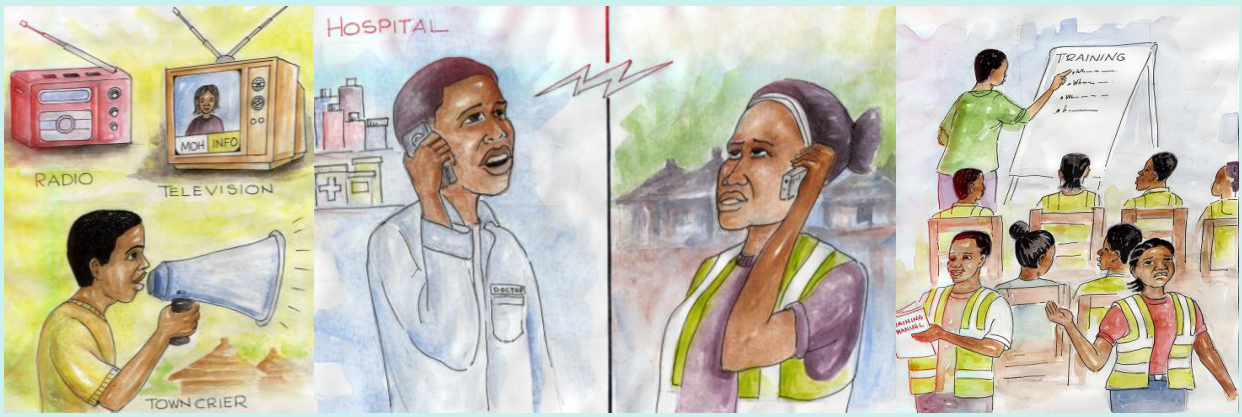
Neglected Tropical Diseases Program of Liberia

Neglected Tropical Diseases Communication Strategy 2019-23



MINISTRY OF HEALTH

Republic of Liberia

COUNTDOWN
Calling time on Neglected Tropical Diseases

UKaid
from the British people

Healthy Life

Foreword

The Neglected Tropical Diseases (NTDs) are communicable diseases linked with poverty and prevalent in areas with poor sanitation, inadequate safe water supply and substandard housing conditions. The NTDs are estimated to affect over one billion people in the world, the majority of whom are in developing countries. Liberia is not an exception. These diseases include Lymphatic Filariasis (LF), Onchocerciasis, Schistosomiasis, Soil-Transmitted Helminths (STH), Buruli Ulcer, Leprosy, Guinea Worm, Rabies and Yaws, among others. These diseases have been confirmed to be endemic in the 15 counties in Liberia.

The Sustainable Development Goals also provided an effective framework for the successful elimination of NTDs. SDGs emphasise the interrelated nature of health and development and encourage a broad, multi-sectoral approach that is essential to uproot NTDs, whose persistence is related to a variety of biological and social factors. Importantly, the SDG framework ensures that our commitment to leaving no one behind outlasts these targets, and stimulates a mindset attuned to the needs of societies most vulnerable to NTDs.

To increase the awareness among the population at various levels (national, counties, districts and communities), the Neglected Tropical Diseases Program, in collaboration with the National Health Promotion Division, other MOH Divisions and programs, line ministries (MOE & MOA) and partners with support from the COUNTDOWN program, embarked upon and completed the development of this NTDs Communication Strategy. The planning process was inclusive, consultative, evidence-based and sensitive to the changing external and internal environments. The development of the NTDs Communication Strategy received financial and technical assistance from the COUNTDOWN Programme funded by the United Kingdom Government's Department for International Development (DFID). This NTDs Communication Strategy is to serve as a guide for the implementation of the NTDs Programme at all levels, and will be the basis for creating effective message dissemination to increase knowledge and awareness through community engagement for the elimination and control of targeted NTDs in Liberia.

We are positive that the strategies in this document will accelerate movement towards attainment of control, elimination and eradication of NTDs from Liberia. With multi-sectoral collaboration and engagement between stakeholders and partners at county and national levels, we anticipate that we shall be able to fulfil our vision.

We therefore urge our partners to support the implementation of this strategy as we move towards control and elimination of NTDs in Liberia.

Thanks

Dr. Wilhelmina Jallah

Minister of Health

Republic of Liberia

Acknowledgement

The development of the Neglected Tropical Diseases Programme Communication Strategy (NTDCS) would not have been possible without the collaboration and support of programmes of the Ministry of Health (MOH) and partners. The Neglected Tropical Diseases Program (NTDs) (MOH) thanks everyone who participated in the development and finalization of the communication strategy. The Ministry of Health is grateful for the completion of this plan.

We wish to recognize the financial and technical contributions of the COUNTDOWN programme (Grant ID – PO 6407) which is a multi-disciplinary research consortium dedicated to investigating cost-effective, scaled-up and sustainable solutions, necessary to control and eliminate the seven most common NTDs by 2020. COUNTDOWN was formed in 2014 and is funded by UKAID's Department for International Development (DFID). Further acknowledgement goes to COUNTDOWN implementing partners at the University of Liberia Pacific Institute for Research and Evaluation (UL-PIRE) and various departments and programs within the Ministry of Health.

Special recognition goes to the World Health Organization (WHO) Liberia Country Office, Partnership for Advancing Community-Based Services (PACS); Accelerating Integrated Management Initiative (AIM); Schistosomiasis Control Initiative (SCI); Sightsavers; Associazoine Italiana Amici de Raoul Follereau (AIFO); the Ministry of Education (MOE) and the Ministry of Agriculture (MOA). Similarly, Dr. Wilhelmina Jallah, Minister of Health; Dr. Francis N. Kateh, Deputy Minister and Chief Medical Officer of Liberia; Dr. Samson K. Arzoaquoi, former Assistant Minister for Preventive Services; Mrs. Joyce W.D. Sherman, Assistant Minister for Preventive Services; Dr. D. Evelyn S. Kandakai, NTDs Ambassador for Liberia; Mr. Karsor K. Kollie, Director, Neglected Tropical Diseases Program; Rev. John B. Sumo, Director, National Health Promotion Division; coordinators of the Neglected Tropical Diseases Program; Staff of the National Health Promotion Division and the County Health Teams for their technical support.

Contents

Acronyms and Abbreviations

AIFO	Associazoine Italiana Amici de Raoul Follereau
ALM	American Leprosy Missions
AIM	Accelerating Integrated Management Initiative
SBCC	Social Behaviour Change Communication
BU	Buruli Ulcer
CDD	Community Drug Distributor
CDI	Community Directed Intervention
CHA	Community Health Assistant
CHDD	Community Health Department Director
CHPFP	County Health Promotion Focal Person
CHSS	Community Health Service Supervisor
CHV	Community Health Volunteer
CM	Case Management (NTDs)
CMO	Chief Medical Officer
COUNTDOWN	Calling Time on Neglected Tropical Diseases
CSO	County Surveillance Officer
DHIS	Demographic and Health Information Survey
EPHS	Essential Package for Health Services
EVD	Ebola Virus Diseases
GDP	Gross Domestic Product
GLRA	German Leprosy and Tuberculosis Relief Association
GNP	Gross National Product
GoL	Government of Liberia
HF	Health Facility
HMIS	Health Management Information System
IEC	Information, Education and Communication
LF	Lymphatic Filariasis
LIBR	Liberia Institute of Biomedical Research
LSTM	Liverpool School of Tropical Medicine
MAP	Medical Assistance Program
M&E	Monitoring and Evaluation
MDA	Mass Drug Administration
MDT	Multi-Drug Treatment
MOA	Ministry of Agriculture
MOE	Ministry of Education
MOH	Ministry of Health
NGO	Non-Governmental Organisation
NHPD	National Health Promotion Division
NPHIL	National Public Health Institute of Liberia
NTDs	Neglected Tropical Diseases
NTDCS	Neglected Tropical Diseases Communication Strategy
PACS	Partnership for Advancing Community-Based Services
PCT	Preventive Chemotherapy
PLWD	People living with the diseases
SP	Strategic Priority
STH	Soil-Transmitted Helminthiasis
SWOT	Strength, Weakness, Opportunity and Threat
UL-PIRE	University of Liberia Pacific Institute of Research and Evaluation
WHO	World Health Organization

1.0 Executive Summary

The Neglected Tropical Diseases Program of Liberia has the stated goal of elimination of Onchocerciasis and Lymphatic Filariasis, the control of Schistosomiasis and Soil-Transmitted Helminths and the prevention of Buruli Ulcer, Leprosy, Lymphedema, Hydrocele and Yaws to a level that no one is left behind. Critical to meeting this goal is the development of targeted messages and clear communication objectives that will lead to effective advocacy and the development of Social Behavior Change Communication (SBCC) materials.

In developing its Communication Strategy in Liberia, the NTD Program worked in collaboration with the National Health Promotion Division (NHPD) through numerous meetings that cumulated in joint planning meetings. These meetings included the sharing and revision of documents, discussion of research findings, and the development of a SWOT analysis and creative briefs. In line with the NHPD approach, creative briefs are twofold: routine creative briefs to guide on-going communication and awareness at county and district levels on specific NTDs (e.g. Onchocerciasis and Lymphatic Filariasis) and creative briefs and processes to support campaign development (e.g. Mass Drug Administration and case management).

The development of this strategy is critical to achieving greater awareness and knowledge surrounding the treatment and prevention of targeted NTDs in Liberia. It will do this by developing messages that link to the evidence on knowledge gaps and preferred modes of communication amongst different groups, and will improve adherence to treatment with appropriate medication.

1.1 Structure of the Document

The document is divided into six sections. Section one covers the Executive Summary. Sections two introduces the NTD Program, its goal, strategic communication plan, advocacy goals and strategic priorities. Section three focuses on the National Health Promotion Division processes used within Liberia. Section four highlights the processes of developing the NTDs Communication Strategy. Section five contains summaries of communication objectives and operational plans set for each disease area. Section 6 summarises the communication objectives against behavior change with respect to different NTD programs.

2.0 Introducing the National Neglected Tropical Diseases Program in Liberia and the National Health Promotion Division

The goal of the program is to reduce the burden of targeted NTDs to a level that is no longer a public health problem. It should leave no one behind in access to NTDs services through an integrated control program, contributing to the socio-economic development of Liberia.

The NTDs Communication Strategy has a number of elements designed to support the NTD Program to achieve its stated goal by interrupting the transmission of Yaws, Onchocerciasis, Lymphatic Filariasis; the control of Schistosomiasis, Soil-Transmitted Helminths; and the case management and prevention of Buruli Ulcer, Leprosy, Lymphedema and Hydrocele, to a level that is no longer of public health significance. (Master Plan for Neglected Tropical Diseases 2016-20 and Case Management Integrated Strategic Plan for Neglected Tropical Diseases.)

One of these elements is the development of targeted messages and clear communication objectives that will lead to effective advocacy and the development of SBCC/ IEC activities and materials. The development of this strategy is critical to achieving greater awareness and knowledge surrounding the treatment and prevention of targeted NTDs in Liberia through improved adherence to treatment with appropriate medication, as well as ensuring that targeted NTDs messages are disseminated in all communities in Liberia.

2.1 Advocacy Goals

- Ensure high-level review of NTDs Program performance and the use of lessons learnt to enhance advocacy, awareness and effective implementation (Strategic Objective SO1.5- NTD Master Plan and Case Management Plan).
- Strengthen advocacy visibility and profile of NTD interventions (CM and MDA) that will lead to control, elimination and eradication at all levels (Strategic Objective SO1.6- NTD Master Plan and Case Management Plan).
- Increase community participation in NTD planning and resource mobilization (Strategic Objective SO2.2- NTD Master Plan).
- Increase community engagement in the design and development of NTD Program delivery.
- Conduct high-level advocacy for the NTD Program with the Government of Liberia to secure additional funding support (Strategic Objective SO2.4- NTD Master Plan).
- Increase community access to the NTDs Program (Strategic Objective SO3.1- NTD Master Plan).
- Establish a mechanism for information sharing to support decision making (Strategic Objective SO4.4- NTD Master Plan).

