

The following document is an abbreviated malaria operational plan. The principles guiding development of this document—country-led, inclusive, consultative with a broad audience, and transparent—are consistent with best practices that the U.S. President’s Malaria Initiative (PMI) has instituted since its inception. While an in-depth background of malaria in this country can be found in the detailed [FY 2018 malaria operational plan](#) on [pmi.gov](#), this abbreviated document provides a high-level overview of PMI’s program in this country, including key strategic updates, country data and progress updates, and a detailed list of activities to be supported with FY 2019 U.S. Government PMI funding.

This abbreviated malaria operational plan has been approved by the U.S. Global Malaria Coordinator and reflects collaborative discussions with the national malaria control programs and partners in country. The final funding available to support the plan outlined here is pending final FY 2019 appropriation. If any further changes are made to this plan it will be reflected in a revised posting.



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PRESIDENT'S MALARIA INITIATIVE

GUINEA

Abbreviated Malaria Operational Plan FY 2019

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ABBREVIATIONS and ACRONYMS

ACT	Artemisinin-based combination therapy
AL	Artemether-lumefantrine
AS/AQ	Artesunate-amodiaquine
DHIS2	District Health Information System 2
DHS	Demographic and Health Survey
DQA	Data quality assessment
EUV	End-use verification survey
FY	Fiscal year
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
HMIS	Health management information system
IPTp	Intermittent preventive treatment of malaria during pregnancy
IRS	Indoor residual spraying
ITN	Insecticide-treated mosquito net
LLIN	Long-lasting insecticide-treated mosquito net
LSHTM	London School of Hygiene and Tropical Medicine
MIS	Malaria indicator survey
MoH	Ministry of Health
MOP	Malaria Operational Plan
NMCP	National Malaria Control Program
OR	Operational research
PCG	Central Pharmacy of Guinea
PMI	President's Malaria Initiative
RA	Resident Advisor
RDT	Rapid diagnostic test
RMIS	Routine management information system
SMC	Seasonal malaria chemoprevention
SM&E	Surveillance, monitoring, and evaluation
TA	Technical assistance
TPR	Test positivity rate
WHO	World Health Organization

I. INTRODUCTION

This abbreviated fiscal year (FY) 2019 Malaria Operational Plan (MOP) presents an implementation plan for Guinea, based on the strategies of the President's Malaria Initiative (PMI) and the National Malaria Control Program (NMCP) and building on investments made by PMI and other partners to improve and expand malaria-related services. It was developed in consultation with the NMCP and with the participation of national and international partners involved in malaria prevention and control in the country. The [FY 2018 MOP](#) contains a more detailed and comprehensive description of the malaria situation in Guinea, country health system delivery structure, Ministry of Health (MoH) organization, and PMI's progress through April/May of 2017. This abbreviated MOP describes critical changes/updates to overall NMCP and PMI strategic approaches, as well as newly proposed activities under each technical area to be supported with FY 2019 funds.

II. OVERVIEW OF PMI IN GUINEA

Guinea began implementation as a PMI focus country in FY 2011. The proposed FY 2019 PMI budget for Guinea is \$14 million. Apart from the national level support to the NMCP, PMI supports malaria prevention and control activities in 14 out of the 33 prefectures in Guinea as well as the 5 communes of Conakry while the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) supports these activities in the remaining 19 prefectures.

PMI and the Global Fund work collaboratively to support the NMCP priorities identified in the National Strategic Plan 2018-2022. An annual gap analysis is used as the basis for a joint action plan. Both donors use the same materials and tools, and collaborate on a number of activities including the development of policies and guidelines as detailed in the FY 2018 MOP.

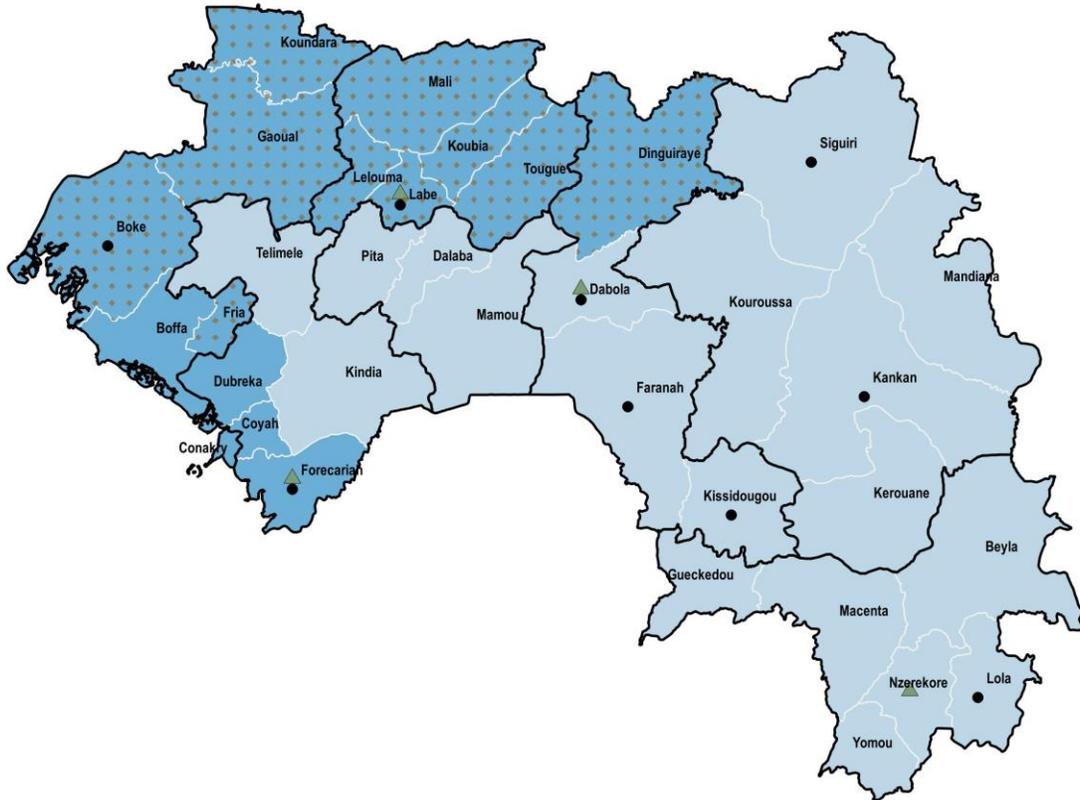
The main interventions described in the National Strategic Plan include:

