katz methods.
- Conduct case search to identify estimated trachomatous trichiasis (TT) backlog in one district (which did not meet the TT elimination criteria of $TT < 0.1\%$).
- Train 5 ophthalmic nurses to provide TT surgery in the post elimination phase (funded by Sightsavers).
- Put together Trachoma elimination dossier for submission to WHO.

ADVERSE EVENT AND DRUG DETAILS

Drug	
Suspected Drug	Tablet Ivermectin 3mg
Dose, frequency	Once
Date of Administration	30 th June 2016
Drug sample obtained?	Yes. Samples of the drug taken and sent to the Food and Drugs Authority for analysis.
Batch no. of suspected drug	Ivermectin: BN 0000459120 EXP 01/2018
Drug Administration	
Source of drug	MSD France
How was the medicine stored prior to delivery to the districts?	Stored at the Regional Medical Stores
Any contamination?	No obvious indication of contamination
Who administered the medicines? Any likelihood of administration errors?	Community Drug Distributor–volunteer 1 tablet of Ivermectin administered. No likelihood of administrative error
Drug administration mode & route	Drug was administered orally with water and under supervision
Was the whole MDA supervised by nurses or teachers or community volunteers?	MDA was supervised by nurses who had undergone training conducted by the District Health Administration on 28/6/2016
Concomitant Medication and Past medical history	
Presenting complaint at Wassa Akropong Government Hospital	Rashes over the body with discharging eyes and sore mouth
Immediate past medical history. Malaria? Upper respiratory tract infection?	<ul style="list-style-type: none"> No significant past medical history Has had full first year immunization First experience in mass drug administration for NTDs
Existing medical conditions - diabetes, asthma, liver function, kidney impairment etc.? Known or unknown?	No known existing medical condition.
If child had any condition, was she administered any medicines? If so, which ones? Dosage, frequency etc.	NA
Outcome of post-mortem	
Post-mortem report obtained?	NA
Case-causality assessment	
Certain, Probable, Possible, Unlikely, Not assessable	(To be done by panel of experts)
SAE Forms	
SAE form filled?	Yes
Obtained copy of SAE form?	Yes
Who filled the original SAE form?	District Disease Control Officer.
What is the view of the "receiving doctor" on the patient's condition?	Steven Johnson Syndrome

Niger

The principal activities that took place during this reporting period are the mass drug administration (MDA) in the remaining four health districts (HDs), work planning for FY17, capacity-building activities, and monitoring and evaluation (M&E) activities.

In FY16, the MDA was divided into two separate campaigns: one in Zinder, Agadez, Tillabéri and Dosso; the second in the regions of Diffa, Maradi, Niamey and Tahoua. This was for two main reasons: 1) there was a large quantity of praziquantel (PZQ) due to expire in early 2016 and the National Program wanted to use as much as possible before it expired (though still approximately 2 million pills expired); and 2) the Zithromax had arrived in Niger in early November 2015 and the other drug was not scheduled to arrive until March or April 2016. During this part of the MDA, independent monitoring was conducted (in-process and end-process) to detect bottlenecks and correct them during the MDA and to validate coverage results.

Following the completion of the MDAs, district-level and regional-level evaluation meetings were held to review and validate the data before they were transmitted to the national level. In July 2016, the national-level evaluation was held, with participation from the central level program, representatives from the 8 regions, and technical and financial partners of the Neglected Tropical Diseases Programs (NTDP). At this meeting, the overall results of the campaign were presented, revised (if errors detected), and validated. A total of 7,189,384 people were treated for lymphatic filariasis (LF) in 23 HDs. For schistosomiasis (SCH), a total of 1,908,710 persons were treated in 14 HDs. For soil-transmitted helminthes (STH), 8,340,596 persons were treated (either through ivermectin (IVM) + albendazole (ALB) or PZQ + ALB) in 28 HDs. Finally, 2,842,501 persons in 9 HDs were treated for trachoma (though results are only available for 8 HDs at this time).

This reporting period was also characterized by work planning for FY17. Prior to the validation meeting in June 2016 with all the partners, microplanning meetings were held with the regions to plan budgets and discuss other logistical details for the FY17 MDA campaign. One of the main changes in FY17 planning (when compared to previous years), is planning for two MDA campaigns instead of one (in FY16, two campaigns were not planned but held out of necessity): one for trachoma (and the other diseases requiring treatment in the HDs treating for trachoma) and the second for all the other HDs. The reason for this is because the Zithromax arrives in November and the rest of the drug generally arrives sometime between March-April. Additionally, given the logistical demands of organizing one single MDA for all diseases, the NTDP has noticed many errors in quantification, packaging and delivery of drugs in preparation of the MDA; splitting the MDAs will spread the logistical burden over more time.

In terms of capacity-building, Deloitte led a technical assistance on an update of the Tool for Integrated Planning and Costing (TIPAC) in April 2016. This exercise enabled the NTDP to generate useful information, such as a detailed mapping of funding, which will help reduce the risk of funding overlap and show gaps where additional funding is necessary. These data will be used in finalizing the new NTD Master Plan for 2016-2020, which is planned to happen at the end of September 2016. In addition, the TIPAC will provide the NTDP with reliable data on stocks of medication. For the oncho entomological surveys, fly capturers were trained in order to capture the 6,000 flies needed for the evaluation. Finally, the training of trainers for the FY17 MDA has begun. This training will focus on MDA strategy, proper dosing, filling out report, and on management of the drugs.

In capacity-building exercises, the NTDP has placed a large emphasis on gender. For the MDA training at the central level, 13 out of the 16 persons trained were women. For independent monitoring, 6/14 were women. Finally, during the TIPAC training, 8/18 participants were women.

In terms of M&E activities during the reporting period, several surveys were conducted for LF, trachoma and oncho. The TAS 1 was held in 2 evaluation units (EU) in Niamey; results indicate that both EUs passed and can stop MDA. The pre-TAS for FY16 is also just being completed in the HDs of Aguié, Tessaoua, Madarounfa, Mayahi, Bouza, Keita, Konni, Illéla, Tahoua, Tchintabaraden and Gaya but results are not yet available. The FY15 trachoma impact survey in N’Guigmi was finalized in March 2016 but results were not available in time for the previous report; the HD will require three additional years of MDA. For oncho, the entomological survey is currently underway and will be finished shortly.

Finally, there are several M&E activities that are to begin shortly. The FY16 trachoma impact assessments are set to begin in the HDs of Magaria, Matamèye, Gouré, and Zinder Commune. In addition, the FY16 surveillance surveys in Kollo, Boboye, Dosso and Illéla will take place in the same period. TAS 1 in the HD of Gouré, sentinel site evaluations for SCH/STH, and entomological surveys in four of the oncho endemic HDs (Say, Téra, Kollo, and Boboye).

1. MDA Assessment

The workbooks have been completed.

2. Changes in MDA Strategy

Table 1: Changes in MDA Strategy

District Name	Disease	Description of Change (ex: Stopped MDA; or Changed from district-level treatment to community-level treatment, etc.)	Rationale for Change (ex: active trachoma prevalence in impact study conducted in August 2011)
Niamey 2	LF	Stop MDA and begin surveillance	TAS 1 conducted and passed in April 2016
Niamey 3	LF	Stop MDA and begin surveillance	TAS 1 conducted and passed in April 2016
All SCH endemic HDs (41)	SCH	Update of SCH endemic villages; resulted in increase of villages requiring treatment	Activity conducted to determine where SCH is endemic, based on data reported in the health system

3. Training

A total of 36,945 people were trained during this period—refresher training for 22,234 and new training for 14,711, with 20% of all those trained being women. In addition, four MOH personnel and two HKI staff participated in a training on management of the supply chain and distribution of NTD drugs in Cotonou, Benin, held by Management Sciences for Health (MSH) from August 28–September 2, 2016. The training objectives were to explain the components of effective NTD management for MDAs and to describe how to develop a NTD drug supply system that complies with WHO standards.

4. Community Mobilization, IEC Materials, Registers, Publications, and Presentations

During the reporting period, a number of social mobilization activities were conducted at different levels in the health system in support of the MDA. At the national level, a contract was signed in April 2016 with Niger’s state radio and television broadcaster, Office of Radios and Televisions of Niger (ORTN), to transcribe, produce and broadcast televised and radio spots with NTD messages as part of the NTD MDA campaign.