2.2 Communication Objectives

- Increase awareness and acceptance among community dwellers on targeted NTDs and their associated interventions (Case Management and Mass Drug Administration-MDA).

- Increase knowledge of health workers, CHA, CHV, CDDs and community dwellers in relation to endemic NTDs in Liberia (Onchocerciasis, Lymphatic Filariasis (including lymphedema and hydrocele), Schistosomiasis, Soil-Transmitted Helminths, Buruli Ulcer, Leprosy, Yaws, Guinea Worm).
- Enhance monitoring and supervision of training and awareness generation activities at all levels of the health system to ensure quality dissemination and content of messaging.
- Tailor communication messages and approaches to cultural, regional, religious and gendered differences.
- Make use of traditional communication techniques, existing local knowledge and structures.
- Raise the profile of the NTD Program within the government of Liberia to ensure ownership and sustainability.

The National Health Promotion Division (NHPD) was previously established as the IEC unit during the 1970s within the Ministry of Health and was renamed in 2005. The NHPD is a cross-cutting division working in collaboration with all the health programs within the Ministry in collaboration with line ministries and partners. The National Policy and Strategic Plan on Health Promotion, the Liberia Media Tool Kit and the National Health Communication Strategy 2016-21 were launched. To operationalize these documents, a national health communication strategy was developed (2016-21), focusing on many key health priorities including HIV, reproductive health issues, maternal and new-born health, malaria etc. The Liberia Media Tool Kit, focusing on immediately reportable diseases and conditions, was also developed while the national policy and strategic plan on Health Promotion focuses on guiding and strengthening health promotion activities at all levels. The NHPD approached divisions within the Ministry to review their health promotion materials and research available, as the development of materials within the national health communication strategy needs to be evidence based. (NTDs were not included at this point, in part due to lack of research.) This is the first time the NHPD and the NTD Programs have worked collaboratively together. However, the communication strategy developed for NTDs will be an addendum to the National Health Communication Strategy, so that it is in line with national health policies, processes and plans.

3.0 The process of developing the NTDs Communication Strategy

In line with NHPD processes, meetings were held between the NHPD and the NTD Programs to discuss and agree the process. One initial meeting was held at the NTD office to develop the plan, activities and budget; a follow-up meeting was held at UL-PIRE to develop the framework of the strategy and to give direction for the main meeting in Buchanan, Grand Bassa County. The Buchanan meeting brought together the staff from NTDs, NHPD, Community Health Services, COU**NTD**OWN, Ministries of Education and Agriculture and other health partners (e.g. AIM, PACS, GLRA, AIFO, PIH, MAP and Effect: Hope). The NTD Ambassador, Assistant Minister for Preventive Services, Deputy CMO of the MOH, and COU**NTD**OWN NTD policy advisor were also present. Within this meeting, documents were shared: NHPD shared their documents and COU**NTD**OWN Liberia shared the research findings (see Table 1, page 11). A SWOT analysis on the NTDs Program (Annex 3, page 35) was also undertaken and showed that there was a need to develop a comprehensive communication strategy that will increase the knowledge of different community groups on the various NTDs.

Meeting participants were divided into groups to develop the disease specific creative briefs. These were reviewed, discussed and improved during a plenary. Following the NHPD process, these creative briefs were reviewed by NHPD and the NTD programs, and later shared with all partners for comment. Follow-up meetings were held in February 2018 to finalize the strategy, develop disease-specific creative briefs (to be used during routine health promotion approaches and MDA) and specific case management approaches (which can be linked to the campaign approach to health promotion). The final process of validation was undertaken in line with Ministry protocol and policy.

Part of this process included a multi-partner two-day meeting to review the research and develop creative briefs. The development of the communication strategy is based on research findings from COU**NTD**OWN Liberia's ongoing Social Research on Neglected Tropical Diseases in Liberia. The results of the research show weaknesses in awareness and social mobilization in counties where the research was conducted. The SWOT analysis on the NTDs Program (Annex 3, page 35) also shows that there is a need to develop a comprehensive communication strategic plan that will increase the knowledge of different community groups on the various NTDs. The creative briefs developed can be found in Annex 4. The operational plan to take this critical work forward can be found in section 5.

Creative briefs are templates used as the main tools to guide the development of messages that are audience specific and culturally acceptable (using local languages and terminologies). The information in the creative briefs comes from evidence such as literature reviews, research and existing documents. They are developed through a collaborative process between the NHPD, the respective health programs and partners. The county NHPD focal points lead in the dissemination and operationalization of the strategy together with respective program leads (e.g. maternal health), ensuring its relevance to the local context, with support from the NHPD. The NHPD has communication strategies which are intended to be used either in routine processes or during campaigns.

Table 1: Key points from the COUNTDOWN research to consider in the development of the strategy

	Men's perceptions	Women's perceptions	Recommendations
Existing health messaging sources	Most men described receiving messages through interpersonal communication with other community members, people living with the disease, health workers (including hospital and clinic staff) and CDDs. During Schistosomiasis MDA most men described receiving information from the school. Some men also identified the radio, mass meetings, their employer or posters as ways they received information.	Most women received messages through interpersonal communication from the clinic or CDDs. Some women also identified the radio as a key information source. During Schistosomiasis MDA most women described receiving information from the school.	Interpersonal communication through multiple channels will be critical to reaching both men and women with health messages. Other SBCC/IEC techniques, such as radio jingles and posters/flyers, could be investigated.
Preferred awareness message	Most men preferred receiving awareness messages from health workers in a face-to-face discussion. They also prioritized the involvement of the town chief and county health team. A few described that they would prefer to be informed through radio and TV.	Some women described a preference for receiving information through fliers and posters in the market place and clinic. Others described a preference for workshops at the clinic or information being brought to them in their houses. Most women described that messaging should be provided in local dialects or in very simple English.	To ensure women are reached in awareness activities, messaging should be delivered in local dialects and or simple English. A variety of awareness techniques, including workshops, face-to-face discussions, radio campaigns and posters, will be essential to ensuring all community members are reached.
Existing programme	Most men had limited knowledge of	Most of the women didn't know about	There should be a focus on providing ongoing

and disease knowledge	the disease or drug distribution program. Some men described seeing people in their communities living with blindness, 'big foot', however they didn't know how people acquired the disease. A few men were able to name the medicines distributed, such as Albendazole and Mectizan. They did not know what they were for. Most fathers described being unaware of the distribution campaign and a few described being afraid as to why their wives let the children take the medicine.	the disease or the distribution programme. They were able to describe the 'filarial' medicine and that they had been given it, but that they didn't know what it was for. Most women did not know about the Schistosomiasis distribution before it took place, and this left them fearful for their children to take the medicines.	awareness about each of the diseases that the programme is trying to target. There should also be ongoing awareness about the medicines being distributed, what they are, what they do and who they are targeted at. Awareness activities need to be given in sufficient time so that information reaches or is targeted at parents in advance of the school-based distribution.
Perception of the diseases	Some men thought that the diseases had medical causes whilst others believed it was caused by 'African Signs' and should be treated using country medicine. Many men also described links between the environment and disease, particularly Schistosomiasis, and described the importance in keeping the environment clean.	Most women thought there was a link between 'African Signs' and the diseases. They also described 'boiling leaves' and other traditional treatments for the disease. Some women described the disease being caused by the environment, and talked about worms in the swamp etc. When asked about Schistosomiasis, many mothers also described a link between food and the disease.	Communication messages should respond to traditional beliefs about the causes of the diseases. People seem to have some awareness about the link between the diseases and environment and this should be emphasized in communication messaging to support communities in keeping their environment clean.

Timing of awareness activities	Many men described being at their farms when awareness and distribution was completed and so missed all the information about the disease.	Some women described that the awareness messages didn't reach their part of the community and so they had limited knowledge of the diseases.	Awareness activities should take place at different times of the day to allow for the timing of different livelihood activities. Supervision of awareness activities should focus on ensuring all sections of the community are reached.

4.0 Communication objectives by program area/diseases

Based on the creative briefs (Annex 4), this section summarises the communication objectives against behavior change with respect to different NTD programs. Key promises and supporting points are also included.

NB: In the following boxes where all community members are referred to, we prioritise the need for inclusivity in developing communication messages and materials. They should be adapted to meet all audiences including women, men, girls, boys, people living with disability, people who can't read and write etc.

4.1 Buruli Ulcer

Behavior	Communication objectives
Increased knowledge of community members who recognize the early signs and symptoms of BU. Increased proportion of community members reporting early signs and symptoms of BU to CHA/CHV and the health facilities. Increased proportion of community members with knowledge to reduce stigma and discrimination based on BU.	**Primary audience:** General population (all community members) **Influencing/secondary audience:** Community leaders, health workers**,** herbalist (to be discussed further), community based: CHAs/CHVs, MOE authorities, and people living with the disease. ○ Increase the belief that practicing good hygiene prevents BU. ○ Increase the belief that BU is curable. ○ Encourage the belief that the medications for BU are free and safe and available at all health facilities.
Key promise: BU can be cured. **Supporting points:** Drugs are available, free and safe at all health facilities.	

4.2 Guinea Worm

Behavior	Communication objectives
Increased proportion of the population with adequate knowledge on safe drinking water.	**Audience:** General population (all community members) **Influencing/secondary audience:** CHAs/CHVs, community leaders, health workers. ○ Increase the belief that guinea worm is a parasitic worm that lives in humans and can be transmitted from unsafe drinking water. ○ Increase the belief that guinea worm can be prevented by

	drinking safe water.
Key promise: Guinea worm can be prevented. **Supporting points:** Drinking safe water can prevent you from getting guinea worm.	

4.3 Hydrocele

Behavior	Communication objectives
Increase proportion of community members with adequate knowledge in the early detection of signs and symptoms of Hydrocele**.** Increased proportion of community members who adhere to all MDA campaigns. Increased proportion of the population who sleep under treated mosquito nets everywhere and every night.	**Primary audience:** Male population **Influencing/secondary audience: H**ealth workers, CHAs/CHVs, community leaders, people living with the disease. ○ To increase the belief that any suspected client who goes at the clinic/hospital will be examine by a skilled and trained health worker. ○ Increased the belief that confirmed cases can be treated at the hospital. ○ Ensure the belief that all suspected cases are to be reported to the nearest health facility. ○ Ensure the belief that all confirmed clients can receive surgery for free at all hospitals.
Key promise: Hydrocele is curable. **Supporting points:** Surgery of confirmed Hydrocele cases can be done at all hospitals for free.	

4.4 Leprosy

Behavior	Communication
Increased knowledge of community members who recognize the early signs and symptoms of Leprosy. Increased proportion of people living with Leprosy who adhere to their full treatment. Increased proportion of community members with knowledge to reduce stigma and discrimination due to Leprosy.	**Primary audience:** General population (all community members). **Influencing/secondary audience:** Health workers, people living with the disease (CHA/CHV). ○ Increase the belief that any suspected case that goes to the clinic hospital will be examined by a skilled and trained health worker. ○ Encourage the belief that all confirmed cases must complete the required doses of medication which are free and safe. ○ Increase the belief that Leprosy can cause permanent disability if not referred for early treatment.
Key promise: Leprosy can be cured. **Supporting points:** Drugs are available at all hospitals/health centers, free and safe.	

