

**Table 1: Budget Breakdown by Mechanism
President's Malaria Initiative - GHANA
Planned Malaria Obligations for FY 2019**

Mechanism	Activity	Budget	%
PMI Impact Malaria	Implementation of clinical OTSS, support for CHO internships, and TA on SMC, diagnostics, and data quality.	\$1,950,000	7.5
CDC IAA	TA, support to FETP, and Staff	\$859,000	3.3
Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	Commodity procurement, warehousing, and distribution of ITNs, SP, SP+AQ, RDTs, and supply chain TA	\$9,905,500	38.1
G2G Ghana	Support government implementation of laboratory and clinical OTSS and SMC, NHIA clinical audits, NHIA capitation roll-out, regional data review, verification and analysis, and GOG capacity building	\$2,950,000	11.3
Peace Corps	Support malaria Volunteers and grants to engage in malaria control and prevention activities	\$30,000	0.1
People for Health	Strengthen the role of civil society in malaria advocacy	\$200,000	0.8
Strengthening Health Outcomes through the Private Sector (SHOPS)	Strengthen GMP practices of local ACT manufacturer's and LMD to ensure drug availability	\$50,000	0.2
TBD - Central Mechanism	Secondary analyses of household surveys, build capacity of FDA to monitor antimalarial drug quality, strengthen SBCC through school-based IPC, and TA for NHIA capitation	\$1,300,000	5.0
TBD-Ghana Bilateral	Strengthen SBCC through community and provider-based IPC	\$1,400,000	5.4
Environmental Compliance Operational Support (ECOS)	Environmental compliance for IRS	\$40,000	0.2
TBD	External assesment of OTSS	\$50,000	0.2
USAID	Staff	\$1,230,000	4.7
PMI VectorLink	Entomological and insecticide resistance monitoring, IRS program implementation, and ITN durability and monitoring	\$6,035,500	23.2
TOTAL		\$26,000,000	100.0

**Table 2: Budget Breakdown by Activity
President's Malaria Initiative - GHANA
Planned Malaria Obligations for FY 2019**

Proposed Activity	Mechanism	Budget (in \$)	Geographic Reach of PMI Activity		Description of Proposed Activity
			If coverage is focused by region, name(s) of region(s)	If coverage is focused by district, name(s) of district(s)	
INSECTICIDE-BASED PREVENTION					
Entomologic Monitoring and Insecticide Resistance Management					
Entomologic Monitoring and Insecticide Resistance Management Implementation	PMI VectorLink	\$100,000	Nationwide		In collaboration with another partner and national research institutions, PMI will continue to support insecticide resistance monitoring at 10 of the 20 existing NIRMOP entomological sentinel sites. Insecticide resistance monitoring will be conducted using standard WHO susceptibility testing with at least six insecticides from the five insecticide classes. The funding supports technical assistance, equipment, training, oversight, data collection, molecular analysis of specimens, and reporting. This activity will leverage other vector control partner resources for entomological and insecticide resistance monitoring activities and will help fill gaps to ensure national coverage. Expand laboratory to include molecular testing.
Entomologic Monitoring and Insecticide Resistance Management Implementation	PMI VectorLink	\$185,500		Bunkpurugu, East Mamprusi, Gushiegu, Karaga, Kumbungu, Mamprugu Moaduri, West Mamprusi, Yunyoo	IRS routine entomological monitoring will continue at 20 entomological monitoring sites in eight districts in Northern Region. The activities include: WHO bottle assay insecticide susceptibility testing, cone bioassays (for spray quality and durability of insecticide), molecular analysis for species identification and resistance genes, and the determination of entomological inoculation rates, and parity rates from indoor and outdoor human landing catches and pyrethroid spray catches.
Entomologic-Related CDC TDY	CDC IAA	\$29,000	Central		Provide technical assistance through two visits by a CDC entomologist focused on longitudinal monitoring to obtain representative vector bionomics data, and to help ensure timely laboratory reporting.
Subtotal : \$314,500					