- i) Vector control (distribution of long-lasting insecticide-treated mosquito nets (LLINs) through mass campaigns and continuous distribution channels);
- ii) Indoor residual spraying (IRS);
- iii) Larviciding;
- iv) Targeted prevention interventions (intermittent preventive treatment of malaria during pregnancy (IPTp) and seasonal malaria chemoprevention (SMC));
- v) Ensure laboratory confirmation by rapid-diagnostic test (RDT) or microscopy for all suspected cases of malaria and proper management of all confirmed cases in health facilities and in the community;
- vi) Strengthening pharmaceutical management, including improved quantification, storage and distribution, logistics information system, pharmacovigilance, and quality control, as well as strengthening the Central Pharmacy of Guinea (PCG);
- vii) Behavior change communication including interpersonal communication, mass media, advocacy and social mobilization;
- viii) Strengthen surveillance, monitoring, and evaluation (SM&E) at all levels for the collection and analysis of high quality data to inform decision-making; and
- ix) Improved program management at the national, regional, and district levels and strengthened partnership.

All the above interventions are supported by both PMI and the Global Fund except larviciding and pharmacovigilance which do not receive any support and IRS, which is supported by mining

companies in two districts (Sigiri in upper Guinea and Lola in forest Guinea) targeting about 25,925 structures.

Figure 1: Geographic Distribution of FY 2019 PMI-Supported Activities



FY 2019 PMI-Supported Activities

- Nationwide support: Procure malaria-related commodities and strengthen diagnostics and pharmaceutical management. Central-level support to strengthen NMCP management.
- Focused support: Above-listed activities + strengthen malaria-related service delivery in health facilities and communities, warehousing and distribution, and routine surveillance; and support for malaria focal points.
- Seasonal malaria chemoprevention
- Therapeutic efficacy monitoring
- Entomological monitoring
- Regional boundary (prefecture-level boundaries are outlined in white)

III. STRATEGY UPDATES

As described in the FY 2018 MOP, the primary goal of the National Malaria Strategic plan 2018-2022 is to move the country towards pre-elimination by reducing malaria-related morbidity and mortality by 75% compared to 2016 levels. The objectives of this plan are:

- i) Protect at least 90% of the population with effective preventive interventions for malaria;
- ii) Ensure correct and prompt treatment of at least 90% of malaria cases; and
- iii) Strengthen capacity in management, partnership, coordination, communication and monitoring and evaluation of the National Malaria Control Program at all levels.

PMI supports all of these objectives.

A few key updates relevant to malaria programming include:

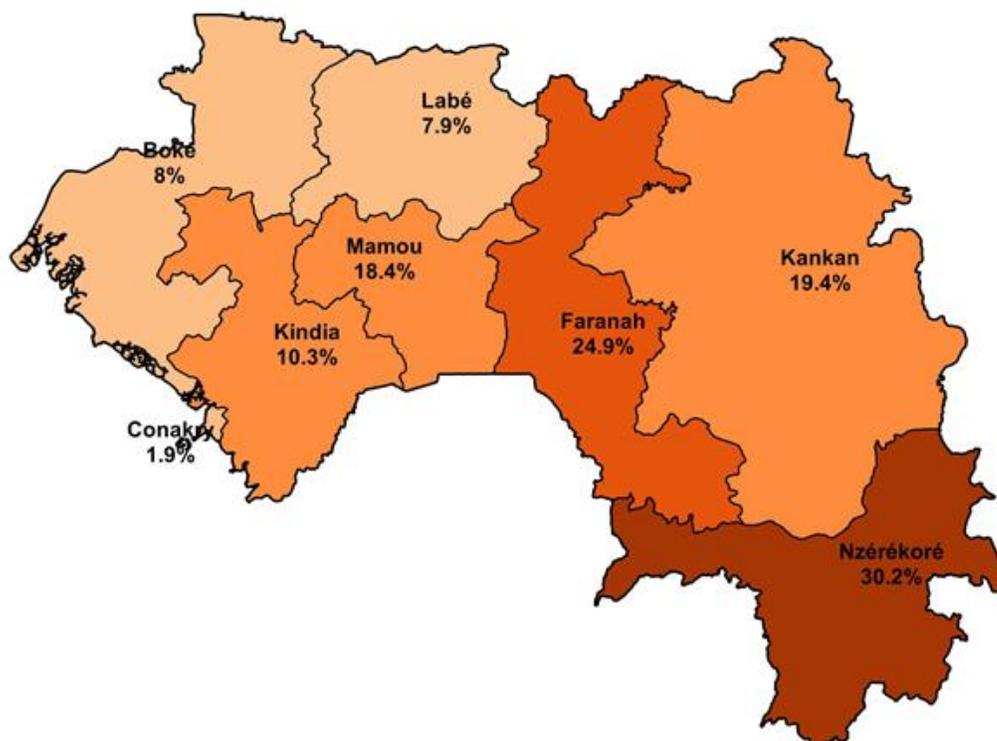
- i. The NMCP is considering revisions to the existing SMC strategy based on evidence from current implementation which may include increasing the coverage period from four to five months in selected districts with extended rainy seasons and extending the eligibility age to ten years. Current World Health Organization (WHO) recommendations for SMC are limited to four months of implementation in children age 3-59 months. PMI supports WHO-approved malaria interventions.
- ii. A recent restructuring of the MoH resulted in the change of position of senior staff to different directorates and programs. This change has affected the NMCP leadership leaving the position of the Deputy Coordinator vacant for an extended period time and thereby creating uncertainty and potential for delayed activity implementation.
- iii. The prevailing security situation calls for concern. Over the years, Guinea has experienced civil and political unrest; this situation has escalated in the last six months with sporadic street protests that have not only paralyzed daily operations in Conakry but also in other prefectures at varying scales. This situation also needs to be closely monitored as it may prevail until the next presidential election planned for 2020 and as it could impact successful implementation of the SMC activities planned for July-October 2018, the mass LLIN campaign in 2019, as well as other routine malaria activities and access to healthcare by the population depending on the scale of the violence.

IV. DATA UPDATES AND EVIDENCE OF PROGRESS

The MoH has put substantial effort into the rollout of the District Health Information System 2 (DHIS2) platform for collection and management of the health management information system (HMIS). There is a clear goal of having all disease program data integrated on this one platform and much progress has been made in standardization of indicators and data collection tools. As of February 2018, 80% of health facilities were reporting into the HMIS. The SM&E team at the NMCP and the prefectural malaria focal points have been trained on the DHIS2 system. The NMCP is involved in this process of evaluating the consistency and concordance of the two systems and has developed a transition roadmap with a plan to complete transition from the Routine Management Information System (RMIS) to the HMIS by December 2018. PMI has supported supportive supervision with the NMCP SM&E team aimed at further improving the reporting rates and quality of the HMIS data. As the NMCP's monthly malaria reporting system continues to report very high levels of district-level and facility-level completeness, NMCP is committed to maintaining this parallel system until the malaria data, available through the integrated HMIS, can be confirmed to be reliable, accessible and of good quality. Until this time, there is still a need for continued technical assistance (TA) for systems maintenance and support for training and

refresher training on data collection and reporting, monthly data review meetings at the prefecture level with the head of health centers as well as supervision.

Figure 2: Parasite Prevalence by Region, 2016



Malaria Parasite Prevalence by Microscopy in Children 6-59 Months Old (Source: 2016 MICS-Palu)

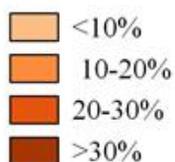


Table 1: Evolution of Key Survey-Based Malaria Indicators in Guinea from 2012 to 2017

Indicator	2012, DHS	2016, MICS
% Households with at least one ITN	47%	84%
% Population with access to an ITN	25%	69%
% Children under five who slept under an ITN the previous night	26%	68%
% Pregnant women who slept under an ITN the previous night	28%	70%
% Population that slept under an ITN the previous night	19%	64%
% Children under five years old with fever in the last two weeks for whom advice or treatment was sought	37%	42%
% Children under five with fever in the last two weeks who had a finger or heel stick	9%	17%
% Children receiving an ACT among children under five years old with fever in the last two weeks who received any antimalarial drugs	5%	17%
% Women who received two or more doses of IPTp during their last pregnancy in the last two years	22%	49%
% Women who received three or more doses of IPTp during their last pregnancy in the last two years	11%	30%
Under-five mortality rate per 1,000 live births	123	88
% Children under five with parasitemia (by microscopy , if done)	44%	15%
% Children under five with parasitemia (by RDT , if done)	47%	30%