4.5 Lymphatic Filariasis/Elephantiasis

Behavior	Communication objectives

Increased proportion of community dwellers with knowledge on the acceptance and intake of Albendazole. Increased proportion of community dwellers with ownership of MDA for Lymphatic Filariasis. Increased proportion of community dwellers with an understanding of Lymphatic Filariasis and who encourage practices that prevent the spread of the disease.	**Audience:** Community dwellers (5 years and above). **Influencing/secondary audience:** Community leaders, health workers and people living with the disease. ○ Increase the belief that Lymphatic Filariasis leads to Elephantiasis, and that early signs and symptoms can be prevented, treated and cured. ○ Increase the belief that Lymphatic Filariasis is caused by the bite of an infected mosquito. ○ Increase the belief that community dweller participation in MDA and sleeping under treated mosquito nets prevents Lymphatic Filariasis.
Key promise: Taking albendazole prevents you from getting Lymphatic Filariasis. **Supporting points:** Sleeping under treated mosquito nets regularly and participating in MDA by taking Albendazole prevents you from getting Lymphatic Filariasis/Elephantiasis.	

4.6 Lymphedema

Behavior	Communication objectives
Increased knowledge of community members who recognize the early signs and symptoms of Lymphedema. Increased proportion of community members who recognize and refer late signs and symptoms to the health facility. Increased proportion of community members with knowledge to reduce stigma and discrimination on Lymphedema.	**Audience:** General population (all community members). **Influencing/secondary audience:** Health workers, (CHA/CHV), community leaders and people living with the disease. ○ Increase the belief that community dweller participation in MDA and sleeping under treated mosquito nets prevents Lymphedema. ○ Increase the belief that all confirmed clients will receive self-care education and home-based self-care kits. ○ Increased the belief that community members who reduce stigma and discrimination on Lymphedema are champions.
Key promise: Lymphedema can be managed at home. **Supporting points:** Home-based self-care kits are available and free at health facilities.	

4.7 Onchocerciasis

Behavior	Communication objectives
Increased proportion of community members with knowledge on the acceptance and intake of Mectizan. Increased proportion of community members who fully	**Audience:** Community dwellers (5 years and above). **Influencing/secondary audience:** Community leaders, health workers and people living with the disease. **Communication objectives:** ○ Increase the belief that Onchocerciasis is transmitted by

participate in every round of MDA on Onchocerciasis.	the bite of an infected black fly and causes itching of the skin and blindness. ○ Increase the belief that Onchocerciasis can be prevented by taking Mectizan during every round of MDA.
Key promise: Onchocerciasis can be prevented. **Supporting points:** Taking Mectizan during every round of MDA prevents you from getting Onchocerciasis.	

4.8 Schistosomiasis

Behavior	Communication objectives
Increased proportion of parents/caregivers of children aged 5-14 years, both in and out of school, who take their children for Praziquantel during MDA.	**Audience:** Parents/caregivers of school-aged children (5-14 years). **Influencing/secondary audience:** Community leaders, teachers, health workers, all community members. ○ Increase the belief that Schistosomiasis is a disease caused by several types of worm transmitted by fresh water snails.
Key promise: Schistosomiasis can be prevented and cured. **Supporting points:** Praziquantel is free, safe and available at all health facilities.	

4.9 Soil-Transmitted Helminthiases

Behavior	Communication objectives
Increased proportion of parents/ caregivers of children (aged 5-14 years), both in and out of school, who take their children for Albendazole and Mebendazole during MDA.	**Primary audience:** Parents/caregivers of children aged 5-14 years. **Influencing/secondary audience:** Community leaders, teachers, health workers. ○ Increase the belief that Soil-Transmitted Helminths are a sickness and caused by parasitic worm eggs or larvae ○ Increase the belief that practicing good hygiene (hand washing etc.) prevents Soil-Transmitted Helminths. ○ Promote the knowledge amongst parents/caregivers of children aged 5-14 years that their children can participate in the MDA campaigns at designated sites in the community.
Key promise: Soil-Transmitted Helminths are preventable and curable. **Supporting points:** Drugs are free, safe and available during every round of MDA campaign.	

4.10 Yaws

Behavior	Communication objectives
Increased proportion of community members with knowledge on recognizing and reporting early signs and symptoms of Yaws. Increased proportion of the population that adheres to single dose medication for Yaws.	**Primary audience:** General population (all community members). **Influencing/secondary audience:** Community leaders, health workers**,** herbalists, CHAs/CHVs, MOE authorities and people living with the disease. ○ Increase the belief that any suspected case of Yaws that goes at the clinic/hospital will be examined by a skilled and trained health worker. ○ Promote the belief that prevention of Yaws is based on the interruption of transmission through early diagnosis. ○ Increase the belief that all confirmed clients will be placed on medication.
Key promise: Yaws is curable. **Supporting points:** Treatment is free, safe and available at all health facilities.	

4.11 Mass Drug Administration

Behavior	Communication objectives
Increased proportion of community members with awareness of, access to and acceptance of MDA campaigns. Increased proportion of community members who are aware of the benefits and side effects of the drugs.	**Primary audience:** Community dwellers (5 years and above). **Influencing/secondary audience:** Community leaders, health workers**,** herbalists, (CHAs/CHVs), MOE authorities and people living with the diseases. ○ Increase the belief that Mectizan, Albendazole/Mebendazole and Praziquantel are to be taken by the whole population, aged five years and above, during every round of MDA in endemic counties.
Key promise: Mectizan, Albendazole/Mebendazole and Praziquantel are effective in preventing and curing targeted NTDs like (Onchocerciasis, Lymphatic Filariasis, Schistosomiasis and Soil-Transmitted Helminths). **Supporting points:** Drugs are free, safe and available during every round of MDA.	

4.12 Case Management Awareness

Behavior	Communication objectives
Increased proportion of community with knowledge on recognizing & reporting early and late signs and symptoms of Leprosy, BU, Lymphedema, Hydrocele & Yaws during routine and mass campaigns.	**Primary audience:** General population. **Influencing/secondary audience:** Community leaders, health workers**:** OICs, CHSS, 2nd screeners, CHAs/CHVs, MOE authorities, MOA authorities, people living with the diseases and herbalist. ○ Promote the belief that all confirmed clients with BU, Leprosy, Lymphedema, Hydrocele and Yaws can be treated free. ○ Increase the belief that confirmed clients with these conditions will receive home-based self-care kits.
Key promise: Buruli Ulcer, Leprosy, Lymphedema, Hydrocele & Yaws can be managed, prevented and cured **Supporting points:** Treatment is free, available and safe at all health facilities.	

Disease Awareness Operational Plan

The following tables outline the operational activities required to obtain the previously described communication objectives.

Table 2. Disease Area Operational Plans

Material	Delivery mechanism	What is currently available	Gaps	Proposed next steps	Monitoring mechanisms	Resources required
Disease awareness: Lymphatic Filariasis						
Audio messages	Radio spot played 2x per day, 14 days per month	Audio messages available on discs in county.	Audio messages are outdated	Review and revise existing audio messages. Ensure delivery mechanism in place.	NTDs focus points to monitor broadcast (audio messages) and collect all receipts and record in log/ledger. Share with the NTD focal point(s) for messages aired.	Funding (message development for audio & airing)
Print materials for community members (posters, flyers, stickers, brochure)	Distribution at community and health facility through NTD cascade: national to county (NTD focal point,) to DHO to OIC to CDD. Immediately after development and printing.	Posters and flyers currently available. Stickers not available.	Materials are outdated - developed in 2011.	Review and revise existing posters and flyers. Develop stickers. Ensure delivery mechanism in place.	Spot check monitoring through supervision, report from materials development and availability of distribution plan.	Funding for development of print materials & dissemination (posters, flyers, stickers, brochure).

Print for CHAs/CHVs/ CDDs (Job aids, flip book)	Distributed during training including explanation on how to use them.	Job aids currently available.	None in stock need printing.	Print job aids for all trained CHAs/CHVs/ CDDs. Distribute during next MDA training.	Training and supervision visits.	Funding for development of print material & dissemination (flip book, job aids).
Community engagement (dialogue meeting)	Embed Lymphatic Filariasis as a topic in health facility health talks. CHAs/CHVs/ CDDs to have community dialogue via house-to-house mechanism.	Community engagement prior to MDA with key stakeholders at district level in four counties (Bong, Grand Gedeh, River Gee & Rivercess)	Limited community engagement	Ensure delivery mechanism is in place.	County level supervision visits.	Funding for stakeholders' dialogue meeting at all levels & training of CHVs/CHAs/ CDDs in IPC (inter personal communication).

Material	Delivery mechanism	What is currently available	Gaps	Proposed next steps	Monitoring mechanisms	Resources required
Disease Awareness: Onchocerciasis						
Audio messages	Radio spot played 2x per day, 14 days per month.	Audio messages available on discs in county.	Audio messages are outdated.	Review and revise existing jingles. Ensure delivery mechanism in place.	NTDs focus points to monitor broadcast (audio messages) and collect receipt and record on log shared with the NTD focal point(s) for messages aired.	Funding (message development for audio & airing).
Print for community members (posters, flyers, stickers, brochure)	Distribution at community and health facility through NTD cascade: national to county (NTD focal point) to DHO to OIC to CDD. Immediately after development and printing.	Posters and flyers currently available. Stickers and brochure not available.	Materials are outdated - developed in 2011. Stickers and brochure are not available	Review and revise existing posters and flyers. Develop stickers and brochure. Ensure delivery mechanism in place.	Spot check monitoring through supervision. Report from materials development and availability of distribution plan.	Funding for development of print material & dissemination (posters, flyers, stickers, brochure).
Print for CHAs/CHVs/ CDDs (job aids, flip book)	Distributed during training including explanation on how to use them.	Job aids currently available.	None in stock need printing.	Print job aids for all trained CHAs/CHVs/ CDDs. Distribute during next MDA training.	Training and supervision visits.	Funding for development of print material & dissemination (flip book, job aids)

Community engagement (dialogue meeting)	Embed Onchocerciasis as a topic in health facility health talks. CHAs/CHVs/ CDDs to have community dialogue via house-to-house mechanism.	Community engagement prior to MDA with key stakeholders at district level in six counties (Bomi, Gbarpolu, Bong, Grand Gedeh, River Gee & Riverscess).	Limited community engagement.	Ensure delivery mechanism is in place.	County level supervision visits.	Funding for community stakeholders dialogue and training of CHVS/CHAs/ CDDs in IPC (inter personal communication).

Material	Delivery mechanism	What is currently available	Gaps	Proposed next steps	Monitore mechanisms	Resources required
Disease Awareness: Schistosomiasis						
Audio messages	Radio spot played 2x per day, 14 days per month.	No audio messages available.	Need to develop audio messages.	Develop audio messages.	NTDs focus points to monitor broadcast (audio messages) and collect receipt and record on log share with the NTD focal point(s) for messages aired.	Funding (message development for audio and airing)
Print for community members (posters,	Distribution at community and health facility	Posters and flyers currently	Materials were developed in 2016.	Review and revise existing posters and	Spot check monitoring	Funding for development of print material and

flyers, stickers and brochure).	through NTD cascade: national to county (NTD focal point) to DHO to OIC to CDD. Immediately after development and printing.	available. Stickers and brochure not available.		flyers. Develop stickers and brochure. Ensure delivery mechanism in place.	through supervision. Report from materials development and availability of distribution plan.	dissemination (posters, flyers, stickers, brochure).
Print for CHAs/CHVs/ CDDs (Job Aids)	Distributed during training including explanation on how to use them.	Job aids currently available.	None in stock need printing.	Print job aids for all trained CHAs/CHVs/ CDDs. Distribute during next MDA training.	Training and supervision visits.	Funding for development of print material and dissemination (flip book, job aids).
Community engagement (dialogue meeting)	Embed Schistosomiasis as a topic in health facility health talks. CHAs/CHVs/ CDDs to have community dialogue via house-to-house mechanism.	Community engagement prior to MDA by using town criers at the community level.	Not effective in all counties treated for Schistosomiasis.	Ensure delivery mechanism is in place.	County level supervision visits.	Funding for community stakeholders dialogue and training of CHVS/CHAs/ CDDs in IPC (inter personal communication).