At the community level, the MDA campaign began with information and awareness-raising sessions using two strategies: public criers, who go door-to-door to inform the populations about the campaign date and the need to obtain treatment and awareness-raising sessions within households, led by female community health workers. These female health workers were used to facilitate access to families, given religious and traditional considerations. They educate families about the diseases, the MDA strategy, the target individuals and side effects and encourage them to participate. In addition, contracts were signed with community radio stations to broadcast campaign messages in the most remote villages.

Finally, an awareness caravan traveled to 22 villages in the Tahoua and Maradi regions to encourage the populations to participate more actively to ensure successful distribution. The caravans consist of health personnel travelling to targeted villages and projecting films about NTDs and giving educational talks.

5. Supervision

This reporting period coincided with the end of the first phase of distribution in four regions and the start of the second phase in the country's four remaining regions. As with the trainings, supervision is conducted on a cascade basis. The national level supervises the regional level, the regional level supervises the district level, the HD supervises the health center and the health center supervises the CDDs. However, the central level may deal directly with the HD or health level and the CDD level, when required. A supervision checklist is provided to all supervisors to facilitate supervision at different levels.

The second phase of the FY16 MDA, which was carried out primarily between March and June 2016, was supervised in all regions; HKI was able to provide supervision support in the Tahoua and Maradi regions. Discussions with regional and/or health district focal points, health center head and CDDs provided an overall view of the campaign activities' progress and, in particular, of the problems encountered. This supervision at the HD and health center level provided a better understanding of the inter- and intra-district mechanism for redeploying drugs, based on the needs indicated, and, in particular, based on the availability of inputs. For example, Ague HD in Maradi did not receive the amount of Zithromax needed in the original deployment of drug; with support from The Carter Center, additional drug was transferred from Zinder. However, the time this transfer took caused a serious delay for this HD.

The goal of community visits is to obtain the views of village leaders, the population and the CDDs regarding distribution. Many areas for improvement were raised, including insufficient drugs and side effects, which often created an unwillingness to take the medication. During these visits, supervisors were then able to take the opportunity to inform the communities about the product's benefits and the temporary nature of the side effects.

Nearly all of the recommendations to improve the MDA gathered during supervision included comparisons of the NTD CDD motivation to national polio vaccination day campaign workers' (CDDs receive 2,500 CFA per drug package distributed; for polio, they receive 2,500 CFA/day). In FY16, the END in Africa project supported an increased number of CDDs to reduce the workload on CDDs, though this was not seen as sufficient. In addition, other issues noted during supervision included inadequate training, weaknesses in the drug and other input supply chain in the HDs, insufficient coverage (location and frequency) by the awareness caravan, and inadequate detail regarding HD budgets.

To ensure the reliability of the data collected, the supervisors followed CDDs from house to house to listen to the interviews, note the responses provided and observe how the responses are recorded. Problems are noted and corrected on site. In addition, actual drug distribution is observed to check how they are determining the dosage, giving the drug, and making check marks in their notebooks.

Corrections are made on site. Afterwards, the registers are verified and the number of individuals treated is counted, based on gender and age, to ensure consistency.

Based on observations during this last MDA, it was noted that training needs to be improved for the CDDs; rather than just provide theoretical training, the FY17 MDA training will be based on role-plays, so that all CDDs can practice each step and ensure they understand what to do. In addition, as CDDs work in pairs, the NTDP will also work to break up tasks so that one CDD will perform certain tasks (for example, measure the height of the drug recipient and give the appropriate amount of drug) and the other will do others (record information about the amount of drugs given). This will provide less confusion during the MDA.

In addition to the MDA, HKI and the partners (END in Africa, FHI 360) supervised the TAS at the former Niamey 2 and 3 HDs. This supervision was part of an exercise verifying that the program complied with the steps in the protocol and also better understand how the surveys are carried out.

6. Supply Chain Management

As a prelude to the FY17 NTD MDA, all drug requests were supported by the HKI NTD team. This involved:

- The Zithromax application which was sent to International Trachoma Initiative. Delivery is scheduled for October 2016. The Zithromax physical inventory must still be sent before the delivery green light is issued.
- FY17 SCH application for the PZQ order was sent to the WHO, initially in June 2016, and subsequently included as part of the joint request submitted again to the WHO in August 2016, with the requests for ALB and IVM. It should be noted that the PNLBG requested PZQ for both adults and SAC; thus far, the WHO has stated that they will only provide drug for the SAC.
- The PZQ, ALB, and IVM order was completed and sent to the WHO, the JRSM and the JRF. This request was sent and validated in August 2016.

In order to avoid past issues with lack of data regarding the quantities of drug left after the MDAs and to avoid allowing large quantities of drug to expire, a couple of measures have been taken. First, following the FY16 MDA, all health centers must return the remaining drugs to the health HDs or to the ONPPC regional or national warehouses. Once this has been finalized, the drugs will be counted and taken into account in HDs' drug requests for the FY17 MDA. These data will also be used to determine the quantities and locations of drugs that are at-risk of expiring; HKI and the NTDP will work with the HDs to ensure these drugs are distributed in the first part of the FY17 MDA, planned for November 2016. As a second control measure, HKI's newly hired logistician is also analyzing the data on drug left after the FY16 campaign and will compare this to the counted data. This will help show where problems are being made in reporting leftover drug.

Supply chain challenges

- The IVM and ALB for the FY16 MDA remained at the Cotonou port for several months before being transported to Niger. This was due to inadequate transmission of information. In the future, the NTDP has asked that a number of persons be copied on transmission of all information (within the MOH, the NTDP and HKI) to ensure that everyone is aware of where the drugs are and can follow-up.

- As mentioned above, the PNLBG generally requests PZQ for both adults at risk and SAC; however, the WHO does not take into account the treatment of at-risk adults in endemic HDs, and the discussion is on-going.
- During the national evaluation, problems were identified with the ONPPC's efforts to package drugs and its ability to deliver the proper medications. This resulted in some temporary drug shortages in certain HDs that required extra effort and funding to regulate. In the future, an NTDP staff person will accompany each convoy sent to deliver drug, to ensure that correct drugs and quantities are delivered. In addition, the HDs will be asked to review their requests on the spot and ensure it is what they requested.
- A lack of inventory forms at the ONPPC warehouses was reported. Similarly, quarterly drug physical inventories have not yet begun at the ONPPC warehouses. This follows a meeting in April 2016 with HKI and the Director and Associate Director of the END in Africa project, where this was discussed and agreed upon.
- One of the key problems that the NTD program has faced is the failure to return drugs from the health centers to the HDs after the campaign. As a result, the remaining supplies and drug expirations are not managed properly. Above, we described steps being taken to address this issue.
- Every year, the program must deal with new staff members who join the program every year at various levels, and whose skills require upgrading. In addition, there are no logisticians or SCM personnel at the NTDP, and not enough qualified staff in the field. This is one reason HKI hired a logistician. In addition to the inventory and data comparison activities described above, he will also be charged with determining training needs and providing it, where he is able.

7. Program Monitoring and Evaluation

LF /Oncho—During the reporting period, we received the final results for the FY15 TAS 1, conducted in April 2016 in Niamey II (now Niamey III and IV) and III (now Niamey V). In Niamey II, there were 0 positive cases out of 1,562 children surveyed; in Niamey III, there were 7 positives out of 1,576 children surveyed, though this was still below the critical cut-off. These HDs will stop MDA and begin monitoring as of FY17.

For FY16 activities, all HDs planned to undergo pre-TAS will finish between September and October 2016 (Aguié, Madarounfa, Tessaoua, Mayahi, Bouza, Keita, Tahoua, Illéla, Konni, Tchintabaraden and Gaya). Results are not yet available but will be shared when available. Among the 9 HDs programmed for TAS 1 in FY16, only Gouré will finish by the end of FY16. All others have been carried into FY17 (Matamèye, Magaria, Mirriah, Tanout, Zinder, Diffa, Maine Soroa, and N'guigmi). It should be noted that Tanout was not approved by the RPRG to carry-out TAS 1; however, this appears to be due to errors in the TAS eligibility form, and HKI is encouraging the PNDO/ELF to appeal the decision.

