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U.S. President's Malaria Initiative

Improving Migrant Worker Access to Malaria Treatment and Prevention: Implementation Guidelines from Gambella, Ethiopia

Gambella Regional Health Bureau

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Foreword

Malaria is a major public health problem in Ethiopia. About 75% of the country's total area is considered malarious, and about 68% of the population living in these areas is at risk of malaria at any time. EFY 2010 Health and Health Related Indicators data recorded 1,206,891 malaria cases and 158 deaths throughout the country; 883,886 of the cases were from *P. falciparum*. In the same fiscal year, Gambella region registered 88,229 malaria cases and 19 deaths; 11,322 of the cases were confirmed cases from *P. falciparum*.

The National Malaria Strategic Plan (for 2014-2020) aims to achieve the goals of near zero malaria deaths (no more than one confirmed malaria death per 100,000 population at risk); reduction of malaria cases by 75% from the baseline of 2013; and elimination of malaria by 2030 from all parts of the country.

To achieve the goals, the NMCP needs to have appropriately planned and targeted delivery of essential malaria interventions, including early diagnostic testing of suspected malaria and prompt treatment of confirmed cases with effective anti-malaria therapy. To implement these interventions, it is important to create an environment that enables access to malaria management services and prevention modalities, including at the workplaces and lodgings of seasonal migrant workers. Other interventions are the application of appropriate vector control measures, particularly the use of long-lasting insecticide-treated nets by seasonal migrant workers and of indoor residual spraying of insecticides in worker structures at remote farm sites and at other investment projects.

This Gambella-specific implementation manual has been developed to support and guide the different governmental and non-governmental stakeholders involved in the region's NMCP on how to improve access to malaria management and prevention services for the seasonal migrant workers and refugees in the region.

I am optimistic that, with the continued commitment of all government stakeholders and the support of development partners, we will defeat and eliminate the old disease malaria and get on track toward our common vision: a malaria-free Ethiopia.

Gambella Regional Health Bureau

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- Gambella RHB with the regional laboratory, Ethiopian Pharmaceuticals Supply Agency hub and regulatory agency
- Gambella Bureau of Labor and Social Affairs
- Heads of woreda health offices (Gambella zuria, Gog, Abobo, Dimma and Godere)
- Hospitals, health centers, health posts, and private health facilities from the region
- Partners (ICAP/Columbia University-Gambella office, and International Medical Corps)

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Acronyms

EFY	Ethiopian Fiscal Year
EPISA	Ethiopian Pharmaceuticals Supply Agency
EQA	External Quality Assurance
FMOH	Federal Ministry of Health
HMIS	Health Management Information System
IEC	Information Education Center
IRS	Indoor Residual Spray
LLIN	Long-lasting Insecticide-treated Net
MMW	Mobile and Migrant Worker
NMCEP	National Malaria Control and Elimination Program
PHEM	Public Health Emergency Management
PHSP	Private Health Sector Project
PMI	President's Malaria Initiative
RHB	Regional Health Bureau
RDT	Rapid Diagnostic Test
SBCC	Social and Behavior Change Communication
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

I-INTRODUCTION

Approximately 60% of the Ethiopian population lives in areas of malaria risk. The disease is found primarily at elevations below 2,000 meters (m) but it occasionally occurs in areas up to 2,300 m. Its presence is affected by changes in climate (temperature, rainfall, and relative humidity), topography (altitude, surface hydrology, land vegetation cover, and land use), and demography (population movements)¹.

Rapid overall population growth and scarcity of land for farming in high and midland areas has increased investment in agriculture in the fertile lowlands of Ethiopia, where malaria prevalence is high. As a result, seasonal workers have moved into the lowlands, increasing their exposure to malaria infection. Aside from their own risk of severe disease and death, infected mobile and migrant workers (MMWs) may transport parasite hosts when they return to their permanent residences in areas of little or no malaria transmission.