Material	Delivery mechanism	What is currently available	Gaps	Proposed next steps	Monitoring mechanis-ms	Resources required
Disease Awareness: Soil-Transmitted Helminths						
Audio messages	Radio spot played 2x per day, 14 days per month.	Audio messages are available on discs in county.	Jingles are outdated.	Review and revise existing audio messages. Ensure delivery mechanism in place.	NTDs focus points to monitor broadcast (audio messages) and collect receipt and record on log share with the NTD focal point(s) for message	Funding (message development for audio and airing).

					s aired.	
Print for community members (posters, Flyers, stickers and brochure).	Distribution at community and health facility through NTD cascade: national to county (NTD focal point) to DHO to OIC to CDD. Immediately after development and printing.	Posters and flyers currently available. Stickers and brochure not available.	Materials are outdated, developed in 2011.	Review and revise existing posters and flyers. Develop stickers and brochure. Ensure delivery mechanism in place.	Spot check monitoring through supervision. Report from materials development and availability of distribution plan.	Funding for development of print material and dissemination (posters, flyers, stickers, brochure).
Print for CHAs/CHVs/ CDDs (job aids)	Distributed during training including explanation on how to use them.	Job aids currently available.	None in stock need printing.	Print job aids for all trained CHAs/CHVs/ CDDs. Distribute during next MDA training.	Training and supervision visits.	Funding for development of print material and dissemination (flip book, job aids).
Community engagement (dialogue meeting)	Embed Soil-Transmitted Helminths as a topic in health facility health talks. CHAs/CHVs/ CDDs to have community dialogue via house-to-house mechanism.	Community engagement prior to MDA by using town criers at the community level.	Not effective in all counties treated for Soil - Transmitted Helminths.	Ensure delivery mechanism is in place.	County level supervision visits.	Funding for community stakeholders dialogue and training of CHVS/CHAs/ CDDs in IPC (inter personal communication).

MMDA Campaign

Table 3. Operational Plan for MMDA Campaign

Purpose	Material	Delivery mechanism	Proposed next steps	Monitoring mechanisms	What is currently available	Gaps	Resource required
To increase MDA coverage, to interrupt transmission and reduce disease burden at community level.	Print (flyers, posters, job aids, fact sheet FAQ, brochure).	Community engagement (IPC) community dialogue, radio talk show.	Plan MDA campaign activities and conduct awareness raising.	End process monitoring on drug distribution campaign and awareness.	Not available.	Development of SBCC materials and monitoring tool	Funding for the development of the SBCC materials, monitoring tool & conduct monitoring and supervision in the respective counties.
To increase community participation and ownership	Print community registry ledger (flyers, posters, job aids, fact sheet FAQ, brochure).	Community dwellers/CDDs take the lead, from registration to drug distribution and information sharing.	CDDs continue sensitization and awareness at community level.	Community self-monitoring and spot check.	Recruited CDDs by community.	Development of SBCC materials, monitoring tool and printing of the community registry ledger. Inadequate time allotted for CDDs training.	
Disease awareness LF & Onchocerciasis.	Print (flyers, posters, stickers, job aids). brochure, FAQ)	Community engagement (IPC) community dialogue, radio talk show.	Availability of SBCC materials at community level.	End process monitoring on compliance of MDA and spot check.	Minimum SBCC materials.	Printing of additional copies of SBCC materials, development of monitoring tool.	Funding for the printing of additional copies of the SBCC materials, development of monitoring tool and conduct monitoring and supervision during MDA in the 15

							counties.
Disease awareness Schistosomiasis & STH	Print (posters, fact sheet, brochure, job aid, FAQ).	Community engagement (IPC) community dialogue, radio talk show.	Availability of SBCC materials at all levels.	End process monitoring on compliance of MDA and spot check.	Minimum SBCC materials.	Printing of additional copies of SBCC materials and development of monitoring tool.	Funding for the printing of additional copies of the SBCC materials, development of monitoring tool and conduct monitoring and supervision in the respective counties.
Side effects	Print (posters, fact sheet, brochure, job aid, FAQ).	Mass media dissemination of communication materials.	Awareness	In process monitoring.	Limited copies SBCC materials and require revision.	Review, revise and reproduce SBCC materials and development of monitoring tool.	Should be included in print materials for awareness and MDA campaigns.
Absenteeism/ refusers/ eligibility	Print (posters, fact sheet, brochure, job aid, FAQ).	Community engagement through lost-to-follow-up (IPC).	Awareness	In and end process monitoring.	N/A	Develop tracking tools, SBCC materials and monitoring tool.	Should be included in print materials for awareness and MDA campaigns.
Case management	Print (posters, fact sheet, brochure, job aid, FAQ) on case management	Counselling	Referral	Monitoring and treatment adherence.	Limited services.	Lack of resources for the procurement of drugs, review and reproduction of SBCC materials and development of monitoring tool.	Funding for procurement of drugs, review and reproduction of the SBCC and development of monitoring tool to conduct monitoring &

							supervision on case management in the 15 counties.

Case Management Awareness Campaign

Table 4. Operational Plan for Case Management

Purpose	Material	Delivery mechanism	Proposed next steps	Monitoring mechanisms	What is currently available	Gaps	Resource required
Community understanding of treatment for case management diseases	Print (flyers, posters, job aids, flip book, fact sheet, brochure, FAQ).	Inter-personal communication (IPC), community dialogue.	Conduct awareness.	End process monitoring on awareness.	Recruited CDDs by community.	Lack of resources for development of SBCC materials monitoring tool.	Funding for the development of the SBCC monitoring tool and conduct monitoring and supervision in 15 counties.
Disease awareness LF (Lymphedema and Hydrocele)	Print (flyers, posters, stickers, job aids). Audio messages	Inter-personal communication (IPC), community dialogue.	Conduct awareness. Availability of SBCC materials at all levels.	End process monitoring.	Minimum SBCC materials.	Reproduction of SBCC materials, development of monitoring tool and the availability of surgeons and HBSC kit.	Funding for the reproduction of the SBCC materials and development of monitoring tool and HBSC kit in all 15 counties.
Disease awareness Buruli Ulcer	Print (flyers, posters, stickers, job aids, brochure, FAQ).	Community engagement (IPC)	Conduct awareness. Availability of SBCC materials at all	End process monitoring on treatment uptake (including case identificati	Availability of drugs and wound dressing materials.	Development of SBCC materials monitoring tool for treatment and adherence	Funding for the development of the SBCC monitoring tool, conduct monitoring

	Audio messages		levels.	on) and adherence.		.	and supervision, and provision of BU drug/wound dressing materials.
Disease awareness Leprosy	Print (flyers, posters, stickers, job aids, brochure, FAQ). Audio message	Community engagement (IPC).	Conduct awareness. Availability of SBCC materials at all levels.	End process monitoring on treatment uptake (including case identification) and adherence.	Availability of drugs and services.	Development of SBCC materials monitoring tool for treatment and adherence.	Funding for the development of the SBCC monitoring tool, conduct monitoring and supervision, and provision of Leprosy drug/dressing materials.
Disease awareness Yaws	Print (flyers, posters, stickers, job aids, brochure, FAQ). Audio messages	Community engagement (IPC).	Conduct awareness. Availability of SBCC materials at all levels.	End process monitoring on treatment uptake (including case identification) and adherence.	Availability of drugs and services.	Development of SBCC materials monitoring tool for treatment and adherence.	Funding for development of the SBCC monitoring tool, conduct monitoring & supervision, & provision of Yaws drug/ wound dressings.

5.0 Annex 1: Country Profile

Table 5. Liberia Country Profile

Parameter	Status
Geographic size	111,369km^2
Natural resources	Iron ore, rubber, oil, timber, diamonds, gold
Form of government	Democratic (Executive, Judiciary and Legislative branches)
Per capita gross domestic product	US$457.9
Gross domestic product growth rate	0.7
Population living below $1 per day	63.81%
Population (growth rate 2.1%)	4,021,017
Maternal mortality ratio	1,072/100,000
Under 5 mortality ratios	94/1,000
Birth by skilled health practitioner	61%
Vaccination coverage (Pentavalent 3)	80%
Net enrolment primary school	Male 47.9%, Female 48.1%
Net enrolment secondary school	Male 26.3%, Female 25.8%

Source: DHS, 2013; EMIS 2014; LISGIS, 2013; World Bank, 2014; MOH, 2015

5.1 Administrative, Demographic and Community Structures

The Head of State and Government of Liberia is a president who is elected by an absolute majority of the population. The country is divided into 15 political sub-divisions called counties. Each county is divided into districts, districts into chiefdoms, chiefdoms into clans, and the clans are further divided into towns and villages. The county governments are headed by superintendents who are appointed by the President. Districts are headed by Commissioners who are also appointed by the President. The clans and towns are headed by Paramount, Clan and Town Chiefs, who are elected by the citizens.

5.2 Demography

The 2008 Liberia Population and Housing Census identified a population growth of 2.1% and a total population of 3,476,608. The estimated population in 2016 stood at 4,021,017. A national population census was conducted in 2008 and revealed a 65% population increase from the 1984 census (2,101,628). Women account for 51% of the population, while men account for 49%. 63.8% are aged 15 years and above, ages 5 to 14 years make up 16.2%, and ages 0 to 4 years 15.0%. The fertility rate is

currently 5.2, indicating a substantial reduction since 1986 (6.2 in 1999-2000 and 6.6 in 1986) (LDHS, 2013).

One third of all Liberians live in Monrovia and 47% of the population lives in urban areas. However, while the urban population has grown, the census reported that 40% of all households travel more than one hour to the nearest health facility. In rural areas, two thirds of households must travel more than an hour to the nearest health facility. The population of Montserrado County has more than doubled since 1984 (from 491,078 to 1,118,241).

Education and Literacy Rates

The 2008 census showed Liberia had a population of approximately 3.5 million, with a youth population of over 50%. Of the total population, 33.2% had no education, 31.1% had only primary education, and 35.7% had secondary and tertiary education (LISGIS, 2008). With the high rate of illiteracy in Liberia, the NTDs Program intends to develop a strategy that prioritizes visual/pictorial IEC/SBBC materials to benefit those in the target population who are unable to read and write.

5.3 Community Structure

There are 91 health districts in Liberia. Each district is divided into chiefdoms and clans. Every health facility has a catchment population, and in each catchment there are General Community Health Volunteers/Community Health Assistants (CHVs/CHAs) and Community Directed Distributors (CDDs).