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Insecticide-Treated Nets						
Procure ITNs for Continuous Distribution Channels	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$3,631,500	Nationwide			Procure approximately 1.3 million long-lasting ITNs, including up to 350,000 PBO synergist LLINs in eligible districts in Greater Accra, Eastern, Northern, and Upper East regions) to support continuous distribution channels (schools) following the completion of the planned mass distribution in 2018.
Distribute ITNs for Continuous Distribution Channels	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$1,300,000	Nationwide			Warehouse and distribution of approximately 1.3 million long-lasting ITNs to support continuous distribution channels (schools).
Support ITN Durability Monitoring	PMI VectorLink	\$150,000	Central	Eastern	To Be Determined	Support year two of the ITN durability monitoring which will include the 24 month survey to assess net survivorship, attrition, physical integrity and bio-efficacy analysis from a sample of ITNs from the 2018 mass distribution campaign.
Subtotal : \$5,081,500						
Indoor Residual Spraying						
IRS Implementation	PMI VectorLink	\$5,600,000			Bunkpurugu, East Mamprusi, Gushiegu, Karaga, Kumbungu, Mamprugu Moaduri, West Mamprusi, Yunyoo	Support IRS implementation and programmatic monitoring and evaluation in eight districts in Northern Region. Funding will support spray operations, data collection, environmental assessment and compliance monitoring, logistics, and SBCC activities including community mobilization. Proposed activities include support for procurement of insecticide and equipment; support for supervision by GHS, Environmental Protection Agency, and Noguchi personnel; and collaboration with the NMCP, MaVCOC, the AGAMal IRS program, and other partners. Programmatic monitoring and evaluation includes the activities that measure the performance of IRS, particularly those relating to monitoring coverage levels.
Support Independent Environmental Monitoring	Environmental Compliance Operational Support (ECOS)	\$40,000			Bunkpurugu, East Mamprusi, Gushiegu, Karaga, Kumbungu, Mamprugu Moaduri, West Mamprusi, Yunyoo	Support environmental compliance monitoring for IRS implementation in eight districts in Northern Region. Funding will support environmental assessment and compliance monitoring.
Subtotal : \$5,640,000						
Total : \$11,036,000						

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MALARIA IN PREGNANCY					
Other MIP Implementation	PMI Impact Malaria	\$200,000	Nationwide		One round of integrated supportive supervision using ICD integrated checklist in all 10 regions.
Other MIP Implementation	G2G Ghana	\$200,000	Nationwide		One round of malaria-specific OTSS using NMCP checklist in all 10 regions. Provide support to GHS ICD for implementation of integrated supportive supervision using ICD checklist.
Total : \$400,000					
DRUG-BASED PREVENTION					
Seasonal Malaria Chemoprevention					
Procure SMC-Related Commodities	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$700,000		Northern	Procure one-half of the required SP+AQ, approximately 1.2 million doses, representing four monthly doses for approximately 297,265 children (ages 3-59 months) for the June 2021 SMC campaign in Northern region.
Other SMC Implementation	G2G Ghana	\$600,000		Northern	Support operational costs associated with the June 2020 SMC campaign in Northern region. The GHS/PMU through NMCP will implement this activity.
Other SMC Implementation	PMI Impact Malaria	\$100,000	Central	Northern	Provide technical assistance to GHS and NMCP to support SMC operations.
Total : \$1,400,000					
CASE MANAGEMENT					
Procure RDTs	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$2,120,000	Nationwide		Procure approximately 4 million RDTs, to fill identified gaps and ensure that health facilities maintain capacity to test fevers and diagnose malaria cases. [This amount may be reduced to 2.5 million, as per PM.]
Procure Other Diagnosis-Related Commodities	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$50,000	Nationwide		Supply microscopes to new facilities and replace broken microscopes to support prompt diagnosis at hospitals.
Procure Drugs for Severe Malaria	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$429,000	Nationwide		Support the national injectable and rectal artesunate needs for severe malaria: procure approximately 150,000 ampules of injectable artesunate (60 mg/1ml) (estimated to cover 10% of the annual requirements). Procure an estimated 100,000 rectal artesunate suppositories (50mg/1ml and 100mg/1ml), which is 100% of the annual need.
Other Case Management Implementation	PMI Impact Malaria	\$150,000	Nationwide		Provide technical assistance to support strengthening the capacity of laboratory supervisors at the national level to conduct diagnostic refresher training and proficiency testing on a quarterly basis.