The UN International Organization for Migration defines MMWs as:

- Mobile population, resident in an area for less than 6 months
- Migrant population, resident in an area for 6 to 12 months
- Permanent local population, resident in an area for more than 1 year

The Gambella region has an estimated permanent population of 453,442. Agriculture is the main economic sector and it attracts farm investors and MMWs. The region's health system comprises 4 general hospitals, 31 health centers, 136 health posts, and 11 private primary and 16 private medium clinics. Each refugee camp has its own health center.

According to Health and Health Related Indicators data for EFY 2010 (2017-2018), the Gambella region at that time had 88,229 malaria cases (7.3% of cases nationwide), of which 74,729 (8.5% of cases nationwide) cases were confirmed *P.falciparum*.

¹Federal Democratic Republic of Ethiopia, National Malaria Guidelines, Addis Ababa: November, 2017.

2- MALARIA MANAGEMENT FOR MIGRANT WORKERS AND REFUGEES IN GAMBELLA

Unpublished field studies done by the President’s Malaria Initiative (PMI)/United States Agency for International Development (USAID)-funded Private Health Sector Project (PHSP) have demonstrated that more than one million seasonal workers migrate to malaria-endemic areas nationwide annually to work on crop production and sugar cane plantations, and in floriculture, horticulture, mining, and road construction.

It is estimated that approximately 131,475 seasonal migrant workers relocate to the Gambella region for temporary employment in agriculture between July and December annually.

2.2. HEALTH CARE FOR SEASONAL MIGRANT WORKERS AND REFUGEES

Except for government organizations like the Ethiopian Sugar Corporation, most employers of MMWs do not have private or government owned workplace health facilities that can diagnose and treat malaria. Most private health care facilities in near-by towns are low level and lack microscopy services. Their health care professionals do not receive updated information on national standards for malaria diagnosis and treatment. All this compromises the quality of care they deliver.

In addition, migrant workers do not have adequate access to information that would help them improve their knowledge and behavior regarding malaria treatment and prevention.

The Gambella region has seven refugee camps (Kule, Nguneyyiel, Jewi, Tierkidi, Pugnido 1, Pugnido 2, and Okugo) with 401,594 refugees from South Sudan. The majority are female (54%) from 18-59 years of age (32%).¹ Each refugee camp has its own health center, which provides health services to camp inhabitants in collaboration with the regional health bureau (RHB) and international organizations (United Nations High Commissioner for Refugees (UNHCR), United Nations Children’s Fund (UNICEF), United Nations International Organization for Migration, and Norwegian Refugee Council (NRC). The health centers use the weekly Public Health Emergency Management (PHEM) and monthly Health Management Information System (HMIS) tools to report malaria cases to the government structure and to procure supplies for malaria management from the RHB, Ethiopian Pharmaceuticals Supply Agency (EPSA), and UNICEF. According to the EFY 2010 regional malaria program performance report, the five health centers investigated 6,115 refugees for malaria and diagnosed 1,179 malaria cases; 86% of the cases were due to *P. falciparum* infection.

¹ United Nations High Commissioner for Refugees, Addis Ababa: February, 2019.

One of the first concrete steps to improve malaria management in regions with a high disease burden among MMWs and refugees is to develop region-specific implementation guidelines to help regional authorities and other stakeholders to increase access to malaria diagnosis, treatment, and prevention services for these population groups.

4-PURPOSE OF THE IMPLEMENTATION GUIDELINES

This region-specific implementation guideline is intended to help the Gambella RHB improve access and quality of malaria case management services and vector control interventions for seasonal MMWs and refugees in the region. It also will guide the RHB in successfully implementing broader malaria prevention and control activities for these group.

Finally, it will support the NMCP in developing national policy guidelines to improve access and quality of care for seasonal migrant workers and refugees located in development corridors (farms, mining areas) and camps, and to achieve malaria elimination by 2030.