The onchocerciasis entomological surveys, planned in FY16 is underway in the Téra, Say, Kollo and Boboye HDs. Prior to the field work, a training for the fly capturers was held from August 18-20 in the Say HD. Results are not yet available. The epidemiological surveys in the same HDs will begin shortly. None of these HDs ever required MDA (all villages were hypo-endemic and below the treatment threshold); however, they all received treatment through LF. These surveys will indicate whether transmission has been interrupted. Results for both surveys will be shared when available, and will be used to populate the dossier for elimination validation.

Trachoma—The FY15 trachoma impact surveys concluded in March 2016, in N'guigmi. In the previous semi-annual report, we did not yet have those data to report. TF prevalence was 11.24% and TT

prevalence was 0.58%. Based on the ITI decision-making tree, the HD will need to continue the MDA for at least three years before conducting a new impact survey.

For FY16 for the PNSO, 7 HDs were planned to undergo impact assessments. Four HDs will undergo these surveys at the end of September-October 2016 (Magaria, Matamèye, Gouré and Zinder Commune). The other 3 HDs (Aguié, Bilma and Tchirozérine), were carried over into the FY17 workplan. The PNSO had also planned to conduct several pre-validation surveillance surveys in FY16; the HDs of Kollo, Boboye, Dosso and Illéla will be finished by the end of October 2016. Several other HDs (Ouallam, Say and Filingué) were carried over into the FY17 workplan.

SCH—The PNLBG began to conduct sentinel site evaluations in 17 sites in September 2016; results will be transmitted when available.

M&E Challenges

A continuing challenge is the fact that different denominators are being used by different levels in the health systems and even by different disease programs. For example, for the last MDA, certain HDs were using population figures from 2014, 2015, and 2016. For FY17, this will be resolved by asking the statistics bureau to provide the population figures to the NTDP and HKI prior to the MDA and sending those figures to each HD to use in quantifying drug and calculating coverage.

Another issue is the length of time it takes for data to be transmitted (as evidenced in the narrative above, where we discussed that certain MDA data are still not available). In FY17, there is a budget line for the MDA to involve the Regional Epidemiological Surveillance Managers. These persons will be responsible for collecting the data after each disease packet is distributed and sending to the national level. Previously, many of the persons compiling the data were the NTD focal points, many of whom have no training in data management and analysis.

Finally, security remains an issue in the region of Diffa, given the continued attacks by Boko Haram. This has had a large impact on the ability to supervise activities; however, the Ministry of Health has given the directive that activities are still to be carried out (thus the PNSO and the PNDO/EFL carried out impact assessments and pre-TAS in this region, respectively, during FY16). The Government helps support these activities, through the region's administrative authorities.

8. Short Term Technical Assistance

During the reporting period, a workshop was held in April 2016 to update the TIPAC with technical assistance from Mr. Justin Tine of Deloitte. The purpose of the workshop was to generate useful information for the program that could provide a detailed mapping of funding sources, reduce the risk of double-funding and offer reliable data on supplies of pharmaceutical products and information on funding gaps and potential funding options that may help to address these gaps, gradually and sustainably. Given that Niger is moving towards finalizing implementation of the 2016-2020 Master Plan, the information generated by this exercise may help to refine budgeting, and identify any gaps/overlaps that need to be considered.

9. Government Involvement

During the reporting period, a meeting was held on September 22, 2016 with the new Minister of Health, Dr. Kalla Moutari, and was attended by the NTD focal point, the disease coordinators, and HKI. He was interested to hear about the extent of the program and the value of the drugs leveraged due to

END in Africa and other partners' contribution. He asked for a briefing paper on the program so to better inform him.

Niger's MOH developed and shared the new 2016-2020 NTD master plan and calls for creating an NTD coordination unit within the Ministry of Health, which would also provide additional staff and infrastructure. In connection with the national M&E of the activities, the MOH's NTD program also developed an M&E plan to evaluate the current plan. This M&E plan was validated in August 2016 at a workshop with participation from both the MOH and HKI. Similarly, NTDs were given priority in the new 2016-2020 health development plan. This is evidenced by the fact that the budget line was doubled from 100 million CFA to 200 million CFA per year.

An NTD Task Force is currently being created and will be supported by the World Bank NTD project. No new staff were assigned to the NTD program.

10. Transition and Post-Elimination Strategy

As part of implementation of the post-elimination strategies that the NTD program proposes to carry out, END in Africa is supporting the PNDO/EFL to conduct entomological and epidemiological surveys to demonstrate that oncho transmission has been interrupted. The PNSO has also planned to conduct several trachoma surveillance surveys to ensure that there has been no disease recrudescence, which is a requirement for its elimination validation dossier.

The NTD program coordination plans to increase the mobilization rate of financial resources allocated to NTD on the budget line, which currently totals 200 million CFA francs. In addition, Niger has just entered into a new agreement with the World Bank that will provide additional support the NTD program for four years.

11. Proposed Plans for Additional Support to National NTD Program

The Ministry of Health is reviewing the issue of health program integration. This involves considering whether to create a single disease control program for all disease, in which all activities would be integrated into a single program.

In addition, HKI and the NTDP recently met with the new Minister of Public Health to discuss the NTDP. To date, the Minister had not heard anything of the NTD program and was surprised and pleased to hear about the extent of the program and the contributions of the NTD program in terms of the value of the drug leveraged. He has asked for a briefing paper to learn more about the NTDP.

Morbidity management plays an important role in the NTD program in order to ensure that those with these conditions can live improved lives. For the PNSO, HKI, through funds from the Conrad N. Hilton Foundation and The Carter Center support surgery for trichiasis cases. Complications of LF (lymphedema) are supported by the Government of Niger and, from time to time through RISEAL (hydrocele). The PNLBG is working with the WHO on a strategy to make Praziquantel available in the health centers where endemicity is high to treat routine cases of bilharzia; once this strategy is developed, further details will be shared.

12. Lessons Learned/Challenges

This year, the program took several measures that helped to improve the population's acceptance of the drugs, thus improving drug treatment coverage in HDs that had reported problems during the previous campaign. This involved strengthening the supervision of the CDDs by the health center heads, the

awareness caravan, and increased awareness-raising by the female community health workers.

Similarly, independent monitoring conducted during and just after distribution of the drug packages quickly identified problems associated with the distribution so that they could be reported and solutions implemented immediately. Villages with inadequate or no coverage were thus identified and the CDDs responded. Drug stock-outs were also identified in certain areas and corrected by redeploying medications from better-supplied areas.

The coverage survey conducted by the PNSO during the last campaign resulted in proactive measures, including enhanced training for the CDDs and supervision of CDD drug distribution by the health center heads in the four health HDs where the survey was conducted (Dakoro, Madarounfa, Zinder commune and Magaria). It also demonstrated that there is a large discrepancy, in some areas, between reported and actual coverage that needs to further be examined.

13. Major Activities for the next six months

- Carry out the FY17 MDA in two phases (one in November 2016 and one in March 2017):
 - SCH in 28 HDs;
 - STH in 11 HDs;
 - Trachoma in 7 HDs; and,
 - LF in 21 HDs.
- Conduct independent monitoring in six HDs during the FY17 MDA.
- Conduct disease-specific assessments:
 - Completion of onchocerciasis epidemiological and entomological assessment in four HDs
 - Completion of trachoma impact assessments planned for FY16 and those planned for early FY17 (Magaria, Gouré, Matamèye, Zinder, Bilma, Tchirozérine and Aguié)
 - Trachoma surveillance surveys in 3 HDs (Fillingué, Ouallam, and Say)
 - Sentinel site surveys for SCH (17 sentinel sites)
 - TAS 1 surveys in 8 HDs (Matamèye, Magaria, Mirriah, Tanout, Zinder, Diffa, Maine Soroa, and N'guigmi). NB: The RPRG did not approve Tanout to conduct TAS 1; however, this was because of an error in coverage data transmitted with the TAS eligibility form. HKI is encouraging the PNDO/EFL to submit an appeal.
- Distribute the new NTD strategic plan
- Hold the Onchocerciasis Elimination Committee meeting
- Hold the national workshop to revise the MDA data collection materials
- Coordination meetings
- Meetings with the Governors to sign the FOGs
- Cascade trainings for MDA

Sierra Leone

During the reporting period, a number of activities took place, particularly related to mass drug administration (MDA), monitoring and evaluation (M&E), and strategic planning.

