

# PMI

# U.S. PRESIDENT'S MALARIA INITIATIVE

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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.

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## MALI

### 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 Mali to end malaria. PMI has been a proud partner of Mali since 2006, helping to decrease child death rates by 47 percent through investments totaling almost \$320 million.

The proposed PMI fiscal year (FY) 2021 planning budget for Mali is \$24 million. This Malaria Operational Plan (MOP) summary outlines planned PMI activities in Mali for FY 2021. See accompanying **FY 2021 Budget Tables** (Tables 1 and 2) for activities and budget amounts, available on [pmi.gov](http://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 country context and health system. Proposed PMI investments support and build on those made by the Government of Mali 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 Mali program. See **MOP FY 2020 Mali, Annex B: Program Inventory**. The activities proposed in this MOP are tailored to draw on strengths and foster improvements.

Since the FY 2020 MOP was developed, no new data, updated policy and/or strategic priorities relevant for the FY 2021 MOP have become available.

For more information about the malaria situation, malaria control progress, and intervention-specific data please refer to the FY 2020 MOPs available on [pmi.gov](http://pmi.gov).

# **Annex A. Gap Analysis Tables**

<b>Insecticide-treated Mosquito Net (ITN) Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Total targeted population <sup>1</sup>	20,251,000	20,838,279	21,442,589
<b>Continuous Distribution Needs</b>			
Channel #1: ANC <sup>2</sup>	847,504	903,339	964,917
Channel #2: EPI <sup>3</sup>	807,407	830,822	854,916
<i>Estimated total need for continuous distribution (morbidity method)</i>	<i>1,654,912</i>	<i>1,734,162</i>	<i>1,819,833</i>
<i>Estimated total need for continuous distribution (consumption method)<sup>4</sup></i>	<i>1,375,430</i>	<i>1,444,201</i>	<i>1,516,411</i>
<b>Mass Campaign Distribution Needs <sup>5</sup></b>			
2019/2020/2021 mass distribution campaign(s)	7,856,689	0	0
<i>Estimated total need for campaigns</i>	<i>7,856,689</i>	<i>0</i>	<i>0</i>
<b>Total ITN Need: Routine and Campaign</b>	<b>9,232,119</b>	<b>1,444,201</b>	<b>1,516,411</b>
<b>Partner Contributions</b>			
ITNs carried over from previous year	1,226,166	2,128,938	2,369,737
ITNs from Ministry of Health (MOH)	600,000	200,000	200,000
ITNs from Global Fund	7,856,691	0	0
ITNs from other donors	0	0	0
ITNs planned with PMI funding <sup>6</sup>	1,678,200	1,485,000	1,290,742
<b>Total ITNs Available</b>	<b>11,361,057</b>	<b>3,813,938</b>	<b>3,860,479</b>
<b>Total ITN Surplus (Gap)</b>	<b>2,128,938</b>	<b>2,369,737</b>	<b>2,344,068</b>

<sup>1</sup> General population is coming from 2009 projections by INSTAT/DNP.

<sup>2</sup> Expected number of pregnant women is 5% of general population. Percentage of pregnant women attending ANC1 is 83.7% (2020), 86.7% (2021), and 90% (2022).

<sup>3</sup> Children < 1 year of age represent 4.43% of general population. Immunization coverage is 90%.

<sup>4</sup> The malaria quantification technical working group decided to use the consumption method for the forecast of ITNs for continuous distribution rather than the morbidity/demographic method. The forecast was based on approximately 5% increase each year from the consumption in 2018.

<sup>5</sup> According to NMCP strategic plan, the plan for the mass campaign is as follows: 2020 (Mopti, Kayes, Koulikoro, Sikasso). No campaigns in 2021 or 2022. The number of ITNs is estimated by dividing the population by 1.8. Then, a buffer of 10% is applied to get the total needs for campaign.

<sup>6</sup> PMI contributions: In 2020, the data is the sum of procurement in 2019 but will arrive in 2020 and the planned quantity in MOP FY 2019; the data for 2021 is the projected quantity to be procured. The data for 2022 is the same as 2021 projected quantity to be procured.