5-EXPECTED CHANGES

5.1: Expected changes in malaria case management and prevention

1. Refugees in the region will be able to access malaria testing and treatment in their camp according to the national protocols.
2. The private health care workers who serve the MMWs and refugees will have improved knowledge and skills on malaria case management and malaria laboratory diagnosis.
3. The private health facilities that serve seasonal migrant workers and refugees will be able to access and receive all important commodities for malaria diagnosis and treatment.
4. RHB and other stakeholders will implement innovative approaches such as temporary malaria clinics and mobile malaria clinics at the investment sites for rapid malaria test and treatment of MMWs.
5. The RHB with the regional Regulatory Department and Bureau of Labor and Social Affairs will encourage and enforce the private businesses to establish clinics for their temporary workers.
6. To prevent contracting malaria, the seasonal migrant workers and refugees will be able to use appropriate vector control interventions such as long-lasting insecticide-treated bed nets (LLINs), IRS and repellants.

5.2: Expected changes from mapping

7. The RHB, Regional Investment Bureau, and Bureau of Labor and Social Affairs will have data on the number of farms and other sectors for investments, number of seasonal migrant workers deployed to the investment corridors, and number of health facilities serving the workers.

8. The number of seasonal migrant workers and refugees will be considered for planning and proper resource allocation.

5.3: Expected changes in malaria case data recording and reporting

9. RHBs, and the NMCP will have disaggregated data on malaria cases related to MMWs, enabling evidence-based decisions and policies on malaria and other health care for this group.
10. Refugee camp health centers will share their performance regularly with the Administration for Refugee and Returnee Affairs (ARRA) and the RHB using the HMIS/DHIS-2 reporting tool.

6-STAKEHOLDER ROLES AND RESPONSIBILITIES

6.1-RHB and other government structures

6.1.1. Creation of an enabling environment to improve access to case management

- Lead, support, and monitor the implementation of the malaria case management services for the seasonal migrant workers and refugees by regularly bringing issues related to these groups to regional technical working group and senior management meetings and coordinate with the ARRA, Federal Ministry of Health (FMOH), and other partners to improve the provision of clinical services to these groups.
- Coordinate with the regional Bureau of Labor and Social Affairs, investment offices, and investors to gather annual information on the number of seasonal migrant workers, status of farm-based clinics, and investor preparedness to establish clinics for their workers.
- Advocate at the FMOH level during the national NMCEP review meetings, conferences, and other venues about the significance of establishing health posts at work-places, allocating an adequate budget for the operations of seasonal (temporary) malaria clinics, and considering the migrant worker population and refugees during the national quantification for malaria prevention and management commodities.
- Support and engage private health facilities to provide the malaria case management services to the seasonal migrant workers and refugees.
- Ensure that private health facilities who provide clinical services to the seasonal migrant workers and refugees are properly linked to the government structure to access all important commodities.
- Coordinate with woreda health offices, investors, and partners in establishing temporary or mobile malaria clinics in periods of high influx of seasonal migrant

workers and the peak malaria transmission season.

- Ensure the regional EPSA hub supports the distribution and supply of malaria commodities to health facilities that serve seasonal migrant workers and refugees.
- Build the capacity of government and private health professionals who are involved in malaria case management.
- Establish regional reference laboratory coordinates and conduct malaria microscopy EQA at eligible health facilities, send feedback results within the specified period, and ensure the implementation of corrective actions.
- Provide technical support to nearby hospitals and health centers so that they will facilitate the management of referred severe cases.
- Distribute the National Malaria Program Guideline, standard operating procedures, recording and reporting forms, and other provider support tools to all health facilities.
- Conduct regular annual program review meetings with all stakeholders including private health facilities and employers.
- Collaborate with partners and investors to devise mechanisms for the effective distribution and use of LLINs, implementation of indoor residual spraying (IRS), health education, mass community awareness sessions, and other prevention modalities.
- Annually map and update information about the malaria situation and associated factors in the development corridors and refugee camps, which will help to plan and improve malaria prevention, control, and elimination activities for seasonal migrant workers.
- Establish regional and woreda-level special technical working groups that include stakeholders and investors to give guidance and follow-up to improve access to comprehensive malaria prevention and management services for MMWs and refugees.

6.1.2. Data recording and reporting

- Advocate at the FMOH level about the significance of separately recording and reporting malaria suspected and treated cases among permanent vs temporary residents in the national HMIS tools.