Advocacy meetings were held on the 10th and 11th May 2016 for the urban and rural Western Area (WA), respectively, and special advocacy took place between 25th and 28th of April 2016 for the three districts that failed the pre-transmission assessment survey (TAS) in 2013. Social mobilization meetings were held in various communities to gain the support and commitment of stakeholders for lymphatic filariasis (LF) and soil transmitted helminthes (STH) MDA in the Western Area between 15th and 25th of May. The participants included council chairmen, ward councilors, religious and traditional leaders, leaders of market women's associations, the teachers' union, motor cycle riders, the police, and youth and women's organizations. These stakeholders helped sensitize target populations prior to and during the MDAs. As in previous MDAs, an advocacy meeting was also held with private medical practitioners in the WA, so that their clients could also be treated. The private practitioners were given drugs to treat their clients, in addition to conducting sensitization. The media is also key to implementing a successful MDA, especially in the WA. Several popular discussion programs, such as "We Yus" on the national television and "Good morning Salone" on Radio Democracy were held to sensitize and mobilize people for MDA.

MDA campaigns for lymphatic filariasis (LF) and soil-transmitted helminthes (STH) in the WA and for LF-Onchocerciasis (Oncho)-STH in 12 health districts (HDs) were implemented: the MDA for LF-STH in the WA was conducted from 27th-31st May 2016 and the MDA for LF-Oncho-STH in 12 HDs was conducted from 5th May–31st July 2016. A total 1,443,139 eligible persons were treated in the WA, with a reported 78% epidemiological coverage. End-process independent monitoring (IM) for MDA LF-STH in the WA showed that 68% of eligible persons ingested the drugs. For MDA LF-Oncho-STH in 12 HDs, a total of 4,202,381 people were treated for LF & STH with epidemiological coverage of 77%; and 2,709,504 persons were treated for Oncho with epidemiological coverage of 76%. End-process IM for MDA LF-Oncho-STH in 12 HDs showed that 86% of eligible persons had consumed the drugs.

Pre-MDA activities for schistosomiasis (SCH) have commenced in preparation for the MDA scheduled for 10th–16th October 2016. Training of chiefdom supervisors for MDA SCH was held on the 29th August 2016 in Kenema for the southeast districts (Kailahun, Kenema and Bo) and on the 31st August in Makeni for the northeast districts (Bombali, Tonkolili, Koinadugu and Kono). Participants included District Health Management Team (DHMT) staff, community health officers, community health assistants and district pharmacists to help supervise the MDA. Preceding the training of supervisors, the Neglected Tropical Diseases Program (NTDP) conducted advocacy meetings and peripheral health unit (PHU) staff training from 3rd–10th September 2016. The advocacy meetings targeted religious leaders, council chairmen, market women groups, representatives of bike riders' associations, civil society, the police, and traditional heads from each of the chiefdoms targeted to galvanize their support for SCH MDA in the 7 HDs.

Monitoring and supervision exercises were performed for both MDAs. Supervision was conducted at the national, district and community levels. At the national level, staff from the National Program supervised the MDA, while at district and community levels, District Health Management Teams and community leaders took leadership in the supervision. Helen Keller International (HKI) also provided supportive supervision during the MDA in the communities.

In terms of monitoring and evaluation, a disease specific assessment was conducted for SCH and STH in April 2016. For SCH, both *S. mansoni* and *S. haematobium* were assessed in all HDs except the Urban Western Area and Bonthe; only *S. mansoni* was assessed in those HDs. STH were assessed in all 14 HDs. The objective of the assessment was to redefine treatment strategies in the seven districts that had conducted SCH MDA for 5 consecutive rounds and to re-assess the other districts (which have never undergone MDA) to determine whether MDA is warranted in any of these districts (see the section on MDA assessment for detailed results). The STH assessment was conducted in all 14 HDs including the WA, combined with SCH assessment where applicable. This was also the first assessment of STH after baseline and after seven consecutive rounds of MDA in the 14 HDs. The objective of the assessment was to determine future STH treatment needs, given the fact that LF treatment is projected to stop by 2018 in 8 HDs and by 2019 in all districts (see the section under MDA assessment for detailed results).

In June 2016, a SCH-STH national program review meeting was held with participants from USAID, WHO, UNICEF, Family Health International (FHI) 360, HKI, Sightsavers, the national school health program, and NTD focal points from the seven SCH endemic districts, to review the current and proposed future treatment strategies for SCH and STH (for details of the proposed strategies, please see attached Appendix 1). Based on the results presented, Kono district will change from annual treatment to biennial treatment for SCH. All of the other districts, except Kenema and Tonkolili, will implement treatment based on a district average of the prevalence and WHO prevalence thresholds (<1%, 10-50% and ≥50%). The treatment strategy will be modified for Kenema and Tonkolili from FY18 going forward based on the results of the supplemental survey (at the SCH review meeting in June 2016, one of the recommendations was to survey additional chiefdoms in these districts prior to making a treatment decision). Results are still being analyzed.

Another key accomplishment of the NTD program during the period under review was development of the new NTD Master Plan for 2016-2020. During the two-week session from 15th- 26th August, the NTDP and partners (HKI, Sightsavers and WHO) carefully reviewed the old master plan and formed groups to develop the new master plan according WHO guidelines. The new master plan is divided into three parts: situational analysis, NTD strategic agenda, and operational framework. These three components were comprehensively reviewed to update the current status of NTDs in the country. The main priorities addressed in the new master plan are post MDA surveillance, morbidity control and innovative and intensified disease management NTDs (IDM-NTDs), i.e., Buruli Ulcer, Rabies, Human African Trypanosomiasis and Leprosy, capacity building of NTDP staff, strategies for resource mobilization, development of NTD policy, an M&E plan and formation of an NTD steering committee to serve as the highest advocacy body to the Government of Sierra Leone (GoSL). The NTDP goals for LF and Oncho elimination are 2020 and 2025, respectively.

1. MDA Assessment

The workbooks have been completed.

2. Changes in MDA Strategy

During the reporting period, a prevalence survey for SCH using Kato-Katz (14 HDs) and urine filtration (12 HDs) was conducted in April/June 2016. During the national review meeting held in June 2016, the NTDP and partners reviewed the recent survey results and agreed on the SCH MDA strategy for FY17. Currently, 7/14 HDs undergo MDA, and treatment frequency is based on chiefdom-level results (with the exception of Kono, where all chiefdoms have treated at the same frequency, given the high prevalence). The SCH treatment strategy will continue to be based on district level prevalence for Kono and chiefdom level prevalence results for Kenema and Tonkolili. Average prevalence will be applied to

the other districts. However, a recommendation at the SCH review meeting was to survey additional chiefdoms in the districts of Kenema and Tonkolili; those samples are still undergoing analysis. No change in strategy in MDA was made during the reporting period. The proposed change will commence in FY17; the additional data in Kenema and Tonkolili may entail an additional change in FY18 for those two HDs.

2008/09 Mapping surveys in Sierra Leone found STH infections in all 14 HDs. According to WHO guidelines, the level of prevalence justified either biannual or annual MDA targeting pre-school children, school-aged children and 'at-risk' adults. Prevalence assessments for STH using Kato-Katz thick smear were conducted in April 2016 in the 14 HDs at the same time as the SCH evaluations to determine future STH treatment needs, given the fact that LF treatment is projected to stop in 8 HDs by 2018. The results are shown in the table below (see also the M&E section). The SCH/STH program review meeting agreed to form a committee to meet twice annually in FY17 to plan transition for SCH/STH in the country. The committee will help provide an informed decision on the future control program in Sierra Leone, especially when the current major donor funding ends. There has been no change in MDA strategy during the reporting period. The proposed change for STH will commence in FY17.

3. Training

A total of eight (8) trainings were conducted during the second half of FY16. In total 32,777 people were trained—refresher training for 31,371 people and new training for 1,406, with about 36% of all those trained being women. In addition, Deloitte conducted a TIPAC training for the national program, HKI, representatives from DPC, TB and Leprosy control program, and the directorate of finance at Ministry of Health and Sanitation (MoHS) central level.

4. Community Mobilization, IEC Materials, Registers, Publications and Presentations

During the reporting period, several social mobilization activities were carried out to mobilize communities to achieve high drug coverage during the MDA. Social mobilization guidelines and frequently asked questions (FAQs) leaflets for both onchocerciasis and LF were updated to include issues raised by communities about MDA and post-Ebola Virus Disease (EVD) survivors. For example, some of the community health workers (CHWs) and CDDs responsible for drug distribution are EVD survivors, and some communities remain skeptical of coming into contact with EVD survivors. Therefore, the FAQs incorporated messaging to reassure the public that it is safe to accept the drugs during MDA.

