This FY 2021 Malaria Operational Plan has been approved by the U.S. Global Malaria Coordinator and reflects collaborative discussions with national malaria control programs and other partners. Funding available to support outlined plans is pending final FY 2021 appropriation. Any updates will be reflected in revised postings.

U.S. PRESIDENT'S MALARIA INITIATIVE

LIBERIA

Malaria Operational Plan FY 2021

The U.S. President's Malaria Initiative (PMI)—led by the U.S. Agency for International Development (USAID) and implemented together with the U.S. Centers for Disease Control and Prevention (CDC)—delivers cost-effective, lifesaving malaria interventions alongside catalytic technical and operational assistance to support Liberia to end malaria. PMI has been a proud partner of Liberia since 2008, helping to decrease child death rates by 18 percent through investments totaling almost $145.8 million through FY 2019.

The proposed PMI fiscal year (FY) 2021 planning budget for Liberia is $13.5 million. This Malaria Operational Plan (MOP) summary outlines planned PMI activities in Liberia for FY 2021. **FY 2021 Budget Tables** (Tables 1 and 2) for activities and budget amounts, available on pmi.gov. Developed in consultation with the National Malaria Control Program (NMCP) and key stakeholders, proposed activities reflect national and PMI strategies, draw on best-available data, and align with the Liberia context and health system. Proposed PMI investments support and build on those made by the Government of Liberia as well as other donors and partners. See **Annex A: Gap Analysis Tables** for information on commodities.

To accelerate the journey to self-reliance, PMI developed a programmatic inventory to assess the strengths and persistent challenges of the Liberia program. See **MOP FY 2020 Liberia, Annex B: Program Inventory**. The activities proposed in this MOP are tailored to draw on these strengths and address the weaknesses.

Since the FY 2020 MOP was developed, the following new data, updated policy and/or strategic priorities relevant for the FY 2021 MOP have become available:

- Liberia completed its Demographic and Health Survey (DHS) 2019-2020. The survey included malaria indicators except the malaria biomarkers. Preliminary results of the DHS 2019-2020 indicated that the proportion of households with at least one insecticide-treated mosquito net (ITN) for every two persons was 30 percent in rural areas and 22 percent in urban areas. About 44 percent of children under five years of age and 47 percent of pregnant women ages 15-49 slept under an ITN the night before the survey. Reported SP/Fansidar uptake by women with a live birth within the two years preceding the survey were 90 percent for one dose, 70 percent for two does, and 40 percent for three doses. Advice or treatment was sought for 81 percent of children with fever, and almost half (49 percent) had blood taken from a finger or heel for testing.

- The NMCP developed the new National Malaria Strategic Plan 2021-2025, to update its strategic direction and targets as well as inform resource mobilization for malaria control and prevention. The malaria strategic plan was validated on June 2-3, 2020 by the Ministry

of Health (MOH) and key stakeholders. Liberia has set an ambitious goal to reduce the national malaria prevalence to 11 percent by 2025 (a decrease of 76 percent from the 45 percent of 2016). The new strategic plan will guide Global Fund application development and partner activities going forward.

- In early 2021 Liberia will conduct its third ITN national mass campaign distribution. In cooperation with the New Nets Project, Liberia will be distributing about 2.7 million Interceptor G2 nets. The NMCP and stakeholders have started planning for the mass campaign to begin in March 2021, but with the COVID-19 pandemic, it is likely that the country will experience delays as it concerns distribution.

- Liberia will launch the first community pre-referral program for severe malaria using rectal artesunate. PMI has procured 10,000 artesunate 100mg suppositories for pre-referral treatment of severe malaria in children under five years of age in the community by community health assistants (CHA) in three counties.

- PMI has reached out to the USAID Education Program to identify a mechanism to distribute approximately 100,000 bed nets and provide malaria prevention messages to schools in three counties. This activity will be implemented as a collaborative effort between PMI, NMCP/MOH, Ministry of Education, and Peace Corps Program. The school bed nets distribution is expected to increase the availability and access to bed nets in Liberian households and contribute to the reduction of school absenteeism and malaria prevalence in the community. This activity will start when the schools reopen after COVID-19.

- In 2019, PMI/USAID supported the MOH to conduct county health team (CHT) capacity assessments with the overall goal to determine the CHT systems in place to follow GOL and MOH policies and guidelines for seven domains including finance, human resources, leadership and management, monitoring and evaluation, supply chain, service delivery and operations. The final drafted report was presented to stakeholders and shared for their review.

For more information about the malaria situation, malaria control progress, and intervention-specific data in Liberia, please refer to the FY2020 MOPs posted to pmi.gov.