- Provide technical support to health facilities to disaggregate malaria suspected and treated cases among permanent and temporary residents during the recording and reporting of cases.
- Advocate at the FMOH level to consider the malaria burden of seasonal migrant workers and refugees and provide these data for the planning and quantification exercises of malaria commodities.

6.2-Donors/Program implementers

- Partners that support the malaria management and prevention program will be part of the regional technical working group and align their plans with the regional plan to avoid duplication of effort; introduce innovative approaches like temporary malaria clinics and mobile malaria clinics to increase MMWs' access to malaria management and prevention services; closely work with local health offices and health facilities to disseminate evidence and best practices learned; advocate to FMOH and other stakeholders about the importance of developing policy guidelines, protocols, and innovative malaria treatment and prevention approaches for the seasonal MMWs and refugees; and strengthen the recording and reporting of MMW malaria cases in the MMWs population in the national HMIS.

6.3-Agricultural and other private investors

- The RHB, Regional Investment Bureau, and Bureau of Social and Labor Affairs will collaborate with investors to facilitate the licensing and establishment of health facilities at different levels that can provide malaria prevention, control, and elimination services to seasonal migrant workers at their work places. Once licensed, the RHB or local district will provide them with commodities for malaria management and prevention. Investors will assign a focal person to ensure that the health facilities provide malaria care as per national protocols, dispense anti-malaria drugs for free, and do recording and timely reporting of cases to the appropriate government structure using the national reporting tool.
- Investors will coordinate with the region and partners by dedicating rooms to serve as temporary or mobile outpatient malaria clinics, as distribution points for LLINs, and as sites where information, education and communication (IEC)/social and behavior change communication (SBCC) materials can be prepared and distributed/disseminated and radio messages for seasonal migrant workers and refugees can be composed.

6.4-Neighboring regions

Neighboring regions that are home to the workers who seasonally migrate to Gambella or of the investment projects that attract the migrant workers need to work with Gambella RHB from

planning through implementation to increase access to and quality of malaria prevention and management services for the workers. Establishing a committee that includes stakeholders from the neighboring region(s) will facilitate and accelerate the execution of approaches designed to achieve malaria control and elimination goals.

7- DATA RECORDING AND REPORTING OF MALARIA CASES

7.1-Monitoring and evaluation, and surveillance

Gambella must put in place NMCEP monitoring and evaluation, and surveillance systems to ensure appropriate use of resources, to assure quality of services rendered, and to generate data for decision-making.

Monitoring and evaluation will help to evaluate the outcomes of program implementation and to measure short and long-term impacts. Surveillance will facilitate the timely submission of cases to the appropriate health offices to support malaria elimination.

Partners, regional authorities, and facility staff need to facilitate and undertake program monitoring through supportive supervision and by organizing program review meetings with all stakeholders.

7.2-Recording, reporting, and monitoring data about seasonal migrant workers and refugees

Existing national data recording tools do not disaggregate malaria suspected, investigated, and treated cases by a patient's status (temporary seasonal worker, permanent resident, or refugee) or region of residency, and reporting tools (PHEM and HMIS/DHIS2) do not show the prevalence of malaria in development corridors and refugee camps.

The RHB could capture all these required data without changing the national HMIS tools. For instance, it could issue a circular instructing all health facilities in the region to denote malaria cases by putting P (permanent resident), T (temporary seasonal worker), or R (refugee) in the remarks column of the mother register and reporting the cases to the next level in a separate monthly reporting tool. This information will help indicate the disease burden among the seasonal migrant workers and refugees who use the services.

Epidemic monitoring and surveillance charts in health facilities also could be used to monitor malaria trends among seasonal migrant workers and refugees.

8- VECTOR CONTROL FOR SEASONAL MIGRANT WORKERS AND REFUGEES

Reports from the region have shown that *P. falciparum* malaria is the commonest form of malaria, accounting for 85% of malaria cases. This indicates that unless coordinated vector control interventions are in place, there is a high risk of epidemic outbreak and death among seasonal

migrant workers and refugees.