The social mobilization guidelines are emphasized during the training of health staff so that they know exactly what they should tell the public during community meetings. The FAQs are used in all community meetings as well as radio discussion programs. These FAQs are updated based on the feedback from the SMS messages and phone-in comments or concerns from the audience. A total of 120 integrated training manuals² for PHU staff, 122 banners, 30,100 treatment & reporting forms and 500 FAQs were produced and distributed for the LF-STH MDA in the WA in May 2016.

Social mobilization activities for the LF-Oncho-STH MDA in the 12 HDs was conducted in late February 2016 at the village level, with the PHU staff holding meetings for traditional leaders, religious leaders, village headmen, section chiefs, councilors, youth leaders and local teachers (this activity was not captured in the SAR 1). Town criers in villages and street announcers in urban settings (i.e., the WA and

² Integrated training manuals cover all aspects of the 4 preventive chemotherapy NTDs endemic in Sierra Leone (LF, oncho, STH, and SCH): training, advocacy, social mobilization, MDA, M&E.

district head quarter towns) were used to inform communities about the dates of the sensitization meetings and the MDA and to convince every eligible person to comply with the treatment. Prior to and during the LF-STH MDA in the WA, several popular discussion programs like “We Yus” on the national television and “Good morning Salone” on Radio Democracy FM 98.1 were held to sensitize and mobilize the population. Local comedians “Wan Pot” produced a video, which was then shown on three community large screens and three TV channels in Freetown prior and during the LF-STH MDA in the WA. The video clip was also uploaded on YouTube³ for wider audience.

Well-tailored, pre-tested messages and position statements were aired on community radio stations and the commercial ‘Star Radio’ with nation-wide coverage. These were done through interactive, live panelist broadcasts during the MDAs for both LF-Oncho-STH in 12 HDs and LF-STH in the WA. Text messages and phone calls from the public that come in during the live panelist broadcasts serve to heighten the radio discussion, and the feedback from these discussion is used to update the FAQs. Some of these radio stations, particularly “Star Radio”, “Radio Democracy”, and “AYV Radio” are also available online for a wider coverage.

During the reporting period, HKI assisted the National Program to develop a monthly radio discussion to cover various issues about NTDs such as the need for motivating CDDs, responsibilities of communities during MDAs (especially in urban settings), lessons learned and the impact of NTDs in communities to increase awareness about the NTD program. These monthly radio discussion programs invite key stakeholders such as religious leaders, councilors and heads of youth groups to be panelists so as to increase a sense of community ownership and public confidence post-EVD.

In addition, an advocacy group (END7) from the University of Sierra Leone also helped raise awareness about MDA in the WA. In May 2016, this group held meetings in seven tertiary institutions with dean of faculties and student union bodies to galvanize support for and participation in the MDA.

Traditional leaders, both male and female, played a vital role during the EVD outbreak. These individuals also helped raise awareness during MDAs for both LF-STH in the WA and LF-Oncho-STH in 12 HDs. They also helped to sensitize communities about the importance and benefits of taking NTD drugs.

Commercial motor bike riders who are frequently on the move were included in advocacy and social mobilization for all MDAs. This group was invited to community meetings to sensitize them and encourage them to raise awareness and mobilize others to participate in the MDA.

Furthermore, as a way of increasing public confidence in the safety of the drugs used, the Deputy Minister of Health and Sanitation, the Deputy Chief Medical officer, the USAID Health Advisor, District council chairman for Rural Western Area District council, the NTD Program Manager and other key stakeholders all took the treatment in front of the participants during the LF-STH MDA in WA in May 2016. This event was recorded and the video aired on national television.

In terms of publications for the reporting period, the END in Africa Sierra Leone program team submitted three abstracts which were accepted and presented for the poster session at the biennial

³ <https://www.youtube.com/watch?v=Btzt5-V7Dng&feature=youtu.be>

conference of the Royal Society of Tropical Medicine and Hygiene in Cambridge, United Kingdom that took place on September 12–16, 2016.

- Y. M. Bah, A. Conteh, Paye J, M. S. Bah, I. Savage, M. Sonnie, M. Hodges. “Maintaining effective mass drug administration for neglected tropical diseases post Ebola in Sierra Leone” (poster).
- Y. M. Bah, A. Conteh, Paye J, M. S. Bah, M. Sonnie and M. Hodges. “Schistosoma mansoni infection following 6 years of mass drug administration (MDA) in Sierra Leone” (poster).
- Y. M. Bah, A. Conteh, Paye J, M. S. Bah, M. Sonnie and M. Hodges. “Progress towards soil-transmitted helminths control in Sierra Leone” (poster).

5. Supervision

In the second half of FY16, funds were made available to the NTDP for regular maintenance of and fuel for their vehicles to conduct supervision of trainings, social mobilization, advocacy and MDA activities at all levels, including hard-to-reach communities. Furthermore, at the PHU level, funds were also provided to PHU staff to cover the cost of transportation in supervising their catchment communities during MDA activities. In addition, a vehicle was hired for the NTD program manager to help him facilitate and coordinate activities at district level.

In-process and end-process independent monitoring was conducted for both MDAs (LF–STH in the WA and MDA LF–Oncho–STH in 12 HDs) to ensure MDA targets were met. The in-process independent monitoring was done during the MDA to report issues such as CDDs providing treatment without using dose poles, administering either ALB or IVM instead of both drugs together, and not treating eligible persons or communities. This enables the NTDP to take corrective measures before the end of the MDA. Some of the issues reported during the period under review included the distribution of drugs to beneficiaries for their dependents, lapses in direct observed treatment protocol, and delays in distributions.

End-process independent monitoring was conducted after the MDAs. The results were used to validate the NTDP and DHMT-WA tallies. In addition, the reasons for non-compliance were also assessed during MDAs through independent monitoring using the same evaluation forms. Data on the effectiveness of PHU staff training, community sensitization meetings, and CDD training were also collected by the independent monitors. These findings will be presented during the annual review meeting in December 2016 in order to implement corrective measures during subsequent activities. Furthermore, supervisions were also undertaken at national, district and community levels. HKI, Sightsavers and the NTDP supervised trainings, advocacy, some community meetings and the MDAs. The DHMTs also supervised the community meetings implemented by PHU staff at village and zonal levels in urban settings. The PHU staff supervised the CHWs during the MDA with support from the community leaders to ensure that best practices were observed.

The mHealth software “ONA” was used during in- and end-process independent monitoring conducted for LF-Oncho-STH MDA in 12 HDs. A global positioning system (GPS) device was installed on the mobile phones and enabled the movement of monitors to be tracked to ensure they went to pre-selected sites. In addition, the questionnaires were updated to assess the reasons for non-compliance. These findings will be analyzed and presented in the form of posters and further discussed during the annual review meeting.

6. Supply Chain Management

The Supply Chain Management (SCM) activities included distribution of MDA drugs and materials (such as dose poles, tally sheets, summary forms, and adverse drug reaction forms) for the LF–STH MDA in the WA and LF–Oncho–STH in 12 HDs.

A total of 6,055,000 tablets of ALB and 16,963,500 tablets of IVM arrived in Sierra Leone at the end of March 2016 for the MDAs for LF–Oncho–STH in the 12 HDs and LF–STH in the WA. Prior to the two MDAs, the different drugs were supplied to the various DHMTs based on the district CDD census which was done in March 2016, compiled by the PHU staff for the 12 HDs for LF–Oncho–STH and DHMT-WA projected population data, respectively. Drugs were supplied to the DHMT WA in May 2016 just before the MDA. The DHMTs, in-turn, supplied the various PHUs with drugs based on the PHU CDD census data, and the PHUs gave the drugs to the CDDs in the various communities based on their eligible village census data. Other logistics, such as the dose poles, pencils, pens, and polythene bags were distributed to the various DHMTs and onwards to the communities two weeks prior to the MDA.

Following MDA in the WA for LF–STH, the remaining drugs were quantified and returned to the district drug store. Drugs remaining in the communities and PHUs from the LF–Oncho–STH MDA in 12 HDs and the SCH MDA in 7 HDs will be returned to the district drug store and onward to the NTDP warehouse in Makeni after the SCH MDA in October 2016.