Table 2: Evolution of Key Malaria Indicators Reported through Routine Surveillance Systems in Guinea from 2012 to 2017

	2012	2013	2014	2015	2016	2017
Total # Cases (Confirmed and Presumed) ¹	*	245720	654328	924721	995320	1335208
# Confirmed Cases ²	*	230960	654328	897232	995320	1335208
# Presumed Cases ³	*	-	-	-	-	-
Total # <5 Cases ⁴	*	78013	233170	328444	372116	501175
Total # Malaria Deaths ⁵	*	170	1066	847	867	1162
Data Completeness (%) ⁶	*	30%	88%	96%	99%	100%
Test Positivity Rate (TPR) ⁷	*	83%	71%	70%	66%	63%

¹Total # cases: Total number of reported malaria cases. All ages, outpatient, inpatient, confirmed and unconfirmed cases.

²# confirmed cases: Total diagnostically confirmed cases. All ages, outpatient, inpatient.

³# presumed cases: data element is not available in routine malaria information system.

⁴Total #<5 cases: Total number of <5 cases. Outpatient, inpatient, confirmed, and unconfirmed.

⁵Total # Malaria Deaths Reported: All ages, outpatient, inpatient, confirmed, and unconfirmed

⁶Data completeness: Number of monthly reports received from health facilities/Number of health facility reports expected (i.e., number of facilities expected to report multiplied by the number of months considered)

⁷Test Positivity Rate (TPR): Number of confirmed cases (#2 above)/Number patients receiving a diagnostic test for malaria (RDT or microscopy)

*Data not available

Figures 3 and 4: Trends in Key Malaria Indicators Reported in Routine Surveillance Systems