8.1 Use of IRS and LLINs

Using IRS for vector control in the dwellings of seasonal migrant workers and refugees is one method for preventing malaria among these populations. To conduct efficient and effective IRS, the following should be considered when planning IRS:

- ✓ The number of the seasonal migrant workers and refugees, to quantify the amount of insecticide needed
- ✓ The number of sprayable structures (not all structures can be sprayed; they must have solid surfaces to retain insecticide)
- ✓ The adequacy of human and financial resources for the IRS
- ✓ The availability of appropriate places for insecticide storage
- ✓ The identification of an appropriate time to spray (Refer to the National Malaria Guidelines, 2017)

Planners must pay close attention to the national guidelines to prevent dangerous and toxic chemicals being stored and sprayed for IRS.

Providing LLINs to seasonal migrant workers and refugees is another method for preventing malaria; however, there must be a mechanism for efficient distribution and use of LLINs. To implement this intervention, the region, woredas, and investors need to collaborate on the following preparations:

- ✓ Identifying the number of temporary residents to procure an adequate number of LLINs
- ✓ Allocating adequate resources for purchasing and distributing the LLINs
- ✓ Building recipients' knowledge on how to properly use LLINs, to avoid misuse
- ✓ Determining methods to reclaim the nets when the temporary residents return home
- ✓ Identifying an appropriate place to store the returned LLINs

8.2 Use of repellents and proper clothing

According to the field observation reports from the development corridors, some worker housing is neither appropriate for IRS nor suitable for hanging LLINs. Also, mosquito biting behavior is changing: mosquitoes are biting outdoors, which limits the benefits of IRS, and during the day, which limits the benefits of LLINs. Some worker behavior also is nontraditional; for example, some workers who cultivate sesame are working at night.

Using repellants and long-sleeved clothing, gowns, and gloves helps to prevent mosquito bites, so the RHB, investors, and other stakeholders should work together to procure and distribute effective repellants and appropriate clothing to the seasonal migrant workers and refugees.

8.3 Environmental control

Most development corridors and refugee camps have sites that are conducive to the breeding of

Anopheles mosquitoes, making environmental control another way to prevent malaria.

The region, and its districts and kebeles, in collaboration with investors, seasonal migrant workers, and refugees should work to implement environmental control methods. These methods include ridding work and living areas of containers—discarded food containers, tires, etc.—where water can collect and provide a mosquito breeding site. They also include larviciding. When using chemicals, care must be taken to follow national guidelines to prevent dangerous and toxic chemicals being used in water or the surrounding environment.

8.4 IEC/SBCC

Health education is also a way to prevent malaria or limit its severity. It includes improving seasonal migrant workers and refugees' use of LLINs, their health-seeking behavior when they have a fever, and their rational use of anti-malaria drugs. Awareness creation sessions can be delivered to an individual or a group, when cases are evaluated for malaria in the health facilities located in development corridors and refugee camps. Group sessions can also be conducted at centers where the seasonal migrant workers gather for recruitment and deployment to workplaces, and at their work sites. Awareness creation also can be done through the distribution of leaflets, audio-visual messages, radio spots, and so forth, using appropriate language.

In order to implement these methods, the region needs to collaborate with the investors, government or private media agencies in the region, and other stakeholders who have roles in IEC/SBCC development or distribution.

9-MONITORING THE IMPLEMENTATION OF THE MALARIA PROGRAM

Supportive supervision is an important activity for monitoring that malaria prevention and control activities are in place for seasonal migrant workers and refugees. It also ensures that health facilities adhere to national guidelines in providing high-quality clinical malaria services, laboratory services, and drugs, in maintaining facility infrastructure (ventilation, waste disposal, etc.), and in record keeping and reporting. It also ensures that essential commodities for diagnosis and treatment are adequately allocated.

The regional malaria program needs to work closely with the local health structure and other stakeholders to conduct joint supportive supervision, usually on a quarterly basis, especially during periods of high malaria transmission and when there is a large influx of seasonal workers. It is also recommended to supervise new health facilities on a monthly basis for the first three to six months.