SCM topics were part of the MDA training for PHU staff, CDDs and CHWs at all levels. SCM training topics covered included management of drugs (the quantity received, used and returned), reporting, reverse logistics, completing the treatment and reporting forms, and waste management of empty cups, among others. In April 2016, MSH, through the END in Africa project, met with HKI, NTDP staff, and representatives from the Sierra Leone Pharmacy Board (SLPB) and the National Pharmaceutical and Procurement Unit (NPPU) to discuss the action points from the SCM workshop held in Accra in February 2016.

A constraint at the various DHMTs is the lack of functional vehicles to transport drugs to the various PHUs. Most of the vehicles supplied to the DHMTs were engaged during the Ebola outbreak to help with surveillance, making it difficult to distribute drugs in a timely manner. To address these problems, motor bikes and boats were hired for MDA activities, especially in hard to reach areas in order to help the focal persons' transport drugs where there was a vehicle constraint. Also in August 2016 two brand new vehicles purchased with END project funds were handed over by local USAID Mission through HKI to the National NTDP of the MoHS to facilitate the Program's field support supervision efforts.

Lastly, there were no issues with custom clearance although there were some delays in getting the drugs in the country. Once drugs are in the NTD store, there are little or no issues in distributing them as long as the necessary logistics are available including vehicles, fuel and overnight allowances for NTDP and the NTD focal persons at district level. There were no issues with warehouse and stock management during the reporting period. The necessary forms were used for drug supply and distribution supervised by district pharmacists at district level. And lastly, waste management was also not an issue. Empty cups, which are normally reused by the communities for domestic purposes following the completion of MDA, were returned to the PHUs based on recommendations from John Snow, Inc. (JSI) to be used during subsequent drug distribution. This enhanced the tracking of drug movement at each level, which is evidenced by improved reporting, particularly at the PHU level. However, there was some loss/wastage of drugs–15,913 IVM tablets and 5,150 ALB tablets.

7. Program Monitoring and Evaluation

In order to improve the M&E activities of the DHMTs, HKI reviewed and updated questionnaires to evaluate the knowledge gained by communities during community sensitization meetings, the effectiveness of Health Workers and CDD trainings. The results of this evaluation exercise will be developed into a poster form, and presented during the NTD annual review meeting in December 2016.

Disease-specific assessments (DSAs) for both SCH and STH were conducted during the reporting period. DSAs using Kato-Katz for SCH and STH were conducted in April 2016 in 12 and 14 HDs, respectively. Results from the assessment and action-oriented conclusions can be found in the FY16 program workbook. The results of the DSAs were used to redefine the FY17 treatment strategy.

A total of 3,632 samples were collected and examined. Overall, *S. mansoni* prevalence was 20.4% (95% CI: 18.7-22.3), ranging from 2.7% (95% CI: 1.2-1.5) in Bo to 39.5% (95% CI: 34.0-45.3) in Kenema in the MDA-treated districts. The overall arithmetic mean intensity was 52.76 epg (95% CI: 43.16-62.36 epg). This was a significant reduction from the 2008/09 baseline (n=1758) prevalence of 42.2% and arithmetic mean intensity 100.46 epg (95% CI: 88.71-112.22). In 2016, 73 children had heavy infection (3.7%) and 116 had moderate infections (5.9%), a significant reduction from 6.8% and 14.9% respectively in 2008/09 (p<0.0001). Of the 40 chiefdoms studied in 2016, 5 (13%) had high prevalence versus 23 out of 60 chiefdoms (38%) at baseline.

In order to ensure that M&E needs are successfully met, the NTDP received training on DQA, integrated NTD database and WHO joint application package for NTD drugs in August 2016. This training will also be cascaded to the NTD focal persons in the first quarter of FY17 before the implementation of the DQA. The DQA implementation will allow the National Program to assess the quality of reported NTD data in Sierra Leone and the ability of current data management systems to collect, transmit, document and report quality data. Also, during the DQA training, an orientation in the use of the WHO Joint Reporting Forms and Joint Request Forms to help with drug requests and MDA reporting was discussed and FY17 drug application package was reviewed by the technical lead from FHI 360 before it was submitted. Furthermore, the training on the integrated NTD database will ensure that all data are compiled in one place, which will help the NTDP prepare its elimination dossiers for LF and Oncho.

M&E Challenges

A major challenge encountered during the DSAs for both SCH and STH is the poor road network, especially in the riverine districts (Pujehun, Moyamba, Bonthe). Survey teams had to hire boats and canoes to access these areas and additional days were provided for team members in order to achieve their objective. In addition, communities were still resistant to sample collection due to the recent Ebola outbreak and in some cases teams were denied sample collection.

Poor road networks also posed challenges for the national program, HKI and other partners, who could not monitor activities in some communities that were inaccessible. In addition, independent monitors find it very difficult to access some places due to inaccurate boundary demarcations from the Statistics Sierra Leone (SSL) enumeration listings and spelling mistakes of villages from the sample frame. These issues will hopefully be addressed by SSL as a recent national population and housing census was conducted in December 2015.

8. Transition and Post-Elimination Strategy

During the period under review, no specific post-elimination strategy was developed. However, the new NTD Master Plan for 2016-2020 captures post-elimination strategies such as inclusion of NTD case

management, WASH, morbidity management for LF, vector control for onchocerciasis, and the inclusion of NTD surveillance in the MoHS integrated disease surveillance system.

To ensure that the MoHS is in a position to sustain the successes of the NTDP when donor support ends, all TAs (DQA training, integrated NTD database and WHO joint request and reporting forms) implemented in FY16 and the cascade training of the DQA planned for FY17 will increase the capacity of the NTDP in the area of M&E. Training of laboratory technicians at district level for case identification will also enable timely identification of new cases. The knowledge gained by NTDP on resource mobilization will also help the government raise its own funding locally to sustain the program.

During the SCH–STH program review, participants discussed reactivating the committee on STH/SCH to support the post-LF transition. The committee is expected to meet twice in FY17 to discuss WASH activities in the country through collaboration with other INGOs and the environmental health and sanitation division of the MoHS. In addition, this committee will review other treatment platforms for STH/SCH once LF MDA has stopped and once USAID support is withdrawn from Sierra Leone. This will help provide informed decision on the future control program in the country especially when the current major donor funding ends.

9. Short Term Technical Assistance

A training workshop on TIPAC and data entry organized by Deloitte/FHI 360 was held from the 14th–25th March 2016 in Makeni. Participants included staff from the NTDP, the directorate of disease prevention and control, the leprosy control program, a representative from the director of finance of the MoHS, and HKI. The objective of the workshop was to train the country team and partners on the use of the tool and also to enter the FY 2016 data for future planning. The report of the workshop has not been received from Deloitte. Although this workshop took place during the SAR 1 reporting period, it was not captured in that report, due to the timing of the workshop and the due date of the report.

Technical assistance was also provided by the FHI 360 END in Africa M&E Advisor on DQA, integrated NTD database and WHO joint request and reporting forms for NTD drug application and reporting. The workshop was held in Makeni from August 1–5, 2016. Participants mainly comprised of staff from NTDP and HKI. The objective of the workshop was to train the national program on how to conduct DQA, creating an integrated NTD database and the use of WHO forms for application and reporting of NTD drugs. Before the end of the workshop, the NTDP M&E Officer and the representative of FHI 360 finalized the drug application package for FY17 MDAs. The NTDP plans to conduct its first DQA before the end of 2016.

In addition, the NTDP received technical assistance from the WHO and support from the END in Africa project to develop a new five-year NTD master plan (2016-2020). The two-week workshop was held from August 15–26, 2016. Participants included the director of primary health care; district medical officers and NTD focal points from Koinadugu, Kenema, Bo, Kono and the WA; the school health program manager; representatives from environmental health and sanitation; the national leprosy and tuberculosis programs; the NTDP, HKI, Sightsavers and the WHO. Two WHO consultants facilitated the workshop (Dr. Ngozi Njebuome from Nigeria and Dr. Dorcas Alusala from Kenya). The objective of the workshop was to develop a five-year strategic plan for NTDs, five-year cost projections using TIPAC and 2017 annual work plan for the program. A draft has been sent to various partners for comments and contributions before it will be finalized in October 2016.

TA reports for the above mentioned activities have not been made available yet.

10. Government Involvement

During the period under review, four coordination meetings were held with partners to discuss timelines for the LF–STH MDA in the WA, the SCH MDA in 7 HDs, the NTD Master Plan (2016-2020) and the SCH–STH program review meeting.