<b>Sulfadoxine-Pyrimethamine (SP) Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Total population at risk	20,251,000	20,838,279	21,442,589
<b>SP Needs</b>			
Total number of pregnant women <sup>1</sup>	1,012,550	1,041,914	1,072,129
<b>Total SP Need (in treatments) <sup>2</sup> (statistic services method)</b>	<b>1,744,489</b>	<b>1,978,843</b>	<b>2,209,659</b>
<b>Total SP Need (in treatments) <sup>3</sup> (consumption method)</b>	<b>1,313,589</b>	<b>1,333,293</b>	<b>1,353,293</b>
<b>Partner Contributions</b>			
SP carried over from previous years	285,620	1,204,493	1,297,865
SP from Government	677,130	300,000	300,000
SP from Global Fund	0	0	0
SP from other donors	0	0	0
SP planned with PMI funding	1,555,332	1,126,666	1,126,666
<b>Total SP Available</b>	<b>2,518,082</b>	<b>2,631,159</b>	<b>2,724,531</b>
<b>Total SP Surplus (Gap)</b>	<b>1,204,493</b>	<b>1,297,865</b>	<b>1,371,238</b>

<sup>1</sup> The total number of pregnant women is estimated at 5% of the total population. General population is sourced from 2009 projections by INSTAT/DNP.

<sup>2</sup> The number of treatments is based on the percentage of pregnant women who received the number of SP doses.

<sup>3</sup> The forecasted need for SP is based on consumption method, which is based on 2018 consumption with 1.5% increase per year.

<b>Seasonal Malaria Chemoprevention (SMC) Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Total targeted population <sup>1</sup>	20,251,000	20,838,279	21,442,589
<b>SMC drug (SP+AQ) Needs</b>			
Population targeted for SMC (3-59 months, national) <sup>2</sup>	3,179,306	3,271,506	3,366,380
PMI pop targeted for SMC (3-59 months) <sup>7</sup>	860,924	887,550	915,000
Non-PMI pop targeted for SMC (3-59 months)	2,318,382	2,383,956	2,451,380
PMI-targeted population for SMC (5-10 years) <sup>8</sup>	235,225	242,500	250,000
PMI-targeted population for SMC (3 months to 10 years) <sup>3</sup>	1,096,149	1,130,050	1,165,000
<b>Total SP+AQ Needs <sup>4</sup></b>	<b>16,576,421</b>	<b>17,062,126</b>	<b>17,562,072</b>
<b>Partner Contributions (to PMI target population if not entire area at risk)</b>			
SP+AQ carried over from previous year	1,650,409	0	0
SP+AQ from Government	394,471	4,232,014	4,232,014
SP+AQ from Global Fund	3,491,752	5,723,150	5,723,150
SP+AQ from Other Donors: World Bank	5,541,719	0	0
SP+AQ planned with PMI funding <sup>5</sup>	4,980,035	6,780,000	6,776,000
<b>Total SP+AQ Available</b>	<b>16,058,386</b>	<b>16,735,164</b>	<b>16,731,164</b>
<b>Total SP+AQ Surplus (Gap) <sup>6</sup></b>	<b>-518,036</b>	<b>-326,962</b>	<b>-830,908</b>

<sup>1</sup> General population is coming from 2009 projections by INSTAT/DNP.

<sup>2</sup> National target population: children < 5 years of age represent 17% of population, infants below 3 months of age represent 7.65% of children < 5 years. SMC targets children 3 months to 5 years.

<sup>3</sup> PMI target includes children from 3 months to 10 years in 2020, 2021, and 2022. For 2022, this includes 915,000 <5 children and 250,000 children 5-10 years.

<sup>4</sup> The SMC coverage rate is estimated at 100% of the children 3 months to 5 years; Each child will receive 4 doses during the campaign (July, August, September, and October). A buffer of 10% was applied to the number of doses requested to determine the total needs for SMC products. The needs are for the entire country, including the PMI-targeted districts.

<sup>5</sup> PMI contribution in 2020 is based on actual procurement, and future years are based on projections. Quantity for PMI-supported districts includes 4 rounds and 10% buffer.