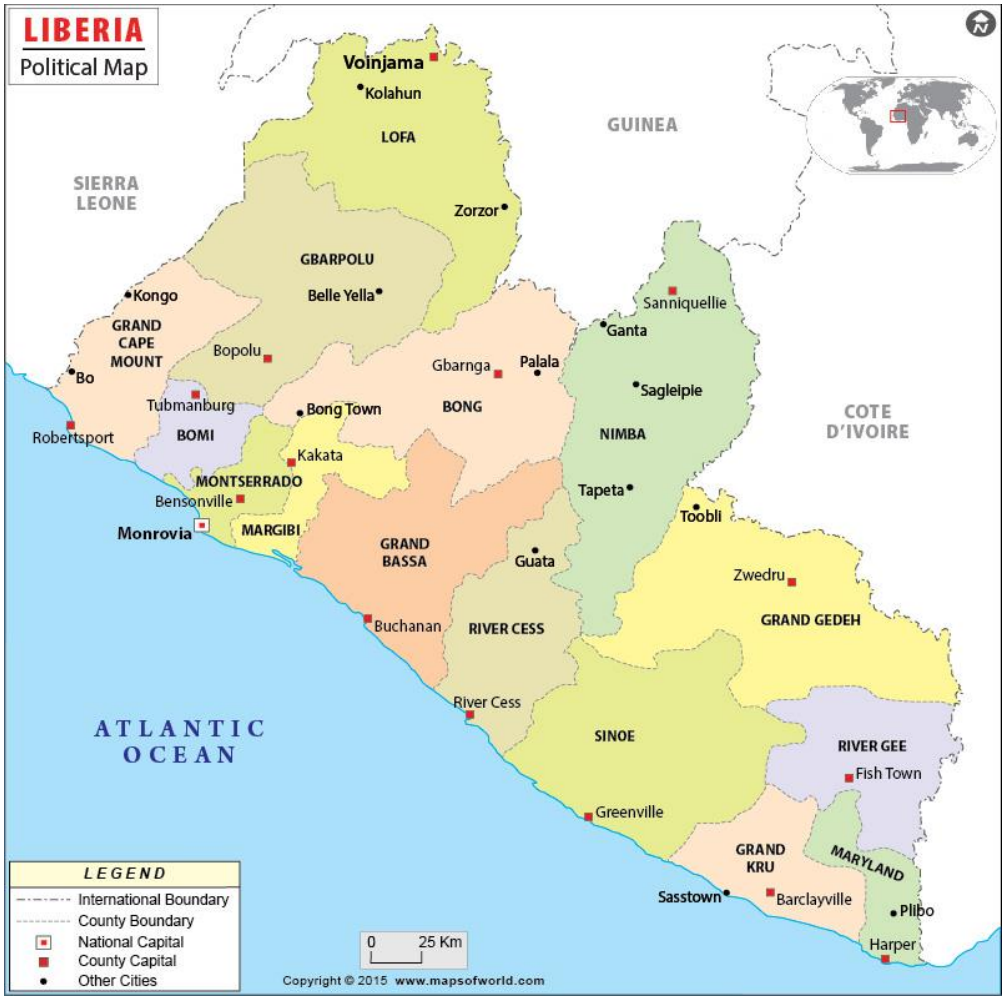


Figure 1. Liberian Geographic Location

Geographical Characteristics

Liberia is bordered by the Atlantic Ocean to the south, Côte d'Ivoire to the east, Sierra Leone to the northwest, and Guinea to the northeast. In Liberia, the Lofa, St. Paul, and St. John rivers are the main rivers, running parallel to each other and flowing perpendicular to the coast. Waterfalls, rapids, rocks and sandbanks occur frequently in upstream sections of these rivers in the north and central regions of Liberia and serve as breeding grounds for *Simulium* vector. However, as the main rivers and their tributaries meander towards the ocean, they become sluggish and hospitable to vectors for other NTDs such as Schistosomiasis and Lymphatic Filariasis. The brackish water swamps that extend along the entire coast of Liberia provide breeding grounds for mosquitoes, which increases the transmission of filarial infections. NTDs are endemic in the Mano River Union Region (Sierra Leone, Guinea, Liberia and Ivory Coast). These countries bordering Liberia have similar drainage, topography and vegetation. Collaborative trans-border efforts by all four-member countries of the Mano River Union are needed to control or eliminate NTDs, especially Onchocerciasis and Lymphatic Filariasis.

5.4 Social & Economic Factors

Liberia is endowed with mineral resources and a favorable climate for agriculture. Liberia exports highly depend on agricultural productivity. The major export items for Liberia are rubber, diamonds, gold, timber, iron ore, coffee, crude oil, and cocoa. Per capita gross domestic product (GDP) declined from US$1,269 in 1980 to US$457.90 in 2014, a fall of 64% (World Bank, 2004). An estimated three quarters of the population is living below the poverty line on less than US$1 a day. The majority of the population works in agriculture and subsistence farming or the informal economy in trading and small-scale production. The burden of NTDs adversely impacts agricultural production. NTDs negatively affect the daily income of patients with these illnesses, thereby negatively affecting efforts by government to reduce poverty.

5.5 Health Indicators

The country's health indicators, though improving, remain unsatisfactory. According to the 2007 Liberian Demographic Survey, childhood mortality has decreased substantially. Infant mortality has declined from 139/ 1000 live births to 71/ 1000 live births; under-five mortality has also declined from 219 to 94/1000 live births (Health Assessment Report, 2015), cutting the 1992-96 infant and under-five mortality rates in half. The maternal mortality rate in 2007 was 994 deaths per 100,000 live births and in 2013 that number increased to 1,072/100,000 live births (Health Assessment report, 2015), one of the highest in the world. Life expectancy at birth in 2010 was 59.1 years.

5.6 Transportation

The main means of land transport in Liberia is by paved, unpaved and path roads. Most of the paved roads have deteriorated extensively, making them difficult for vehicles to use, especially during the rainy season**.** Over-flooding of river banks during the peak of the rainy season also disrupts access to and for NTD-endemic communities. At this time, alternative modes of transport include canoes, motorbikes and by foot. Activity planning will take into account rainy seasons for better access to the remote communities.

5.7 Communication System and Network

There are four major mobile phone companies operating in Liberia, as well as access to landlines and pay phones. Less than half of the country is covered by mobile communications. Internet access is not very common in most counties of Liberia. In communities, communication for dissemination of important information flows through the leadership structure. Upon proper authorization, town announcers, information drummers, print media and electronic media may be used when necessary and appropriate to disseminate information. In most of the major cities, community radio stations disseminate information. In Monrovia there are a number of FM radio stations. Newspaper coverage is limited to major cities. There are three short-wave radio stations (ELBC, ELWA and UNMIL Radios) in Monrovia that cover almost the entire country. Although there are communications networks in the country that could be used to support the implementation of CM NTDs, there is still a need for improvement to ensure nationwide coverage to the remote communities where CM NTDs are prevalent.

6.0 Annex 2: Health System Situation Analysis

Governance

The Ministry of Health is the Institution of Government that provides for and monitors the health of the citizens. The Ministry is headed by the Minister who is appointed by the President of the Republic of Liberia. The Minister is supported by four Deputy Ministers heading four Departments (Health Services, Administration, Planning & Research and Disease Prevention & Epidemic Control). The NTDs/CM fall under Health Services and are supervised by the Assistant Minister for Preventive Services.

Liberia developed a decentralization policy in 2008 that allowed capacity building for management of health services at the county, district and community levels. The decentralization policy is still being gradually implemented as some units (district structures at some counties) are still being established in some counties. Though there exist partners' support for implementing NTDs and other programs' activities at all levels, management and administrative decisions are driven by central and county levels. Sustainability of donor support, coupled with the country's capacity to support such health initiatives at all levels, remain major challenges.

6.1 Health System

The health system is based on three main levels of service delivery: primary, secondary and tertiary. The Essential Packages of Health Services serve (EPHS) as the cornerstones of the national strategy to improve the health of all people in Liberia. The system provides a comprehensive set of services that strengthen key areas that continue to perform progressively in the current system. It also prioritizes services, including NTDs, that reflect the prevailing disease burden and health conditions affecting the population. The EPHS system is affordable, sustainable and encompasses high-impact interventions that have been chosen due to their effectiveness at preventing or treating the major causes of morbidity and mortality.

The availability of higher level facilities (secondary and tertiary) and national support to fully implement the EPHS and Investment Plan are issues that need to be addressed. Currently, however, there is political will and donor support that may be undermined by unforeseen political and natural health events.

The post-conflict recovery was promising, with progress made in major development indicators. Health indicators were improving until the Ebola crisis hit the country. The Ebola Virus Disease (EVD) outbreak did not only expose the health system's weakness and vulnerability but its spread, death toll and suffering were unprecedented and devastating. There are systematic, operational and financial challenges that need addressing for the health system to become resilient to shocks and thereby improve the health status of all Liberians.

6.2 Health Infrastructure

In the first few years of President Ellen Johnson Sirleaf's government, very serious efforts were made to rehabilitate health facilities. However, the Ebola epidemic disrupted the progress made. Post-Ebola recovery ushered in the Resilience and Investment Plan which drives the rebuilding efforts, focusing on expanding access to health services, as well as increasing the utilization and quality of healthcare

settings. The 2011 baseline established for the National Health Plan 2011-21 reported that 69% of the population lives within a 5km radius of health facilities. One of the key objectives of the national health policy is making health care equitable, accessible and affordable for all Liberians. To achieve these objectives, the MOH created the EPHS but not much emphasis was placed on the development of infrastructure since 2011.

6.3 Human Resources

The Human Resources Information System and health workforce have consistently been identified as weak in rapid assessments undertaken in 2006 and 2010. Human Resource Officers have been assigned in all the counties to strengthen and guide the recruitment and management of the health workforce.

Information on the health workforce - with respect to their production, employment, registration & licensing, performance & professional development, budget allocations, donor resources and expenditure - are in different databases that are not interoperable. This presents challenges to effectively and efficiently gather workforce intelligence to inform planning and rationalize resources. The establishment of a national health workforce account was recommended by the National HRH Policy and Plan but has not yet been implemented. The Health Information Systems plan is yet to be revised in line with the relevant components reflected in the current national health policy and plan 2011-21. The current national HIS consists of various sub-systems specially designed for data collection, processing and reporting.

6.4 Health Financing

The Ministry of Health is committed to financing health care at all levels with support from government and partners. The Ministry is also committed to monitoring health expenditure, resource allocation patterns, financing gaps and absorption capacity through financial information generated by the Health Management Information System and the review of National Health Accounts and Public Expenditure Reviews. The national financial management system has been established and improved to meet international standards while the counties' financial management systems have been established and are undergoing progress improvement for efficiency, absorption capacity, accountability and transparency. The Ministry is seeking donors to contribute to the realisation of these plans.

6.5 Challenges in Access to Health Services

The access to health care professionals is skewed heavily towards urban rather than rural settings as the professionals prefer to remain in the urban areas for socio-economic reasons. Generally, the pharmaceutical sector is faced with many challenges amongst which are inadequate funding from government for procurement, storage and distribution of pharmaceutical products, the lack of supply chain management specialists, acute shortage of trained dispensers & logistics officers, shortage of vehicles (especially trucks to facilitate the movement of commodities) and inadequate standard storage facilities at county and national levels. Other external factors that persistently continue to hinder the MOH from keeping a reliable supply of essential medicines in facilities across Liberia are poor road conditions and irregularity of drug supply. Central and county-level warehousing and distribution lack adequate investment and funding for procurement of

pharmaceuticals. Furthermore, medicines are not always supplied to treat certain disease conditions (including NTDs). Deficient supply management activities and constant delays to submit requisitions to the central level are responsible for low drug stocks at health facilities.

6.6 Research and Surveys

The Ministry of Health is still in its infancy in terms of governance and overall management of research in the country. There exists a research unit that coordinates all health research activities. The Liberian Institute of Bio-Medical Research (LIBR) manages and implements most biomedical research conducted in the country, but the research management capacity for health remains very low at national level. The country has a national health development plan and a zero draft of the Health Research Policy.