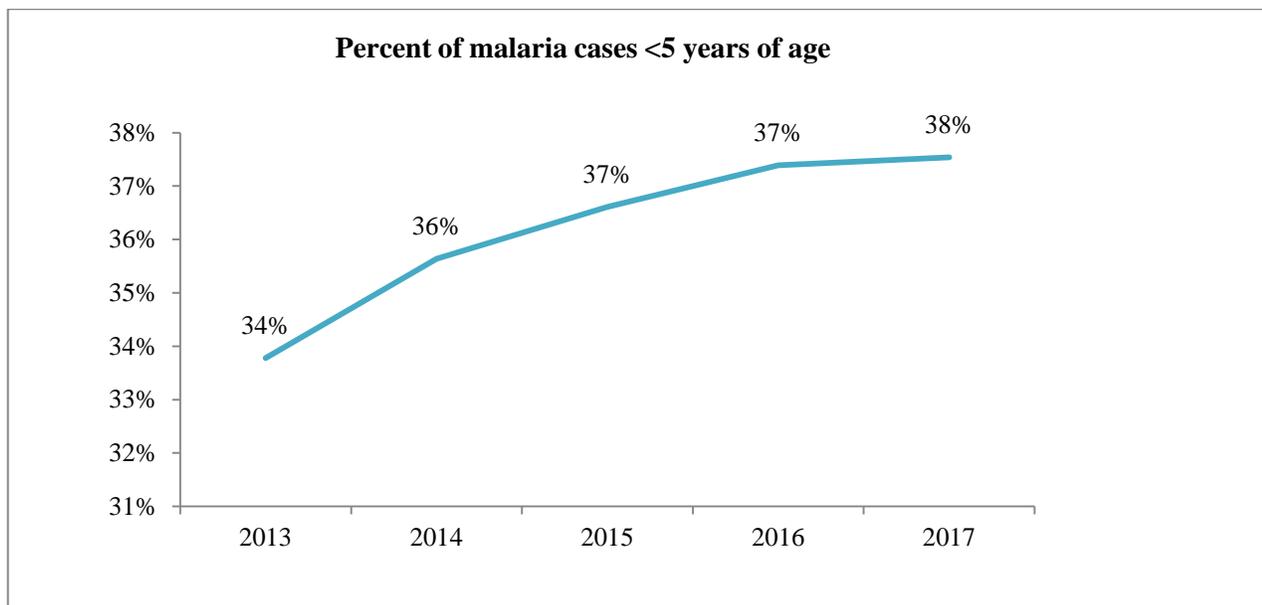
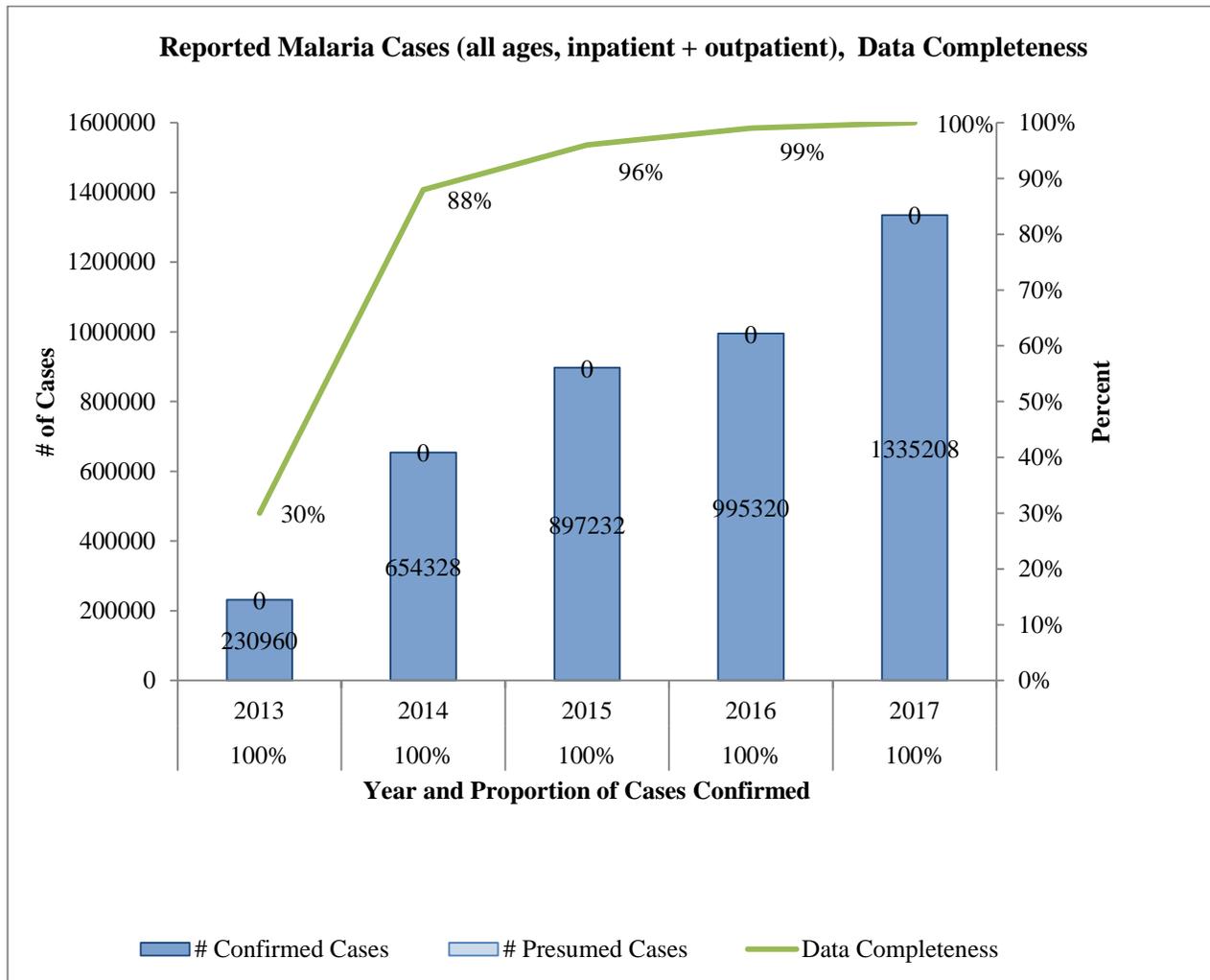