<sup>6</sup> We have a surplus of SP-AQ which will help to prevent a stockout in case the Government does not procure their share.

<sup>7</sup> Dosages for children < 5 years (one round): children 3-11 months is 1 blister of 250/12.5 mg; children 12-59 months is 1 blister of 500/25/mg

<sup>8</sup> Dosages for children 5-10 years (one round): children 5-7 years is 1 blister of 250/12.5 mg + 1 blister of 500/25 mg; children 8-10 years is 1 blister of 250/12.5 mg +2 blisters of 500/25 mg.

<b>Rapid Diagnostic Test (RDT) Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>RDT Needs</b>			
Total country population	20,251,000	20,838,279	21,442,589
Population at risk for malaria <sup>1</sup>	20,251,000	20,838,279	21,442,589
PMI-targeted at-risk population	20,251,000	20,838,279	21,442,589
Total number of projected fever cases <sup>2</sup>	5,941,897	6,404,535	6,566,040
Percent of fever cases tested with an RDT	82.88%	82.88%	82.88%
<b>Total RDT Needs (<i>morbidity method</i>)</b>	<b>4,924,763</b>	<b>5,308,206</b>	<b>5,442,065</b>
<b>Total RDT Needs <sup>3</sup> (<i>consumption method</i>)</b>	<b>5,177,441</b>	<b>6,471,802</b>	<b>6,471,802</b>
<b>Partner Contributions (to PMI target population if not entire area at risk)*</b>			
RDTs carried over from previous year	230,925	2,636,209	1,964,407
RDTs from Government	2,695,400	2,000,000	2,000,000
RDTs from Global Fund	0	0	0
RDTs from other donors: World Bank	1,087,325	0	0
RDTs planned with PMI funding	3,800,000	3,800,000	3,500,000
<b>Total RDTs Available</b>	<b>7,813,650</b>	<b>8,436,209</b>	<b>7,464,407</b>
<b>Total RDT Surplus (Gap)<sup>4</sup></b>	<b>2,636,209</b>	<b>1,964,407</b>	<b>992,605</b>

<sup>1</sup> General population is sourced from 2009 projections by INSTAT/DNP. 100% of general population is at risk.

<sup>2</sup> The number of fever cases was counted at health facility and community level.

<sup>3</sup> The needs were estimated using the consumption method. The increase/regression rate was calculated during the quantification workshop by comparing actual consumption for the same quarter in subsequent years to take into account seasonality. The progression rates varied between 18% and 55% between July 2017 and June 2019. The quantification committee built the consensus of using 25% annual increase rate to estimate the needs for 2020-2022.

<sup>4</sup> There is a surplus of RDTs which will help to prevent a stockout in case the Government does not procure their share.

<b>Artemisinin-based Combination Therapy (ACT) Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>ACT Needs</b>			
Total country population	20,251,000	20,838,279	21,442,589
Population at risk for malaria	20,251,000	20,838,279	21,442,589
PMI-targeted at-risk population <sup>1</sup>	20,251,000	20,838,279	21,442,589
Total projected number of malaria cases <sup>2</sup>	3,774,462	3,827,073	3,726,600
<b>Total ACT Needs <sup>3</sup> (<i>morbidity/demographic method</i>)</b>	<b>2,904,062</b>	<b>3,073,873</b>	<b>2,993,174</b>
<b>Total ACT Needs (<i>consumption method</i>)</b>	<b>3,171,062</b>	<b>3,386,221</b>	<b>3,724,843</b>
<b>Partner Contributions (to PMI target population if not entire area at risk) <sup>1</sup></b>			
ACTs carried over from previous year	2,500,470	3,421,778	5,113,490
ACTs from Government	1,909,500	1,691,520	1,691,520
ACTs from Global Fund	1,182,870	1,386,414	1,386,414
ACTs from other donors	0	0	0
ACTs planned with PMI funding	1,000,000	2,000,000	1,678,500
<b>Total ACTs Available</b>	<b>6,592,840</b>	<b>8,499,712</b>	<b>9,869,924</b>
<b>Total ACT Surplus (Gap) <sup>4</sup></b>	<b>3,421,778</b>	<b>5,113,490</b>	<b>6,145,081</b>

<sup>1</sup> General population is sourced from 2009 projections by INSTAT/DNP. 100% of general population is at risk.