The Ministry of Health is, however, working on the establishment of a national public health institute of Liberia (NPHIL) for building a resilient health system in Liberia. One of the strategic goals of the NPHIL is to expand, conduct and coordinate public health and medical research to inform Liberian public health policies. To achieve this goal, NPHIL will expand funding/co-funding for research, enhance the infrastructure for research and regulatory capacity, and establish processes for conducting research to ensure quality and accuracy. Therefore, research related to the NTDs program, like all other programs in the Ministry, will be coordinated by the NPHIL when established, to minimize duplication and optimize synergies.

In view of the national health situation analysis, the CM/NTDs Strategic Plan is made in line with present-day realities and will be adapted as the situation changes.

7.0 Annex 3: SWOT Analysis of NTD Program Implementation

Strengths	Weaknesses/ Gaps	Opportunity	Threat
High level of commitment for NTDs control.	Integrated NTDs control is in the set-up phase. Policy and guidelines, program management/ coordination structures and HR systems are yet to be developed.	Mobilize resources from existing partners (WHO, CNTD/LSTM & Sightsavers, SCI, Effect: hope) to develop and disseminate policy and guidelines. Conduct institutional, technical and formative	Hard terrain impacts on reaching the rural population to provide NTDs services.

		assessment and develop NTDs monitoring and evaluation plan.	
Political will of government to support health programs.	Stretched and limited financial resources.	Use NTDs master plan as a tool to mobilize additional funds to close resource gaps.	Failure of the program to meet its targets and goals.
Existing physical facilities	Failure to fulfil formal commitments made by government.	Foster inter-sectoral collaboration with line ministries.	Lack of collaboration with line ministries. Lack of interest with existing programs.
Political stability of country	Low community involvement/ participation in health care delivery programs.	Liaise with existing community radios to carry out communication and advocacy programs to promote community participation.	People's perceptions of NTD's drugs. Refusal to take ownership and access NTDs services provided. Adverse reaction to the drugs.
Existing networking and partnership with government agencies, UN and INGOs.	Institutional, technical and formative capacity to implement integrated NTDs control not fully assessed.	Collaboration will be established with research institutions at home and abroad to build capacity of NTDs managers to coordinate and conduct operational research to improve NTDs programming.	Political instability in country.
Availability of national NTDs multi-year plan that can be used for resource mobilization.	Lack of ownership of existing programs at national and county levels.	Continue advocacy at the national level for resource mobilization. Continue collaboration with the county level for proper coordination and integration.	Lack of motivation for central and county-level staff. Lack of motivation for community workers (CHAs/CHVs/CDDs).
Availability of CDI structures at community level.	Monitoring and evaluation plan including management information systems for	Continue advocacy at the national level for inclusion in the health management information system and the monitoring	Untimely and inconsistent data. Limited information for intervention.

	integrated NTDs not fully developed. Community self-monitoring.	and evaluation plan.	
Commitment of partner(s) to provide PCT and MDT if required.	Lack of a communication and advocacy plan for integrated NTDs.	Develop and validate a communication and advocacy plan for integrated NTDs.	Program will receive limited support to carry out its activities.
Government decentralization policy.	NTDs drugs not fully on MOH procurement plan and essential drug list.	Continued advocacy with government to include NTDs drug within MOH procurement plan and essential drug list (pharmaco-vigilance system).	Difficulties in procuring and reporting.
Baseline data and experience from 2012-15 NTDs program.	Lack of effective synergy with other sectors (educational, faith-based and development institutions) operating at the community level.	Continued advocacy with other sectors at the community level.	Limited knowledge of disease burden.
Inclusion of NTDs into the National Health Plan and Policy and Essential Packages for Health Services (EPHS).	Limited operational research activities.	Continued advocacy with government and partner for funding to support operational research activities.	Limited knowledge of disease burden.
Willingness and acceptance of CDI projects by the communities.	High turnover of trained professional staff.	Provide training opportunities for lower cadres of health workers (CHSS, vaccinator, etc).	Lack of trained staff to provide NTDs services.
Network of CDDs - over 10,000 trained across all counties participating in other health care interventions, e.g. ITN distribution, NIDs, social mobilization, contact tracing and health education. Also, member of burial teams in the various counties during the EVD outbreak.	Insufficient health professionals in the health services, especially at county and facility levels.	Provide training opportunities for lower cadres of health workers (CHSS, vaccinator, etc).	Lack of funding to conduct training.

Inter-sectoral collaboration (MOH and MOE) in implementing MDA.	Lack of integration from both ends (MOH & MOE).	Enhance collaboration with MOE ahead of MDA and other activities (Schistosomiasis monitoring and evaluation impact survey).	Instability in country.
Multiple partnerships with WHO, CNTD/Liverpool, Sightsavers, SCI, ENDFUND, AIM, MAP International, AIFO, GLRA, MOE/MOA and other public and private organizations.	Poverty and lack of health knowledge in general population.	Advocate for school feeding with WFP.	Lack of food provision from WHF at all communities or schools.
Opportunities at international level in funding NTDs.	Use of external cash incentives by some programs to motivate volunteers at community level.	Collaborate with development NGOs and Agriculture Ministry to involve CDDs in income generating activities.	Lack of government funding to support NTDs.
Presence of local radio stations in all 15 counties.	Poor road conditions.	Liaise with other programs to influence national policy to harmonize incentives.	Economic stability in the country.
Presence of general community health volunteers in all counties.	Political instability in neighboring countries.	Low community participation will be improved with proper collaboration with community radios in implementing NTDs communication and advocacy plan.	Lack of incentives for volunteers.
Availability of paramedical institutions in all regions of the country.	Impact of EVD on community confidence and involvement in the health system.	Strengthen social mobilization efforts on health education program.	Lack of funding to provide training.
Distribution of Praziquantel to school-age children (5-14 years) during MDA.	Resistance by some pupils to taking Praziquantel on empty stomach during MDA.	Training community health volunteers to increase awareness on Schistosomiasis MDA and not to take drug on empty stomach.	Lack of food from community dwellers.

8.0 Annex 4: Creative Briefs for Disease Awareness

8.1 Buruli Ulcer

Shared Vision: To have BU-free community.
Background: BU affects all age groups, but mainly children from 4 to 15 years, and causes permanent disfigurement and disability if not treated early. It is the third most

common mycobacterium disease in humans.
Target Audience(s): Primary: General population (all community members).
Influencing/Secondary Audience: Community leaders, professional health workers**,** herbalists, community-based health workers (CHAs/CHVs) and MOE authorities.
Specific Objective(s): - Good hygiene practices. - BU is preventable and curable. - Medications are free and safe.
Barriers: - Limited awareness . - Traditional belief and practices (caused by witchcraft). - Limited social mobilization materials.
Key Promise: - BU can be cured.
Support Statements/Reason: - BU drugs are available, free and safe.
Call to Action: - When you see the signs and symptoms of BU (small knot on your skin and sore), go to the clinic or hospital immediately.
Creative Considerations: The message should be in all 16 local Liberian vernaculars and simple Liberian English. Adapt messages for people who cannot see, hear, read etc.
Tone: Appealing yet authoritative .
Media Approach/Requirements/Materials to be Developed: Audio messages (jingles, spot, skit, monologue, dialogue, testimony); print materials (flyers, posters, brochure, fact sheets, FAQ, job aid); advocacy meetings with community and traditional leaders, youth and women groups, influential leaders.
Interpersonal communication (IPC): House-to-house awareness.
Message Concept: The NHPD, through the material and message development committee, will carry out a series of activities to design social behavior change communication messages and materials.

8.2 Guinea Worm

Shared Vision: A Liberia free of NTDs for better health, education and economic growth.
Background: In 1986 the disease afflicted an estimated 3.5 million people a year in 21 countries in Africa and Asia; 90% of cases occurred in Africa. Global burden has fallen significantly since the launch of the eradication efforts in 1980s (25 cases in 2016). In 2015, the disease was confined to four sub-Saharan African countries (South Sudan, Mali, Chad & Ethiopia). Liberia was certified free of GWD in 2007. There is on-going surveillance to monitor geographic and epidemiologic sources of current and new infections.
Target Audience(s): General population (all community members).
Specific Objective(s): - Guinea Worm is a parasitic worm that lives in humans and is transmitted through ingestion of water contaminated with cyclops (water fleas) that have eaten the Guinea Worm larvae. - It can be prevented. - Drink/use clean and safe water to prevent Guinea Worm - water filtration.
Barriers: - Traditional beliefs (curse, witchcraft). - Limited awareness.

Key Promise: - Guinea Worm can be prevented.
Support Statements/Reason Why: - Taking in/using clean water prevents you from getting Guinea Worm.
Call to Action: - Treat all drinking water to prevent Guinea Worm.
Creative Considerations: Message in simple Liberian English and in 16 local dialects. Adapt messages for people who can't see, hear, read etc.
Tone: Appealing yet authoritative.
Media Approach/Requirements/Materials to be Developed: Audio (jingles) for radio; print (flyers, poster, stickers for community members, job aids for CHAs/CHVs/CDDs); community engagement (dialogue & advocacy meeting).
Interpersonal Communication: Awareness at health centers.
Message Concept: The NHPD, through the material and message development committee, will carry out a series of activities to design social behavior change communication messages and materials.

8.3 Hydrocele (Big bag)

Shared Vision: By the year 2020 Lymphatic Filariasis will be eliminated in Liberia.
Background: Hydrocele/big bag affects male of all ages and causes swelling of the scrotum.
Target Audience(s): Primary: male population.
Influencing/Secondary Audience: Professional health workers; community-based health workers (CHA/CHV), women, chiefs and elders.
Specific Objective(s): - Report all pain and swelling of the scrotum. - Hydrocele/big bag is curable, and surgery is at the hospital.
Barriers: - Limited awareness. - Traditional beliefs and practices. - Limited social behavior change materials.
Key Promise: - Hydrocele is curable.
Support Statements/Reason: - Surgery is available at the hospital.
Call to Action - When your bag hurts or swells, quickly go to the clinic or hospital.
Creative Considerations: The message should be in all 16 local vernaculars in Liberia and simple Liberian English. Adapt messages for people who can't see, hear, read etc.
Tone: Appealing yet authoritative.
Media Approach/Requirements/Materials to be Developed: Audio messages (jingles, spot, skit, monologue, dialogue, testimony); print materials, (flyers, brochures, facts sheet, FAQ, job aid); advocacy meetings with community and traditional leaders, youth and women groups, influential leaders.
Interpersonal communication (IPC): House-to-house awareness.
Message Concept: The NHPD, through the material and message development committee, will carry out a series of activities to design social behavior change communication messages and materials.

8.4 Leprosy

Shared Vision: By the year 2020 Leprosy will be eliminated in Liberia.

Project Background: Leprosy affects all age groups and if not treated leads to permanent disability. The disease has been endemic across all 15 counties of Liberia for more than half a century. Reduce grade 2 disability rate among new leprosy cases to less than one case per 1,000,000 inhabitants.
Target Audience(s): Primary Audience: general population
Influencing/Secondary Audience: Professional health workers; community-based health workers (CHA/CHV).
Specific Objective(s): - Report any strange spot that appears on your skin to the clinic or hospital. - Leprosy treatments are free and safe in Liberia. - Leprosy can cause permanent disability if not reported early for treatment.
Barriers: - Limited awareness - Traditional beliefs (caused by witchcraft) - Limited social behavior changes materials
Key Promise: - Leprosy is curable
Support Statements/Reason Why: - Leprosy drugs are available, free and safe
Call to Action: - When you see any strange spot on your skin, go to the clinic or hospital as soon as possible.
Creative Considerations: The message should be in all 16 local vernaculars in Liberia and simple Liberian English. Adapt messages for people who can't see, hear, read etc.
Tone: Appealing yet authoritative
Media Approach/Requirements/Materials to be Developed: Audio messages (jingles, spot, skit, monologue, dialogue, testimony); print materials (flyers, posters, brochure, facts sheet, FAQ, job aid); advocacy meetings with community and traditional leaders, youth and women groups, influential leaders.
Interpersonal communication (IPC): House-to-house awareness.
Message Concept: The NHPD, through the material and message development committee, will carry out a series of activities to design social behavior change communication messages and materials.