Table 1. Supervision Checklist for Monitoring the Implementation of Malaria Program Guidelines for Seasonal Migrant Workers and Refugees

No	Monitoring Tool	Y	N	Remarks
1.	The regional investment office, and social and labor affairs and health bureaus collaborate to update the number of seasonal migrant workers and other malaria-related issues in the development corridors on a yearly basis			
2.	The current number of seasonal migrant workers and refugees in the region is considered during the planning and distribution of commodities for malaria management and vector control methods			
3.	The region has annual plans and budgets allocated for establishing temporary malaria clinics/mobile clinics during the peak malaria period			
4.	The seasonal migrant workers and refugees issue is a regular agenda item at regional technical working group meetings			
5.	The regional investment office, and social and labor affairs and health bureaus collaborate to enforce and support the investors to establish clinics for their workers			
6.	The RHB works to make non-functional health posts resume providing services to their catchment population including seasonal migrant workers			
7.	Health facilities in the region are recording and reporting cases by residency, disaggregated as temporary, permanent, and refugee residents			
8.	Woredas are reporting suspected and malaria cases disaggregated as temporary, permanent, and refugees residents to their respective zone and zones to the region			
9.	Regional- and woreda-level committees are established to monitor malaria prevention and management activities for seasonal migrant workers			
10.	The region supports vector control methods targeted to seasonal migrant workers and refugees:			
	Provision of LLINs			

	IRS for eligible housing structures			
	Provision of repellants and others (specify)			
11.	Health facilities (government, private, temporary malaria clinics, mobile clinics) are serving seasonal migrant workers and refugees are receiving the drugs and reagents for microscopy or RDT that they requested			
12.	Health facilities are provided with bin cards, Request Report Forms (RRF), HMIS and PHEM tools.			
13.	Health care providers serving the seasonal migrant workers and refugees are receiving updated training and provider support tools			
14.	Health facilities serving the seasonal migrant workers and refugees are receiving malaria microscopy EQA regularly			
15.	Hospitals are accepting and managing severe cases referred from health centers			

10. STEPS IN ESTABLISHING TEMPORARY MALARIA CLINICS

Temporary malaria clinics are one means of improving access to and quality of malaria management services for seasonal migrant workers. Steps for establishing a clinic are the following:

Step 1. Identification

The region will identify the woredas and investment sites with high numbers of seasonal migrant workers and refugees, the months when the seasonal migrant workers are high in number, and the months of peak malaria transmission. It also will identify eligible sites for temporary clinics. This will be done by regularly mapping the development corridors and refugee camps.

Step 2. Consensus building

The region in collaboration with the woreda and the investor in the farm site identified for the temporary clinic should execute an agreement stating that a temporary malaria clinic will be established and the farm/business owner will support it by dedicating rooms for patient evaluations and accommodation of the health care provider/s.

Step 3. Prepare providers, commodities, and provider support tools

The RHB will recruit providers, provide them an orientation to the temporary malaria clinics, and provide an adequate amount of commodities and tools needed for malaria management to the identified woredas.

The commodities are:

- Medical equipment (blood pressure apparatus, thermometer, etc.)
- Artemether-Lumefantrine, for children and adults
- Chloroquine syrup and tablets
- Primaquine tablet
- Artesunate, intravenous and suppository
- Quinine PO (per oral)
- Anti-pyretics
- RDT
- Safety box

The tools are:

- Laboratory comprehensive register
- Malaria morbidity register
- PHEM and HMIS reporting tools
- Tool to report residency status
- Malaria case management guidelines and pocket reference booklets

Step 4. Transportation of providers and commodities

The region in collaboration with the woreda will deploy the recruited staff and commodities to the assigned temporary clinic sites.

Step 5. Supervision and monitoring

The woreda in collaboration with the region will conduct monthly supervision and follow-up using a supervision checklist and will provide onsite support and solutions whenever there are challenges to the operation.

Step 6. Reporting and closure

Health care providers will report malaria cases to the woreda, on a weekly basis using the PHEM tool and monthly using the HMIS. At the end of the intervention period, the providers will submit the registration books and remaining commodities to the woreda.