Annex A. Gap Analysis Tables

Insecticide-treated Mosquito Net (ITN) Gap Analysis			
Calendar Year	**2020**	**2021**	**2022**
Total targeted population [1]	4,461,333	4,555,021	4,650,676
Continuous Distribution Needs			
Channel #1: ANC [2]	223,067	227,751	232,534
Channel #2: EPI or institutional delivery [3]	178,453	182,201	232,534
Channel #3: Institutions (e.g. hospitals, orphanages, military, etc.)	25,000	25,000	26,250
Channel #4: School-based distribution [4]	20,000	0	50,000
Estimated total need for continuous channels	446,520	434,952	541,318
Mass Campaign Distribution Needs			
2021 mass distribution campaign(s) [5]	0	2,400,000	0
Estimated total need for campaigns	0	2,400,000	0
Total ITN Need: Routine and Campaign	**446,520**	**2,834,952**	**541,318**
Partner Contributions			
ITNs carried over from previous year [6]	0	37,480	82,528
ITNs from MOH	0	0	0
ITNs from Global Fund	0	2,400,000	0
ITNs from other donors	0	0	0
ITNs planned with PMI funding	484,000	480,000	460,000
Total ITNs Available	**484,000**	**2,917,480**	**542,528**
Total ITN Surplus (Gap)	**37,480**	**82,528**	**1,210**

[1] National population with a growth rate of 2.1%.
[2] Five percent of the national population pregnant in a given year with 100% ANC coverage.
[3] Five percent of the population under one year of age with 100% of pregnant women delivering in an institution for 2022.
[4] School nets will not be distributed in 2021 because there will be mass campaign ITN distribution.
[5] ITN mass campaign distribution is carried out every three years. The next mass campaign distributions will be conducted in 2021 and 2024.
[6] ITN opening balance as of January 2020 at CMS, may not include remaining campaign nets at the county depots.

Sulfadoxine-Pyrimethamine (SP) Gap Analysis			
Calendar Year	**2020**	**2021**	**2022**
Total population at risk	4,461,333	4,555,021	4,650,676
SP Needs			
Total number of pregnant women [1]	223,067	227,751	232,534
Total SP Need (in treatments) [2]	**613,433**	**706,028**	**720,855**
Partner Contributions			
SP carried over from previous years	176,869	238,436	207,407
SP from Government	0	0	0
SP from Global Fund	0	0	0
SP from other donors	0	0	0
SP planned with PMI funding [3]	675,000	675,000	675,000
Total SP Available	**851,869**	**913,436**	**882,407**
Total SP Surplus (Gap)	**238,436**	**207,407**	**161,552**

[1] The total number of pregnant women is estimated at 5.0% of the total population with a population growth rate of 2.1%.
[2] 95% of the total pregnant women attend ANC1, 90% attend ANC2 and 70% attend ANC3, and 55% attend ANC4 based on HMIS 2018 and adjustments for increases in program targets.
[3] Data Source: 5% increase of all NMCP targets in 2022.

Rapid Diagnostic Test (RDT) Gap Analysis			
Calendar Year	**2020**	**2021**	**2022**
RDT Needs			
Total country population	4,461,333	4,555,021	4,650,676
Population at risk for malaria [1]	4,461,333	4,555,021	4,650,676
PMI-targeted at-risk population	4,461,333	4,555,021	4,650,676
Total number of projected fever cases [2]	2,714,286	2,714,286	2,714,286
Percent of fever cases tested with an RDT [3]	90%	90%	95%
Total RDT Needs	**2,442,857**	**2,442,857**	**2,578,571**
Partner Contributions (to PMI target population if not entire area at risk)*			
RDTs carried over from previous year	1,319,643	743,836	700,979
RDTs from Government	0	0	0
RDTs from Global Fund	0	0	0
RDTs from other donors	0	0	0
RDTs planned with PMI funding	1,867,050	2,400,000	2,500,000
Total RDTs Available	**3,186,693**	**3,143,836**	**3,200,979**
Total RDT Surplus (Gap)	**743,836**	**700,979**	**622,407**

[1] Total population at risk (100%) as assumed during the 2018 National Quantification.
[2] Data Source: Revised July 2019 National Malaria Commodities Quantification by the NMCP. Estimated 1.9 million cases from HMIS and a 70% test positivity rate.
[3] The assumption of 95% of total malaria cases tested with RDT in 2022.