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Other Case Management Implementation	G2G Ghana	\$300,000	Nationwide		Support GHS ICD to conduct laboratory OTSS and malaria diagnostic training-of-trainers on a quarterly basis. Funds will support the continued quality improvement of malaria microscopy, RDT use and scale-up, and coordination between laboratory staff and prescribers.
Other Case Management Implementation	CDC IAA	\$10,000	Nationwide		Provide technical assistance for microscope repair.
Other Case Management Implementation	PMI Impact Malaria	\$200,000	Nationwide	Ashanti, Brong Ahafo, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta, Western	Support CHO internships in all 10 regions.
Other Case Management Implementation	PMI Impact Malaria	\$600,000	Nationwide		Perform one round of malaria-specific OTSS using the NMCP checklist in all 10 regions. Provide support to ICD for implementation of integrated supportive supervision using ICD checklist.
Other Case Management Implementation	G2G Ghana	\$450,000	Nationwide		Support one round of integrated supportive supervision by GHS ICD using the ICD integrated checklist in all 10 regions.
Other Case Management Implementation	TBD	\$50,000	Nationwide		Support an external assessment and analysis of integrated supervision versus malaria-specific OTSS for malaria case management.
Other Case Management Implementation	G2G Ghana	\$250,000	Nationwide		Continue support for NHIA to conduct clinical audits to improve treatment standards and the quality of service provision among accredited providers, to ensure adherence to standard protocols, and to check against fraud and abuse. Clinical OTSS teams will join the clinical audit teams to learn first-hand how the clinical audits are conducted so as to improve the OTSS teams' capacity to audit cases treated during the intervening period between two clinical visits. Specific activities will include targeted mentorship and additional supervisory and on-the-job training for poorly performing facilities.
Total : \$4,609,000					

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CROSS-CUTTING AND OTHER HEALTH SYSTEMS STRENGTHENING					
Pharmaceutical Management					
Pharmaceutical Management Systems Strengthening	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$1,000,000	Nationwide		In accordance with the Supply Chain Master Plan, continue to provide technical assistance for strengthening logistics, warehousing, and distribution to improve availability of malaria commodities, in accordance with the national Supply Chain Master Plan. Activities will focus on addressing weaknesses in supply management, forecasting, transportation, and reporting systems. Support quarterly EUV surveys to monitor the status of facility-level commodity stock levels including both WHO pre-qualified and locally procured ACTs and identify ongoing programmatic successes and challenges. Technical assistance will also include implementation of the plan developed during FY 2017 to address the local procurement of non-quality assured anti-malarial drugs by health facilities and regional health and RMS staff.
Pharmaceutical management systems strengthening	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$275,000	Central	Ashanti, Eastern, Northern	Support Last mile distribution in coordination with GF, covering at least three regions
Warehousing and Distribution	Global Health Supply Chain Procurement and Supply Management (GHSC PSM) Malaria	\$400,000	Nationwide		Central warehousing and transportation of malaria commodities from central to regional levels.
Pharmaceutical Management Systems Strengthening	Strengthening Health Outcomes through the Private Sector (SHOPS)	\$50,000	Nationwide		Support SHOPS access to finance work for local pharmaceutical companies who are producing ACTs to strengthen good manufacturing practices (GMP) and work with local logistics and transport companies to strengthen last mile distribution to ensure drug availability
Pharmaceutical Management Systems Strengthening	TBD - Central Mechanism	\$150,000	Nationwide		Provide support for continued strengthening of the GH-FDA's capacity to effectively monitor quality of anti-malarial drugs available in Ghana. Support to GH-FDA to monitor and regulate locally procured non-WHO pre-qualified antimalarial drugs including batch testing of Ghana manufactured ACTs, SP and severe malaria drugs including support to increase regulation and removal of drugs that fail quality testing. GH-FDA will be supported PMI will support the GH-FDA to build the capacity of local manufacturers to meet GMP and WHO pre-qualification standards.
Subtotal : \$1,875,000					