8.5 Lymphatic Filariasis

Shared Vision: A Liberia free of NTDs for better health, education and economic growth.
Background: A nationwide LF mapping exercise was conducted in 2010 using Immuno-Chromatic Test (ICT) cards on individuals aged 15 years and above. The results of the LF ICT test confirmed the endemicity of LF in 13 out of 15 counties in Liberia, with the exceptions of Gbarpolu and Bomi. Generally, the highest prevalence of infection (>10% by ICT) is manifested in the southeast counties (Grand Bassa, Sinoe, Grand Kru and

Maryland). Moderate prevalence of 1-10% was shown in all other parts of the country except Bomi and Gbarpolu which seemed free of LF infection.
Target Audience(s): Primary: community dwellers.
Influencing/Secondary Audience: Community leaders/professional health workers.
Specific Objective(s): - To know that Lymphatic Filariasis is a disease that causes Elephantiasis (Big foot) and Hydrocele (Big Seed) as complications, and is transmitted through an infected mosquito bite. - It can be prevented. - Accept and take the Albendazole during every round of Mass Drug Administration. Avoid being bitten by a mosquito. Sleep under a mosquito net.
Barriers: - Traditional beliefs (curse, witchcraft). - Limited awareness at all levels of the health system, e.g. facility staff, CHVs/CHAs/CDDs, community members. - Fear of medicine side effects. - Information not reaching all of the population (e.g. people not present, people living with disabilities etc.).
Key Promise: - Taking Albendazole prevents you from getting Elephantiasis (Big Foot) and Hydrocele. - Avoid getting bitten by a mosquito and you will not get Elephantiasis (Big Foot and Hydrocele).
Support Statements/Reason Why: - Avoiding mosquito bites will reduce your risk of getting Elephantiasis (Big Foot) and Hydrocele (Big Seed). - Taking Albendazole can also treat other worm infections and prevent Elephantiasis (Big Foot) and Hydrocele.
Call to Action: - Take Albendazole to prevent Elephantiasis (Big Foot), Hydrocele (Big Seed) and other worm infections during every round of Mass Drug Administration. - Sleep under a mosquito net.
Creative Considerations: Message in simple Liberian English and in 16 local dialects. Adapt messages for people who can't see, hear, read etc.
Tone: Moderate yet authoritative; appealing.
Media Approach/Requirements/Materials to be Developed: Audio (jingles) for radio; print (flyers, poster, stickers for community members; job aids for CHAs/CHVs/CDDs); community engagement (dialogue & advocacy meetings).
Message Concept: - Elephantiasis (Big foot) and Hydrocele (Big Seed) are sicknesses but not curses. - They are prevented by taking Albendazole every year. - Avoid being bitten by mosquitos. - Sleep under mosquito nets to avoid mosquito bites. - Early sign and symptom is swelling.

8.6 Lymphedema

Shared Vision: By the year 2020 Lymphatic Filariasis will be eliminated in Liberia.
Background: Lymphedema affects males and females of all ages and causes permanent disability.
Target Audience(s): Primary: general population (all community members).
Influencing/Secondary Audience: Professional health workers; community-based health

workers (CHA/CHV), women leaders, chiefs and elders.
Specific Objective(s): - To ensure that all suspected clients are reported to the nearest health facility. - To ensure that all confirmed clients receive self-care education and home-based self-care kits. - To ensure that no client is discriminated against.
Barriers: - Limited awareness. - Traditional beliefs and practices. - Limited social mobilization materials.
Key Promise: - Lymphedema can be managed at home.
Support Statements/Reason Why: - Home-based self-care kits (HBSCKs) are available and free.
Call to Action: When you see your foot getting big and painful, go to the clinic or hospital immediately.
Creative Considerations: The message should be in all 16 local vernaculars in Liberia and simple Liberian English. Adapt messages for people who can't see, hear, read etc.
Tone: Appealing yet authoritative.
Media Approach/Requirements/Materials to be developed: Audio messages (jingles, spot, skit, monologue, dialogue, testimony); print materials (flyers, brochures, facts sheet, FAQ, job aid); advocacy meetings with community and traditional leaders, youth and women groups, influential leaders.
Interpersonal communication (IPC): House-to-house awareness.
Message Concept: The NHPD, through the material and message development committee, will carry out a series of activities to design social behavior change communication messages and materials.

8.7 Onchocerciasis (River Blindness)

Shared Vision: A Liberia free of NTDs for better health, education and economic growth.
Background: Liberia has one of the highest burdens of Onchocerciasis in the world but awareness at the community level is limited. The disease was first diagnosed in Liberia by the Harvard expedition to Africa in 1926–27, and studies show that Onchocerciasis was found to be more prevalent in the interior than the coastal parts of Liberia. *Simulium yahense* was identified as the *Simulium* species responsible for the transmission of Onchocerciasis in Harbel, firestone rubber plantation, Liberia. According to a study conducted in the rubber plantation, transmission of Onchocerciasis in the area peaked in the dry season with a mean annual transmission potential estimated at 1,425 infective larvae per person. Though Onchocerciasis in Liberia is believed to be the forest type, significant ocular Onchocerciasis and a blindness rate of 1.2% was reported from the Bong Range. Rapid Epidemiological Mapping of Onchocerciasis (REMO) conducted in 1999 estimated that the disease affects all 15 counties with an estimated 1,113,213 population at risk.
Target Audience(s): Community dwellers (5 years and above).
Influencing/Secondary Audience: Community leaders, professional health workers.
Specific Objective(s) - To know that Onchocerciasis is a disease that causes blindness and itching and is transmitted by the bite of an infected black fly. - It can be prevented and treated. - Accept and take the Mectizan during every round of Mass Drug Administration. - Avoid being bitten by a black fly.

Barriers

- Traditional beliefs (curse, witchcraft).
- Limited awareness at all levels of the health system e.g. facility staff, CHVs/CHAs/CDDs, community members.
- Fear of medicine side effects.
- Information not reaching all the population (e.g. people not present, people living with disabilities etc).

Key Promise

- You won't get Onchocerciasis if you are not bitten by a black fly.

Support Statements/Reason Why

- Avoiding black fly bites will reduce your risk of getting Onchocerciasis (River Blindness).

Call to Action: Take the Mectizan during every round of Mass Drug Administration. Avoid being bitten by a black fly.

Creative Considerations: Message in simple Liberian English and in 16 local dialects. Adapt messages for people who can't see, hear, read etc.

Tone: Moderate yet authoritative; appealing.

Media Approach/Requirements/Materials to be Developed: Audio (jingles) for radio; print (flyers, poster, stickers for community members, job aids for CHAs/CHVs/CDDs); community engagement (dialogue & advocacy meetings).

Message Concept:

- Onchocerciasis is a sickness but not a curse.
- It is the second leading cause of blindness deriving from worm infection.
- It is transmitted from one person to another by the bite of a black fly.
- It is prevented by taking Mectizan every year.
- Onchocerciasis can cause itching and rashes on the skin.
- Avoid being bitten by black fly.
- Wear rain boots, long sleeves and trousers in swamp and river areas to reduce the chance of being bitten by black fly.

8.8 Schistosomiasis

Shared Vision: To treat at least 75% of all school-aged children at risk of Schistosomiasis. For better health, education and economic growth in Liberia.

Background: Data on status of Schistosomiasis in Liberia is derived from the result of the integrated mapping surveys for Soil-Transmitted Helminths and Schistosomiasis using the Kato-Katz Technique. The results indicated that Schistosomiasis is prevalent in 13 of the 15 counties. The result show that in Bong County the prevalence was 63% for *Schistosoma mansoni* and 56% for *S. haematobium.* In Nimba County the prevalence was 38% for *S. mansoni* and 20% for *S.* haematobium. In Lofa county, 32% for *S. mansoni* and 10% for *S. haematobium,* Maryland County *S. hematobium 43%* while *S. mansoni* is 34%. Margibi had lower prevalence of 9% and 7% for *S. mansoni* and *S. haematobium* respectively.

The remaining counties had Schistosomiasis prevalence of 0-3%. Among age groups, the distribution of Schistosomiasis was 11.6% and 11.2% for *S. haematobium* and S*. mansoni* respectively in 5-8 years. Age group 9-12 years had the highest prevalence of 58% for *S. haematobium* and 57% for *S. mansoni.* Age group 13–15 years followed with prevalence of 28.2% and 30.6% for *S. haematobium* and *S. mansoni* respectively, while age group >15 years had the lowest prevalence of 2.2% for *S. haematobium* and 1.2% for *S. mansoni*.

Target Audience(s): Primary: parents/ caregivers of children aged 5-14 years. Secondary: influencers (community leaders, health workers, teachers and community dwellers).

Specific Objective(s):

- To know that Schistosomiasis is a disease caused by several types of worms and is transmitted by fresh water snails.
- It can be treated and prevented.
- Parents to encourage their children aged 5-14 years to take the Praziquantel.
- Parents to encourage their children to go to school.
- Do not bath, swim or walk in contaminated water bodies.

Barriers:

- Traditional beliefs (curse, witchcraft).
- Limited awareness.
- CHVs/CHAs/CDDs, community members.
- Fear of medicine's side effects.
- Information not reaching all the population (e.g. people not present, people living with disabilities etc).

Key Promise:

- It can be treated and prevented.

Support Statements/Reason Why:

- Praziquantel is available, free and safe.
- Do not bath, swim or walk in contaminated water bodies.

Call to Action:

- When you see or notice the signs or symptoms of Schistosomiasis go to the hospital or clinic as soon as possible.

Creative Considerations: Audio messages should be done in simple Liberian English and translated into local languages. Adapt messages for people who can't see, hear, read etc.

Tone: Simple Liberian English appealing to the heart and head, yet authoritative.

Media Approach/Requirements/Materials to be Developed: Audio (jingles) for radio; print (flyers, poster, stickers for community members, job aids for CHAs/CHVs/CDDs); community engagement (dialogue and advocacy meetings).

Message Concept:

- Schistosomiasis is a sickness that can be treated and prevented.
- Do not bath, swim or walk in contaminated water bodies.
- Take your Praziquantel during every round of treatment and go to the clinic whenever you feel or see a symptom of Schistosomiasis.
- Treat high-risk groups such as school-aged children, women of childbearing age or special occupational groups in endemic areas. Dosage is determined by height.
- Educate the public in endemic areas to seek treatment early and regularly and to protect themselves.
- Dispose of faeces and urine so that viable eggs will not reach bodies of fresh water containing intermediate snail hosts.
- Improve irrigation and agriculture practices; reduce snail habitats by removing vegetation, and by draining, filling or lining canals with concrete.
- Treat snail-breeding sites with molluscicides.

8.9 Soil-Transmitted Helminths

Shared Vision: To treat at least 75% of all school-aged children at risk of STH for better health, education and economic growth in Liberia.