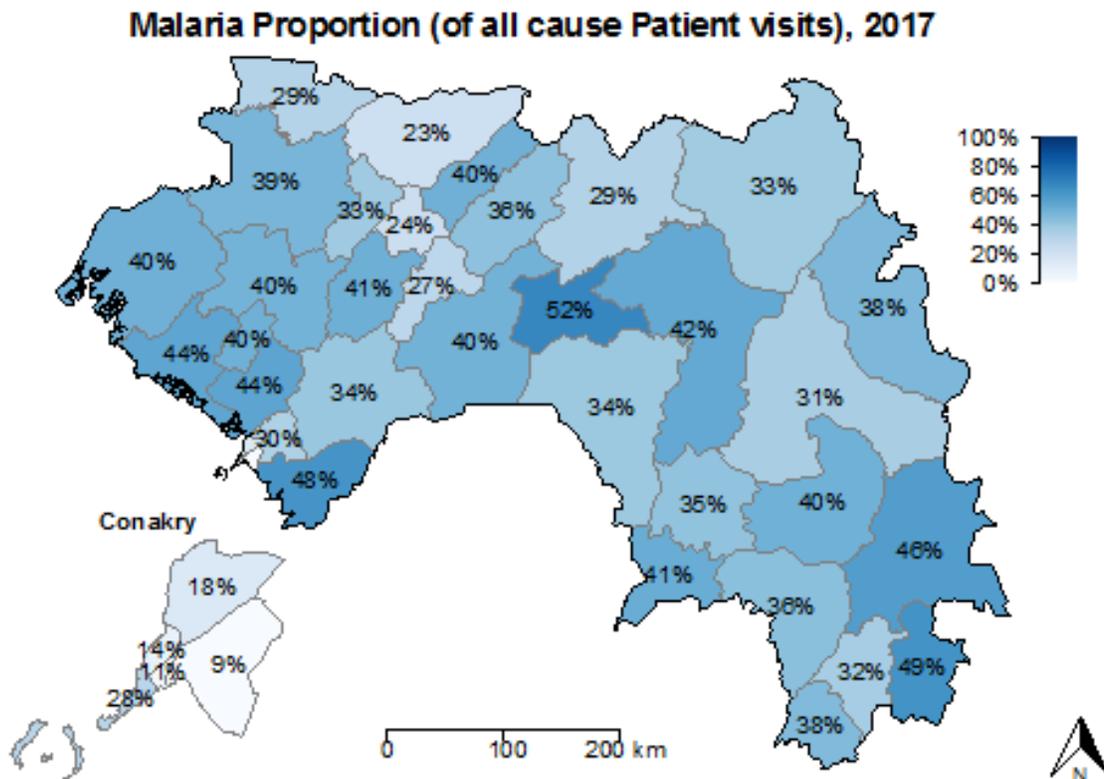
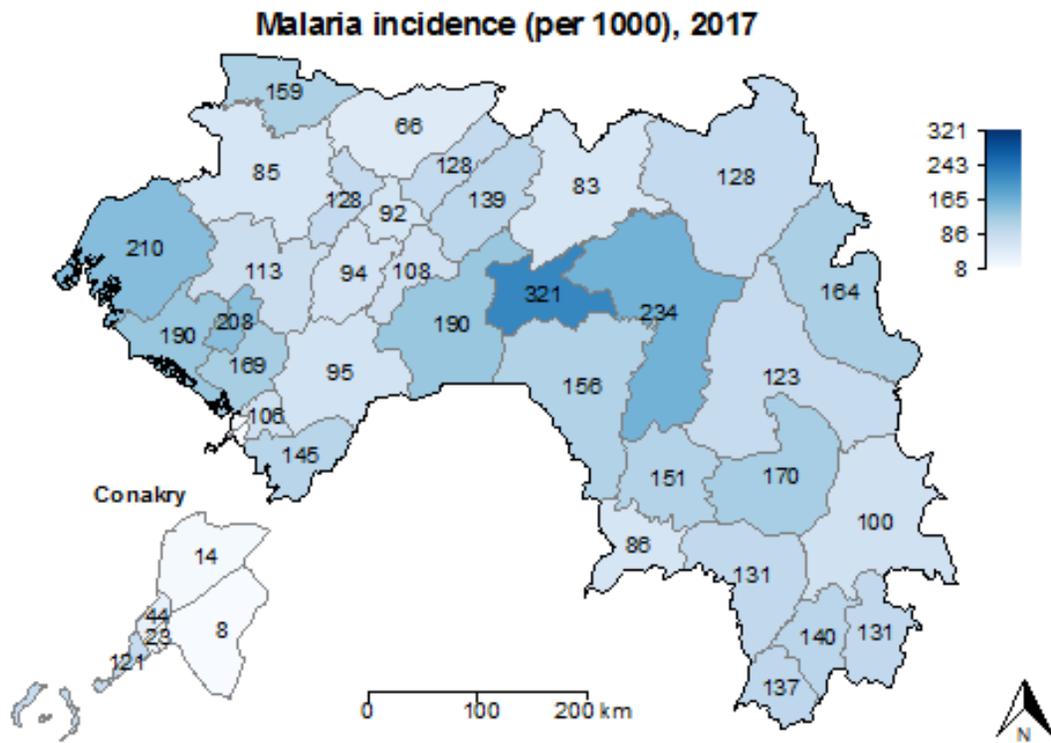