The MoHS annual work plan includes a budget line to cover administrative costs for the NTDP secretariat. In early January 2016, a \$6,700 increase in funding was allocated towards morbidity management in the annual budget by the GoSL. Nevertheless, these funds have still not been released by MoHS to support morbidity control. With the exception of funds from Sightsavers, no additional funding was received by NTDP from other partners during the reporting period. No new staff was assigned or additional space was provided during the reporting period.

11. Proposed Plans for Additional Support to National NTD Program

The NSAHP continues to support the NTDP in the SCH and STH programs. The WASH program of the NSAHP is one of the areas identified for possible collaboration as Sierra Leone moves toward elimination. An STH/SCH committee will be reactivated in FY17 with the inclusion of key stakeholders such as the environmental health and sanitation division, UNICEF, WHO, and health INGOs to plan transition for STH/SCH in the country. Furthermore, during the development of the new NTD strategic plan, the issue of forming an NTD steering committee to advocate at higher level was discussed. It is anticipated that by 2017 the NTDP will form a committee headed by a senior member of parliament to push for NTD government support during the allocation of budgets to various ministries.

No activities were implemented to support morbidity management during the reporting period. The NTDP has included a request for support to conduct an assessment into the current backlog of hydrocele and lymphedema patients in Sierra Leone in the FY17 work plan. The national program plans to train CDDs to conduct the assessment in communities throughout the country in FY17, if funding is made available. This is because each community has a CDD who distribute the drugs to inhabitants and there are higher chances that he/she can identify the patients. Also the results will be more reliable and will reflect the total number in the country rather than an estimate.

12. Lessons Learned/Challenges

October and November are the ideal months to conduct MDA for LF–Oncho –STH in 12 HDs in order to allow the NTDP sufficient time to plan the MDA for SCH in 7 HDs. This ‘window of opportunity’ was not utilized in the FY15 and FY16 MDAs due to the Ebola outbreak in 2014 and DSAs for SCH and STH respectively. Hence, MDA for LF–Oncho –STH in 12 HDs was conducted in May 2016. Once the country was declared Ebola free, the NTDP and partners planned strategically and worked diligently to accomplish successful MDAs for WA and LF–Oncho –STH in 12 HDs.

Continuous use of community and commercial radios to broadcast jingles, live interactive discussions, and community meetings with stakeholders prior to and during MDAs have been the main reasons the national program has maintained coverage above the WHO recommended threshold post-Ebola and with the altered MDA schedule. When MDA started after the Ebola epidemic, social mobilization guidelines and Information, Education and Communication (IEC) materials were revised prior to every MDA to address issues and concerns that arose in the post-Ebola context. Similar strategies will be employed in subsequent MDAs to take into account any rumors or other issues that are detected during MDAs that might impact the communities’ willingness to participate.

In-process independent monitoring conducted during the MDA has also contributed to improved MDA coverage. In-process monitoring sites are selected purposefully from areas that have been known to perform poorly during immunization campaigns by WHO and also very hard to reach locations which are often left out during health interventions because of the rough terrain in accessing these areas. The monitors report on a daily basis to HKI, the NTDP and the DHMT, so that any issues that might affect the campaign, such as noncompliance, mal-distribution (e.g. treatment without dose poles, administering either ALB or IVM instead of both) and stock-outs, are speedily resolved.

13. Major Activities for the next six months

The main objectives for the next six months is:

- Development of NTD curriculum
- Procurement of materials for NTD survey
- Implement DQA in 4 HDs November 2016
- Hold NTD annual review meeting December 2016
- Conduct TAS 1 in 8 HDs January 2017
- Conduct Pre-TAS in 6 HDs February 2017
- Conduct Oncho epidemiological survey in 12 HDs March 2017

Togo

The main activities during this period were the May/June 2016 nationwide integrated mass drug administration (MDA) to treat soil-transmitted helminths (STH), onchocerciasis, and schistosomiasis, and two meetings to discuss the elimination of onchocerciasis in Togo. Also during this period, the Togo Ministry of Health (MOH), in collaboration with Health & Development International (HDI), submitted drug orders for the coming fiscal year and developed an integrated neglected tropical diseases (NTD) Work Plan for fiscal year (FY) 2017.

In May/June 2016, the MOH implemented their sixth nation-wide integrated MDA to treat onchocerciasis, schistosomiasis, and STH, the seventh large scale integrated MDA under USAID funding. Medications (ivermectin, praziquantel, and albendazole) were provided to school-aged children and high-risk adults via a community-based, house-to-house distribution platform. Community drug distributors (CDDs) distributed medications according to local disease prevalence, per World Health Organization (WHO) guidelines and Togo MOH policies. In preparation for the MDA, the MOH organized supervisor training sessions in all five geographic regions, followed by training of the nurses, culminating in the CDD training. The MDA began in mid-May and continued through mid-June 2016. The drug distribution report forms were collected from all of the districts in August 2016 and data entry is underway. Overall, we expect the data will demonstrate high treatment coverage and minimal drug losses, as in Togo's previous MDAs.

It was during supervisory trainings that HDI became aware of a subset of individuals who were not paid their full per diem in 2015 due to a theft that occurred in the Ministry of Health. The approximately \$28,000 taken from the integrated NTD project was part of a larger theft that involved money from other donors' activities, and the suspected thief is in prison. HDI is taking this very seriously, and is continuing to follow up with the Ministry of Health to ensure those individuals are fully compensated. As of this writing, MOH has provided policy documentation that they will pay what is due to short-changed individuals and provided a list of persons affected. HDI will continue to follow up until we have confirmation from the individuals that they have been paid.

Planning for the second round of MDA that will take place in October 2016 has begun. The second round of treatment will be delivered to areas with high rates of STH (6 districts), schistosomiasis (21 districts), and/or onchocerciasis (15 districts).

Collaborations among the Integrated NTD Program, HDI-Togo, and the Onchocerciasis Program are being strengthened. The MOH, HDI, and Onchocerciasis Program are collaboratively developing detailed and integrated implementation plans at the central level for distribution of medications and data analysis. In addition, USAID has agreed to fund a number of onchocerciasis surveillance activities, which requires a new level of collaboration among the Onchocerciasis Program, Integrated NTD Program, and HDI. Two onchocerciasis elimination committee meetings were held during this six-month period, one of which included external experts. These meetings involved compilation and review of all available data and identification of data gaps. Specific next steps were outlined for each area of the country; some areas need intensified interventions, some need additional surveillance data, and some are ready for stop-MDA assessment. These meetings were very successful, and the next meeting will occur in several months.

Finally, the MOH has worked with HDI, USAID, FHI 360, and other partners to develop a new Work Plan, and the MOH generated drug orders for the upcoming fiscal year. Overall, this has been a highly successful six-month period. Although the final treatment numbers have not yet been calculated for the

recent nation-wide MDA, we expect that the coverage will be excellent, and we look forward to continued successful activities.

1. MDA Assessment

The workbooks have not yet been updated with the May/June 2016 MDA numbers. We will update them as soon as they are finalized and confirmed by the MOH.

2. Changes in MDA Strategy

Table 4: Changes in MDA Strategy

District Name	Disease	Description of Change	Rationale for Change
All districts	Schistosomiasis	2012: Expanded treatment strategy to include treatment of school-age children in low prevalence areas twice during primary school	Desire to more closely follow WHO recommendations
All districts	Schistosomiasis	2014: Expanded treatment to include adult women in peripheral health units with moderate prevalence of schistosomiasis (10%-49% prevalence)	As per table A2.2 in the WHO Guidelines on Preventive Therapy in Human Helminthiasis, we are treating adult women, a group felt to be at high risk of schistosomiasis because of their domestic duties.
All districts	Schistosomiasis	2016: Changed frequency of treatment based on schistosomiasis prevalence in most recent integrated DSA.	As per Annex 10 in the Helminth Control in School-Age Children (WHO 2011); in most areas the treatment frequency was maintained or decreased; if the prevalence is >50%, or if the prevalence of SCH increased compared to baseline, the MOH intensifies the frequency of treatment.
Yoto, Est Mono, Oti & Tandjoare districts	STH	2012: Addition of second round of treatment in highest prevalence districts	Desire to more closely follow WHO recommendations
All districts	STH	2013: Addition of women of child-bearing age to target groups, with albendazole donation from UNICEF. Unfortunately, UNICEF donation of albendazole for this population was not available in 2014.	Desire to more closely follow WHO recommendations
Haho and Ogou districts	STH	2015: Addition of second round of treatment in these districts that did not demonstrate reduction in prevalence in the 2015 DSA	Need for intensified treatment to reduce STH prevalence
All districts	STH	2016: All school-aged children in Togo, outside the capital of Lomé, will receive at least one dose of albendazole each year. This will begin in FY16.	Change in Togo MOH policy to ensure all children receive annual deworming and maximally reduce the prevalence of STH in Togo.
All districts	STH	2016: Changed frequency of treatment based on STH prevalence in most recent integrated DSA.	As per Annex 10 in Helminth Control in School-Age Children (WHO 2011)

3. Training

A total of 12,459 people were trained during this period—refresher training for 10,214 and new training for 2,245, with 22% of all those trained being women. The MOH organized supervisor training sessions in all five geographic regions, followed by training of the nurses, culminating in the CDD training. In addition, Deloitte conducted an advocacy and TIPAC training for 17 NTD program coordinators from selected NTD programs and key central level staff.