Artemisinin-based Combination Therapy (ACT) Gap Analysis			
Calendar Year	**2020**	**2021**	**2022**
ACT Needs			
Total country population	4,461,333	4,555,021	4,650,676
Population at risk for malaria [1]	4,461,333	4,555,021	4,650,676
PMI-targeted at-risk population	4,461,333	4,555,021	4,650,676
Total projected number of malaria cases [2]	1,900,000	1,900,000	1,900,000
Projected malaria cases received ACTs [3]	1,710,000	1,710,000	1,805,000
Total ACT Needs [4,5]	**1,710,000**	**1,710,000**	**1,805,000**
Partner Contributions (to PMI target population if not entire area at risk)			
ACTs carried over from previous year	1,203,835	1,558,165	1,506,865
ACTs from Government	0	0	0
ACTs from Global Fund [6]	663,480	663,480	0
ACTs from other donors	0	0	0
ACTs planned with PMI funding	1,400,850	995,220	1,464,000
Total ACTs Available	**3,268,165**	**3,216,865**	**2,970,865**
Total ACT Surplus (Gap)	**1,558,165**	**1,506,865**	**1,165,865**

[1] Total population at risk for malaria, 2008 population census, 2.1% population growth rate, 100% at risk.
[2] Data Source: Revised July 2019 National Malaria Commodities Quantification by the NMCP. Estimated 1.9 million cases from HMIS.
[3] Assume 95% of the malaria cases receive treatment with ACTs in 2022 per NMCP guidance.
[4] ALu (all presentations) forecasted by proportion for uncomplicated malaria treatment. 15% (2019), 40% (2020), 40% (2021) and 40% (2022).
[5] ASAQ (all presentation) forecasted by proportion for uncomplicated malaria treatment. 85% (2019), 60% (2020), 60% (2021) and 60% (2022).
[6] Assume Global Fund will procure 40-50% of the need in 2022.

Injectable Artesunate Gap Analysis			
Calendar Year	**2020**	**2021**	**2022**
Injectable Artesunate Needs			
Projected number of severe cases [1]	119,700	119,700	90,250
Projected # of severe cases among children [1]	83,790	83,790	63,175
Projected # of severe cases among adults [1]	35,910	35,910	27,075
Total Injectable Artesunate vials Needs [2]	**187,390**	**211,570**	**159,517**
Partner Contributions			
Injectable artesunate vials carried over from previous year	117,251	77,861	48,291
Injectable artesunate vials from Government [3]	48,000	0	0
Injectable artesunate vials from Global Fund [3]	0	0	0
Injectable artesunate vials from other donors	0	0	0
Injectable artesunate vials planned with PMI funding	100,000	182,000	150,000
Total Injectable Artesunate vials Available	**265,251**	**259,861**	**198,291**
Total Injectable Artesunate vials Surplus (Gap)	**77,861**	**48,291**	**38,774**

[1] NMCP quantification propotion of severe malaria cases reported 8% (2019), 7% (2020), 7% (2021) and 5% (2022) of the total malaria cases reported treated. 40% of severe malaria cases <10kg, 30% are 11-25kg, 15% are 26-60kg, and 15% are 61+kg. Therefore, 70% included in the line for chidren.

[2] Number of vials needed based on the national quantification (NMCP) 2019. 15% (2019), 31% (2020), 35% (2021) and 35% maintained for (2022) of projected severe malaria cases will be treated with artesunate injectable. Dosage: 5-10kg: 4 vials (40%); 11-25kg: 4 vials (30%); 26-60kg: 6 vials (15%); 61kg+: 9 vials (15%).

[3] Global Fund and Government of Liberia contributions for 2021 and 2022 unknown at this time. PMI will revise its procurements accordingly.

Rectal Artesunate Suppository (RAS) Gap Analysis			
Calendar Year	**2020**	**2021**	**2022**
Artesunate Suppository Needs			
Number of severe cases expected to require pre-referral dose at community level [1]	n/a	n/a	n/a
Total Artesunate Suppository Needs [2]	**10,000**	**10,000**	**10,500**
Partner Contributions			
Artesunate suppositories carried over from previous year	0	0	0
Artesunate suppositories from Government	0	0	0
Artesunate suppositories from Global Fund	0	0	0
Artesunate suppositories from other donors	0	0	0
Artesunate suppositories planned with PMI funding	10,000	10,000	10,500
Total Artesunate Suppositories Available	**10,000**	**10,000**	**10,500**
Total Artesunate Suppositories Surplus (Gap)	**0**	**0**	**0**

[1] NMCP quantification did not include artesunate suppository. There is no service data for this product yet. Rectal artesunate will be implemented through the National Community Health Assistant (NCHA) program. The NCHA program has a structure in place to roll out rectal artesunate. Job aides on rectal artesunate usage have been developed and all Community Health Assistants (CHAs) have been trained on the use of rectal artesunate.

[2] Number of suppository needs increased by 5% for 2022 based on NMCP guidance.