Figure 5: Malaria Incidence (per 1000 population*) by District



*District population estimates based on catchment areas as reported by health facilities

V. NEW OR EXPANDED ACTIVITIES AND KEY CHANGES

1. Vector control

a. Entomologic monitoring and insecticide resistance management

No new activities or significant changes are proposed.

b. Insecticide-treated nets

Depending on the results of the current pilot, school-based distribution may be scaled up as part of the continuous bed nets distribution strategy.

c. Indoor residual spraying

N/A.

2. Malaria in pregnancy

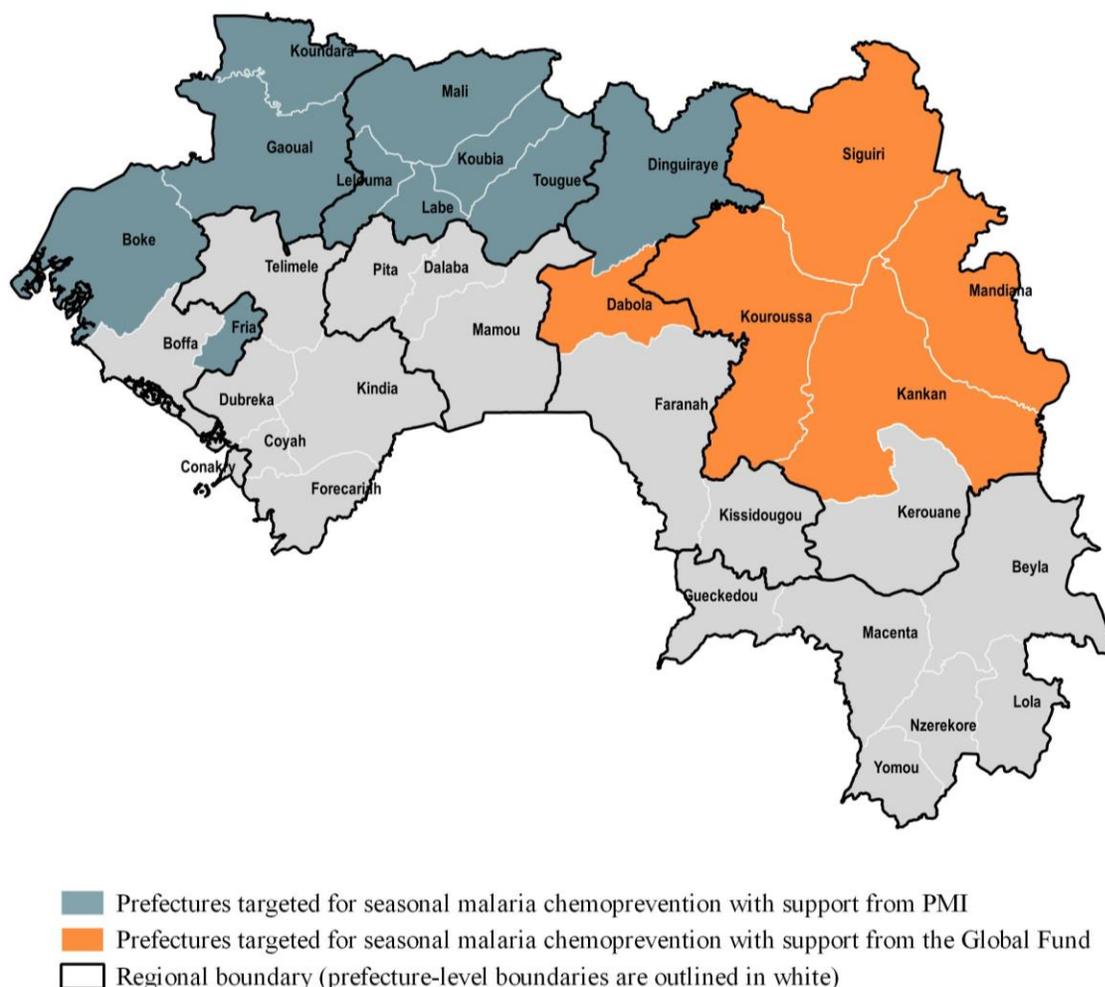
No new activities or significant changes are proposed.

3. Drug-based prevention

a. Seasonal malaria chemoprevention

The NMCP is considering revisions to the existing SMC strategy based on evidence from current implementation which may include increasing the coverage period from four to five months in selected districts with extended rainy seasons and extending the eligibility age to ten years. PMI supports malaria interventions in line with WHO recommendations and is not currently planning support for more than four months of SMC implementation or for coverage of children older than five years. Changing malaria epidemiology in Guinea, defined by declining transmission and more marked seasonality, has led to increasing numbers of districts qualifying for the intervention according to WHO eligibility criteria. Based on this trend, current planning numbers include an expansion in FY 2019 from 8 to 10 districts (to cover a total of 507,017 children) supported by PMI, leading to a national coverage of 15 districts (1,220,415 children). This expansion to the additional two districts will require evidence that the transmission patterns meet WHO criteria. Fria was identified as a potential SMC district based on patterns of rainfall and temperature and of the seasonality of malaria cases reported to the RMIS. Additional assessments will be done by NMCP and the London School of Hygiene and Tropical Medicine (LSHTM) to determine eligibility based on the WHO criteria. Any decisions to revise the national implementation strategy/plan are made by the SMC working group of which PMI is a member. Concerning the impact of SMC, an impact evaluation was conducted but the results are still pending; however given the global evidence that SMC is an effective intervention and given limited resources, further evaluation of impact is not a priority activity at this time.

Figure 6: National SMC coverage by District



4. Case management

Although Guinea is using rectal artesunate as a pre-referral treatment according to WHO guidelines, it has not been included in the national treatment guidelines. The NMCP is updating case management policy guidelines to specify that rectal artesunate is only given to children less than six years of age as per WHO guidelines.

Household survey data shows alarming low use of artemisinin-based combination therapies (ACT) for treatment of malaria among children under five years of age with fever (Table 1). The low consumption of ACT indicated in household survey results could be due to the low preference of artesunate-amodiaquine (ASAQ) that was the first-line ACT at the time of the survey because of its perceived side effects. Since 2017, with the complete transition from ASAQ to artemether-lumefantrine (AL), there has been significant improvement in ACT consumption as indicated by commodity data collected through the routine system. There is also preliminary evidence from a study in Mali that responses to questions on antimalarial drug consumption in household surveys have low validity, a finding which may be applicable in Guinea as well.