Community Mobilization, IEC Materials, Registers, Publications, and Presentations

During the May/June 2016 integrated MDA, town criers were used to publicize the campaign. The MOH developed radio spots (in French, as well as nine different local languages) to encourage individuals to participate in the MDA. No best practices were documented or disseminated during the reporting period.

4. Supervision

The Togo Integrated NTD Program conducts training and supervision using a cascade approach. Each level trains and supervises the next lower level, from central to region-, district-, and finally to the PHU-level. During MDA activities, drugs are delivered to each level, and ultimately reach the CDDs. After the MDA is complete, CDDs return any remaining medication along with treatment records to their local nurse supervisor, who then gathers the medications and data and returns them to his or her district supervisor. Supervisors also examine registers and summary sheets to confirm that data have been correctly recorded in the registers.

Supervisors also investigate all problems reported by the implementers. Problems in implementation of the integrated MDA are identified during field supervisory visits, during post-MDA reviews when drugs and data are returned to the nurses and district supervisors, and at a central level after data are analyzed. If implementation problems are identified in a particular geographic area, these problems are addressed during the next round of training and more attention is paid to that area during future MDAs by the central supervisors in order to resolve the issues.

PHU-level drug distribution guides that conform to WHO treatment guidelines (based on disease prevalence) and MOH recommendations are distributed to every CDD. After the MDA, reported coverage is calculated and compared to the intended distribution plan. Feedback on any errors is given to the PHUs and CDDs where the error occurred.

5. Supply Chain Management

Supply chain management is generally a strength of the Togo MOH Integrated NTD Program. Once the Togo MOH received all of the medications, the MOH delivered them to the regions according to a drug distribution plan that was generated collaboratively by the Togo MOH and HDI. Once in the regions, the drugs were then distributed to the districts and PHUs. At each step of the process, the number of drugs being distributed was documented and inventory forms were signed. Once the MDA was completed, the remaining drugs, as well as the reporting forms, flowed back up the chain from CDD to PHU, district, region, and ultimately back to Lomé. At each step, drug distribution records were checked against the number of drugs received, and any losses were documented. During the May/June MDA, losses and wastage are expected to be minimal, but data have not yet been analyzed fully.

During the May/June 2016 MDA, the MOH and HDI identified an issue in the management of unused drugs. When there were partially used bottles of medication remaining after the MDA, tablets were combined together to create bottles that have a full complement of tablets. However, under that approach it was possible that pills from different lots may possibly be combined together. This poses a problem because different lots may have different expiration dates, and in the event of an adverse event, the lot number of the tablets involved must be known. In the training for the FY 2017 MDA it will be explicitly emphasized that drugs can only be combined into the same container if they are from the same lot.

6. Program Monitoring and Evaluation

The Togo MOH is continuing to use the existing M&E framework and tools supplied by FHI 360. An integrated impact assessment for SCH and STH occurred in early 2015, and the results of that survey indicate that MDA has been very successful in most places, resulting in decreased prevalence of these diseases compared to the mapping results from 2009. However, there are some areas that have persistently or newly higher levels of disease where higher frequency of treatment is needed. The distribution plans for the second round of 2015, as well as the first round of 2016, have been updated to reflect the new prevalence data, using WHO guidelines from Helminth Control in School-age Children, 2011.

7. Short Term Technical Assistance

Deloitte led a training in Togo in June 2016. The MOH NTD team, as well as HDI-Togo representatives participated in this training and learned about financial management strategies, TIPAC, and partnership mapping and resource mobilization.

8. Transition and Post-Elimination Strategy

The MOH is demonstrating commitment to the integrated NTD project in a number of important ways. The Togo MOH has had an NTD five-year plan in place for several years and is taking on additional responsibility for management and analysis of the Integrated NTD Program data, including the completion of drug requests, analysis of the MDA data, and production of the FOG deliverables. The Togo MOH submitted (FY16 Q3) a portfolio to WHO for verification of the elimination of LF as a public health problem in Togo. Finally, the MOH has recently organized two committee meetings to discuss the elimination of NTDs in Togo, in particular onchocerciasis.

9. Government Involvement

The government of Togo continues to be strongly supportive of the Integrated NTD Control Program. The MOH has held numerous coordination meetings over the past six months to discuss the May/June 2016 MDA implementation and NTD elimination. The Togo MOH is also developing their data management and analytical capabilities and has convened a committee for the elimination of NTDs. The MOH organized two meetings to discuss the elimination of onchocerciasis during this period, one of which involved external experts. The MOH is also developing partnerships within the government (e.g., WASH, malaria, education, etc.), as well as with other non-governmental organizations (UNICEF, Sightsavers, Red Cross, Plan Togo, etc.) to participate in integrated NTD activities.

In addition, the Togo Integrated NTD Program developed tools for the CDDs that can be reused every year (e.g., dose poles and flip charts), and registers that can be used for multiple years in order to increase the cost-effectiveness of the program. In addition, the Togo Integrated NTD Program has developed integrated reporting tools and implemented integrated trainings and drug delivery. Further integration with other partners is sought (e.g. UNICEF, WASH) and will be discussed at future work planning meetings.

10. Proposed Plans for Additional Support to National NTD Program

The Togo Integrated NTD Program has relied on broad partnerships to accomplish goals and continues to encourage active participation by a variety of partners. For example, the MOH works with the WHO to successfully obtain the duty-free release of the MDA medication and materials for epidemiologic assessments from Customs, and with the Onchocerciasis Program to implement integrated MDAs. The collaboration with the Onchocerciasis Program will be strengthened in order to facilitate integrated MDAs over the short-term, and over the long-term, to more easily accomplish the goal of onchocerciasis elimination in Togo. Finally, HDI has used USAID-funded activities to leverage support from multiple

other organizations: PATH, the NTD Support Center at the Task Force for Global Health, Emory University, and the Bill & Melinda Gates Foundation.

11. Lessons Learned/Challenges

Integrated MDA coverage in Togo has always been very high; however, the Togo MOH continues to improve the training in a number of ways. The data from the previous year were analyzed and geographic locations were identified in which coverage was relatively low or in which individuals were inappropriately treated. Trainers stressed the use of the educational flip charts, which were not being widely used in some areas, as determined by a previous coverage survey.

12. Major Activities for the next six months

- October 2016–Conduct MDA in high-STH-, SCH-, and onchocerciasis-burden areas; Produce report of May/June 2016 MDA; Onchocerciasis surveillance activities in high prevalence areas
- November 2016 –Onchocerciasis surveillance activities in high prevalence areas; HDI-Togo and HDI-HQ team participates in ASTMH meeting in Atlanta, GA; Onchocerciasis elimination committee meeting
- December 2016–October 2016 MDA data are collected, entered, and analyzed
- January 2016–Onchocerciasis elimination meeting, refine MDA training materials; Conduct NTD Program stakeholder meeting; Finalize MDA microplans, budget
- February 2016 –Reproduce training materials for MDA; Revise, produce, distribute messages for social mobilization; Receive all medication; Community Sensitization in high onchocerciasis prevalence villages
- March 2016–Continue preparations for April 2016 MDA; Finalize Praziquantel application; Implement training of supervisors, nurses, and CDDs; Onchocerciasis surveillance activities