<sup>2</sup> The number of malaria cases was estimated based on the percentage of RDT and microscopy positive, in addition to clinical cases.

<sup>3</sup> The needs were estimated using the consumption method. The increase/regression rate was calculated during the quantification workshop by comparing actual consumption for the same quarter in subsequent years to take account the seasonality. The increase/decrease rates for ALs are: AL6: +10%; AL12: -2%; AL18: +10%; and AL24: +9% for estimating the needs for 2019-2021.

<sup>4</sup> There is a surplus of ACTs which will help to prevent a stockout in case the Government does not procure their share.

<b>Injectable Artesunate Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Injectable Artesunate Needs</b>			
Projected # of severe cases <sup>1</sup> (children < 5 years and pregnant women)	487,011	493,799	480,835
Projected # of severe cases among children (children < 5 years)	426,053	431,992	420,651
Projected # of severe cases among adults (pregnant women)	60,958	61,807	60,185
<b>Total Injectable Artesunate Vials Needs (morbidity/demographic method)</b>	<b>731,491</b>	<b>741,687</b>	<b>722,215</b>
<b>Total Injectable Artesunate Vials Needs <sup>2</sup> (service statistics method)</b>	<b>1,577,101</b>	<b>1,621,260</b>	<b>1,666,655</b>
<b>Partner Contributions</b>			
Injectable vials carried over from previous year	532,146	0	455,964
Injectable vials from Government	500,000	1,468,700	1,468,700
Injectable vials from Global Fund	379,034	448,524	448,524
Injectable vials from other donors	0	0	0
Injectable vials planned with PMI funding	160,000	160,000	160,000
<b>Total Injectable Artesunate Vials Available</b>	<b>1,571,180</b>	<b>2,077,224</b>	<b>2,533,188</b>
<b>Total Injectable Artesunate Vials Surplus (Gap) <sup>3</sup></b>	<b>-5,921</b>	<b>455,964</b>	<b>866,533</b>

<sup>1</sup> According to national policy, severe malaria drugs are only provided free of charge for children under 5 years of age and pregnant women.

<sup>2</sup> Number of vials needed was based on service statistic data collected from DHIS2 (HMIS).

<sup>3</sup> In 2020, the Government of Mali (GOM) was supposed to procure 1,468,700 vials according to the national supply plan for malaria, but they only procured 500,000 vials leading to a negative balance as end of 2020. We kept the 1,468,700 vials for 2021 and 2022 to keep at least a balance of 3 and 6 months of stock at end of the year 2021 and 2022, respectively.

<b>Artesunate Suppository Gap Analysis</b>			
<b>Calendar Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Artesunate Suppository Needs</b>			
Number of severe cases expected to require pre-referral dose at community level <sup>1</sup>	84,801	72,487	70,584
<b>Total Artesunate Suppository Needs <sup>2</sup></b>	<b>124,176</b>	<b>106,143</b>	<b>103,357</b>
<b>Partner Contributions</b>			
Artesunate suppositories carried over from previous year	15,279	17,051	68,351
Artesunate suppositories from Government	94,736	124,327	124,327
Artesunate suppositories from Global Fund	31,212	33,116	33,116
Artesunate suppositories from other donors	0	0	0
Artesunate suppositories planned with PMI funding	0	0	0
<b>Total Artesunate Suppositories Available</b>	<b>141,227</b>	<b>174,494</b>	<b>225,794</b>
<b>Total Artesunate Suppositories Surplus (Gap)</b>	<b>17,051</b>	<b>68,351</b>	<b>122,437</b>

<sup>1</sup> Percentage of malaria cases expected to be severe malaria for 2020, 2021, and 2022 are 21.86%, 21.86%, and 18.43%, respectively. 10.28% of malaria cases are expected to be diagnosed by CHWs.

<sup>2</sup> Number of artesunate suppositories for each case is based on age: 1 suppository for 0-3 years of age; 2 suppositories for 4-5 years of age.