5. Cross-cutting and other health systems strengthening

a. Pharmaceutical management

There are no new activities but a few significant changes are proposed:

- i. The national central medical store has revised the commodity management fees with a 3% increase on storage and distribution fees.
- ii. The support for pharmaceutical systems reform will be reduced and focused on implementation instead of development of regulations since most regulations have been finalized.
- iii. As proposed in the FY 2018 MOP and approved by PMI leadership, PMI will no longer be requiring end-use verification surveys (EUV) of malaria commodities in Guinea. The criteria specified by the supply chain technical team will be met by a) continued support to the RMIS which has been modified to collect data on all for AL weight bands b) provision of quarterly commodity availability data to the supply chain technical team and c) implementation of a supervision/data quality assessment activity. This activity will include quarterly visits to a random selection of health facilities to review the quality of both the commodity data (stock cards) and the epidemiological data (outpatient register, lab registers). Comparison of data reported through the RMIS and the stock cards and registers will be a priority. In this way, the NMCP will have a systematic way of assessing how the stock levels reported through RMIS reflect the true commodity situation, and will serve as a way of verifying the validity of the commodity availability data reported to PMI. This activity is envisioned to be conducted jointly by NMCP and by partners implementing case management and commodity activities.

b. Social and behavior change communication

No new activities or significant changes are proposed.

c. Surveillance, monitoring, and evaluation

The following activities represent a change from activities approved in the FY 2018 MOP:

- i. Health facility supervision and data quality assessments (DQAs) (See point 3 under pharmaceutical management): Routine DQAs will be conducted quarterly by a team of supervisors, including NMCP and district health office staff, as well as technical partners. This collaborative activity will offer comprehensive review of HMIS including supervision of case management services, routine DQAs to ensure high quality epidemiological data, and verification of commodity availability. One specific example of an element that will be examined is the ratio of ACTs to RDTs and how that relates to the test positivity rate (TPR). An ACT/RDT ratio that is higher than the TPR could indicate overconsumption of ACTs, under-reporting of RDT use, rationing of RDTs, or other potential factors that would merit corrective action. As a replacement for the EUV, the PMI team will work with the implementing partner and the PMI commodities team to ensure all required commodity data are consistently captured and reported through this activity. The objective is to provide analysis of short and long-term strategies for improvement. Therefore, it is different from the EUV that provides just a snapshot of the availability and use of malaria commodities at the health facilities.
- ii. Data review response activities: As an extension of the PMI support for routine surveillance described above (supportive supervision, DQAs), PMI will also support the NMCP to conduct regular, structured review of reported data and to take appropriate action as needed to further investigate anomalies that may emerge in the data. In most cases, these “investigations” will be

handled remotely from Conakry via phone or email communication; but in some cases, field activities may be warranted. PMI will provide guidance for the routine data review (i.e., specific indicators and data elements to monitor) and the PMI resident advisors (RAs) will be engaged in decisions about what type of response may be appropriate (i.e., field activity vs. remote follow-up). This activity is intended to encourage analysis of the routine data and to allow the NMCP to respond in a flexible way to any emerging needs. Responses could include investigation of supply chain issues, patterns of commodity use, or entomological investigations depending on the observed data. The expectation is that the combination of routine surveillance support activities, quarterly health facility supervision and DQAs, and technical assistance for rigorous and regular data review will result in improved data availability, data quality, and programmatic decision-making. Increased PMI support for a national malaria research committee is planned due to a shift in other donor support leaving a gap. The funds will be used to support regular meetings to discuss research activities and also to manage and guide research activities in malaria. One activity would be to create a database/repository for all malaria research done in Guinea.

Development of scopes of work and standardized data collection tools for these activities will be the focus of upcoming SM&E-focused trips.

Table 3. Surveillance, Monitoring, and Evaluation Data Sources

Data Source	Survey Activities	Year								
		2012	2013	2014	2015	2016	2017	2018	2019	2020
Household surveys	Demographic Health Survey (DHS)	x						(x)		
	Malaria Indicator Survey (MIS)					x ¹				
	Multiple Indicator Cluster Survey (MICS)	x				x ¹				
	EPI survey									
Health Facility surveys	Service Availability Readiness Assessment (SARA) survey				x			(x)		
Malaria Surveillance and Routine System Support	Support to parallel malaria surveillance system			x	x	x	x	x	(x)	(x)
	Support to HMIS					x	x	x	(x)	(x)
Other Surveys	EUV			x	x	x	x			
	Health facility supervision and DQA							(x)	(x)	(x)
	Health Facility Data Quality survey							(x)		
	Therapeutic efficacy study				x		x	(x)	(x)	(x)

¹This survey was the 2016 MICS-Palu which added malaria biomarker testing to a standard MICS

() indicates planned activities; * indicates activities not funded by PMI

d. Operational research

The NMCP is interested in and eager to pursue a variety of research activities. The PMI team is in discussions with the NMCP regarding prioritization of these activities. Instead of planning to fund these activities in 2020 the team will request approval for prioritized operational research (OR) activities through the official approval process and will fund any approved studies with reprogrammed FY 2018 funds.

e. Other health systems strengthening

The team proposes to change the mechanism of support for the Malaria Advisor leading to a significant decrease in funding for this line item.

6. Staffing and administration

PMI Guinea supports staffing and administration that follow PMI policy, as articulated in the FY 2018 MOP.