Background: The specific Soil-Transmitted Helminths (STHs), namely *Ascaris lumbricoides*, *Trichuris trichiura* and hookworms, are widely distributed in Liberia and prevalent in all 15 counties. The highest prevalence of 50-100% is found in most of the south-eastern counties (Maryland, Grand Kru, Sinoe and Rivercess); the counties in the central part of the country show moderate prevalence of 20–50%. The lowest prevalence of 0.1–20% is found in the northern counties including Lofa, Bong, Gbarpolu, Bomi, Montserrado and Nimba. The result of recent STH mapping surveys in 59 sampled schools, in which a total of 3,144 children were examined, prevalence of *Ascaris* was 20%, hookworm 9% and *Trichuris trichiura* 3%. STH mapping was conducted in all counties.

Target Audience(s): Primary: parents/ caregivers of children aged 5-14 years. Secondary: influencers (community leaders, health workers, teachers).

Specific Objective(s):

- To know that Soil-Transmitted Helminths cause infectious diseases through parasitic worm eggs, or larvae, that are transmitted to human intestines through contaminated soil.
- It can be treated and prevented.
- Parents to encourage their children aged 5-14 years to take the drug (Albenazole or Mebendazole).
- Parents to encourage their children to go to school.

Barriers:

- Limited awareness.
- Inappropriate timing of drug distribution.
- Limited Social Behaviour Change Communication (SBCC) materials for awareness.
- Limited knowledge of Community Director Distributor (CDD) on the drug information.

Key Promise:

- It is preventable and curable.

Support Statements/Reason Why:

- The drug is available, free and safe.

Call to Action:

- When you see the signs or symptoms of STH go to the hospital or clinic quickly.

Creative Considerations: Audio messages should be produced in simple Liberian

English and translated into local languages.
Tone: Simple Liberian English appealing to the heart and head yet authoritative.
Media Approach/Requirements/Materials to be Developed; Audio messages (jingles, spot, testimony); posters; visual (TV); print (fact sheet, brochure, job aid, FAQ); advocacy meetings with community and traditional leaders.
Interpersonal communication (IPC): house-to-house approach.
Message Concept: - Soil-Transmitted Helminths can be treated and prevented. - Wash hands with soap/ash before eating food and after using the latrines. - Drink safe water (or boil the water) to avoid worms. - Keep food and household water safe and away from flies and dirt. - Wash fruit and vegetables in clean water before eating to get rid of eggs or larvae. - Cook meat properly to prevent tapeworm. - Wear shoes if possible to prevent hookworm infections. - Use a latrine and not bushes/fields, or ponds, rivers and puddles. - Keep fingernails clean and short.

8.10 Yaws

Shared Vision: To have a community free of Yaws in Liberia.
Background: Yaws affects people aged 5 and above and is communicable.
Target Audience(s): Primary: general population.
Influencing/Secondary Audience: Community leaders, professional health workers, herbalists, community-based health workers (CHAs/CHVs) and MOE authorities.
Specific Objective(s): - To report any pain or swelling on the foot to the clinic or hospital. - Yaws spread from one person to another. - Yaws is curable, and the medicines are available in the clinic or hospital.
Barriers: - Limited awareness. - Traditional believe (caused by witchcraft?) - Limited social behavior changes materials.
Key Promise: - Yaws is curable.
Support Statements/Reason Why - Treatment is available, free & safe.
Call to Action: When you feel pain in your foot go quickly to the clinic or hospital.
Creative Considerations: The message should be in all 16 local vernaculars in Liberia and simple Liberian English. Adapt messages for people who can't see, hear, read etc.
Tone: Appealing yet authoritative
Media Approach/Requirements/Materials to be Developed: Audio messages (jingles, spot, skit, monologue, dialogue, testimony); print materials (flyers, posters, brochure, facts sheet, FAQ, job aid); advocacy meetings with community and traditional leaders, youth and women groups, influential leaders.
Interpersonal communication (IPC): House-to-house awareness.
Message concept: - Yaws is not an inherited condition. - Report all early signs and symptoms of Yaws to the health facility. - Yaws is preventable and can be cured. The treatments are free and safe.

8.11 Mass Drug Administration Campaigns

Mass Drug Distribution with Mectizan and Albendazole.
Mass Drug Distribution with Praziquantel.
NB: In counties where LF is non-endemic, e.g. Bomi and Gbarpolu, Mass Drug Distributions should focus on Praziquantel and Albendazole or Mebendazole.

Shared Vision: A Liberia free of NTDs for better health, education and economic growth.

Background: MDAs using Community-Directed Treatment with Ivermectin (CDTI have been ongoing since 2000 in the 15 counties. MDA coverage has reached full scale with 99% geographical coverage and 83% therapeutic coverage in 2013 and 2015. Efforts will be made to reach to 85% and 100% therapeutic and geographical coverage respectively in the next 5 years. Onchocerciasis activities are fully integrated in the EPHS with the government taking ownership in the provision of logistics, with some external partners support, within the next 3–5 years.

Target Audience(s): For Mectizan and Albendazole: community dwellers (5 years and above).

Influencing/Secondary Audience: community leaders, professional health workers, herbalists, community-based health workers (CHA/CHV), MOE authorities.

Specific Objective(s):

- Take the Mectizan during every round of Mass Drug Administration.

Barriers:

- Traditional beliefs (curse, witchcraft).
- Fear of side effects of the drug.
- Limited awareness.
- Inappropriate timing of drug distribution.
- Limited SBCC materials to raise awareness.
- Limited knowledge of CDD on the drug information.

Key Promise:

- Taking Mectizan prevents you from getting Onchocerciasis (River Blindness).

Support Statements/Reason Why:

- Onchocerciasis can be prevented, and the drug is available, free and safe.

Call to Action:

- To take the Mectizan to prevent Onchocerciasis (River Blindness) during every round of Mass Drug Administration and at the health facility.

Creative Considerations: Message in simple Liberian English and in 16 local dialects.

Tone: Moderate yet authoritative; appealing

Media Approach/Requirements/Materials to be Developed: Audio (jingles); print (flyers, posters, stickers, job aids); community engagement (dialogue & advocacy meetings).

Message Concept:

- Onchocerciasis is a sickness but not a curse.
- It is the second leading cause of blindness deriving from worm infection.
- It is transmitted from one person to another by the bite of a black fly.
- It is prevented by taking Mectizan every year.
- Target groups (aged 5 years and above) - height can be measured before taking the drug.
- It is distributed once a year.
- It is distributed by trained volunteers in your community.
- Mectizan is given along with Albendazole during distribution.
- Side effects of Mectizan (itching, swelling) are not life threatening.
- The drug is free, safe and available during MDA.
- Community must take ownership during MDA.
- It is distributed by trained volunteers in your community.

- Albendazole is given along with Mectizan during distribution.
- Side effects of Albendazole (itching, swollen) are not life threatening.

8.12 Case Management Awareness Campaigns

This would be an annual campaign to promote awareness of integrated case management services being provided by the NTD programme and the health system. This campaign is usually linked with the celebration of World Leprosy Day. Airing of jingles and conducting hydrocelectomies campaigns.

Shared Vision: A Liberia free of NTDs for better health, education and economic growth.

Background:
Liberia's Neglected Tropical Disease (NTD) Program is at a critical stage in its evolution. The program is the first national NTD program to plan and implement integrated CM NTD mapping and case management as part of its national health policy. The government of Liberia, through the Ministry of Health's NTD Program, has developed this plan and its budget in consultation with civil society, local and international partners. The plan has been incorporated into the revised NTD Master Plan for 2016-20.

There is a rapidly increasing recognition of the need for effective models of integrated case management for NTDs, to both maintain and extend the gains made through Mass Drug Administration (MDA) programs and vertical Intensive Disease Management Programs. This plan will ensure access to NTD treatment and management for affected populations under the Sustainable Development Goal for Universal Health Coverage.

Liberia is co-endemic for several NTDs that require case management, including Buruli Ulcer (BU), Leprosy, Lymphatic Filariasis (LF) and Yaws. An integrated approach to the identification and treatment of these NTDs will ensure economies of scale in implementation as well as better inclusion into the general health services at primary, secondary and tertiary levels.

Target Audience(s): Clarithromycin, Rifampicin, MDT, Azithromycin and WASH KITs for all age groups for the treatment of Buruli Ulcer, Yaws, Lymphedema and Leprosy. Hydrocele surgery for affected men. The treatment is free for everyone with the sickness.

Influencing/Secondary Audience: Community leaders, professional health workers**:** OICs, CHSS, 2nd Screeners, community-based health workers: CHAs/CHVs, MOE authorities, MOA authorities.

Specific Objective(s): Increase the number of community members recognizing and reporting the early signs and symptoms of Leprosy, BU, Lymphedema, Hydrocele & Yaws. Take your medicine and treatment (Clarithromycin, Rifampicin, MDT, Azithromycin and WASH KIT) at home or to the hospital or clinic.

Barriers:
- Traditional beliefs (curse, witchcraft).
- Limited awareness.
- Limited BCC materials to raise awareness.
- Limited knowledge of CDD and CHAs on the diseases.
- Late detection of cases and lack of knowledge of available treatment.

Key Promise:

- Taking Clarithromycin and Rifampicin for Buruli Ulcer will make you well.
- Taking MDT for Leprosy will make you well.
- Taking Azithromycin for Yaws will make you well.
- Keeping the Lymphedema foot clean by using the WASH KIT will keep your foot from getting infected.
- Undergoing an operation for Hydrocele will make you well.

Support Statements/Reason Why:

- Buruli Ulcer, Leprosy, Lymphedema, Hydrocele & Yaws can be treated and can be cured.
-Treatment is free, available and safe.

Call to Action:

- If you experience the signs and symptoms of Buruli Ulcer, Leprosy, Lymphedema, Hydrocele or Yaws go to your health facility or tell your CHA.

Creative Considerations: Message in simple Liberian English and in 16 local dialects.

Tone: Moderate yet authoritative; Appealing

Media Approach/Requirements/Materials to be Developed: Audio (jingles); print (flyers, posters, stickers, job aids); community engagement (dialogue & advocacy meetings).

Message Concept:

- **Leprosy** is a sickness but not a curse.
- The cause is not really known but is believed to spread from person-to-person through skin contact and sneezing.
- It can make you crippled if you do not go to the clinic or hospital for treatment.
- It can be cured by taking your medicine (MDT).
- The drug is free, safe and available.
- The drug is given by trained health workers.
- Leprosy can affect any age group (boy, girl, man or woman).
- **Buruli Ulcer** is a sickness but not a curse.
- It is believed to be caused by a bug that is found in slow moving water or swamps.
- Wash your body and clothes and wear long trousers or boots when working in the swamp or slow-moving waters.
- It mostly affects children under 15 years of age and older people.
- It can cause large sores on any part of your body that can make you crippled if you do not go to the clinic or hospital for treatment.
- It can be cured.
- The drug is free, safe and available.
- Take your Clarithromycin and Rifampicin to get well.
- The drug is given by trained health workers.
- **Yaws** is a sickness but not a curse.
- It mostly affects children under 15 years of age
- It can be cured by taking a single dose of Azithromycin.
- Wash your clothes and bathe every day to prevent Yaws.
- It can be spread from person to person through skin contact.
- The drug is free, safe and available.
- The drug is given by trained health workers.
- **Lymphedema** is a sickness but not a curse.
- It is cause by the same mosquito that cause Malaria.
- Always use mosquito nets while sleeping.
- Always take Ivermectin and Albendazole during MDA.
- Lymphedema can be treated when you go to the clinic or hospital early.
- It can affect children and adults.
- It can make your foot large and can cripple you if you do not go to the clinic or hospital quickly.
- Use the WASH KIT to keep the foot from getting infected.
- **Hydrocele** is a sickness but not a curse.
- It is caused by the same mosquito that can cause Malaria.
- It can be cured by undergoing surgery.
- It only affects men.
- Visit the clinic or hospital when you see your bag getting big, and you are having fever and pains.