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Social and Behavior Change Communication					
SBCC Implementation	TBD Ghana Bilateral	\$300,000	Nationwide		Support national mass media activities targeting identified barriers to key malaria-related behaviors and complementing school-based, community-based, and facility-based IPC activities. Support national-level SBCC technical working groups (NMCP and HPD) and coordinating structures.
SBCC Implementation	TBD - Central Mechanism	\$600,000	Nationwide		Strengthen capacity (both individual and institutional) of GES SHEPS, teachers, and parent teacher associations to conduct school-based IPC activities targeting identified barriers to key malaria-related behaviors.
SBCC Implementation	TBD Ghana Bilateral	\$700,000	Nationwide		Strengthen capacity (both individual and institutional) of facility-based community health nurses and community health officers to conduct community-based IPC activities targeting identified barriers to key malaria-related behaviors using existing platforms such as durbars, health outreach and education activities, and Child Welfare Clinic activities. Collaborate with facility-based service delivery partners.
SBCC Implementation	TBD Ghana Bilateral	\$400,000	Nationwide		Strengthen capacity (both individual and institutional) of facility-based providers to conduct service communication activities targeting identified barriers to key malaria-related behaviors. Support facility-based provider behavior change targeting identified barriers to key provider behaviors. Use existing platforms such as malaria-specific and integrated outreach training and supporting supervision, provider counseling, and health education activities. Collaborate with facility-based service delivery partners.
Subtotal : \$2,000,000					
Surveillance, Monitoring, and Evaluation					
Other SM&E Implementation	TBD - Central Mechanism	\$200,000	Central		Support secondary analysis of household surveys and DHIMS2 data: Ghana-specific technical assistance and training for secondary analysis of household surveys and DHIMS data by NMCP. [This is a Ghana-specific version of the DHIS2 and DHS/MIS secondary analysis workshop.]
Support Routine Surveillance	G2G Ghana	\$800,000	Nationwide		Provide support to GHS ICD to support routine data quality with District-level data verification and validation meetings; quarterly data review, analysis, and action; and data quality audits to strengthen data management and use for programmatic decision making at the District level by engaging the District Health Management Team.
Support Routine Surveillance	PMI Impact Malaria	\$300,000	Nationwide		Provide technical assistance and support to improve data quality. Ensure development and use of sub-district and facility-specific dashboards. Support the Frontline Field Epidemiology and Laboratory Training Program (FELTP) to train district, sub-district, and health center health care workers in data analysis and use.

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Support Routine Surveillance	PMI Impact Malaria	\$400,000	Nationwide		Strengthen supportive supervision feedback by Regional Health Management Team in coordination with PPME to inform existing quarterly review and improve analysis and action and use. Ensure development and use of district and regional dashboards.
SM&E-Related CDC TDY	CDC IAA	\$10,000	Central		Support for a technical assistance visit from the CDC PMI M&E team. Technical assistance will include working with the NMCP to support strengthening M&E and health management information system activities.
Subtotal : \$1,710,000					
Operational Research					
OR Implementation					No OR proposed
Subtotal : \$0					
Other Health Systems Strengthening					
Support to Peace Corps	Peace Corps	\$30,000	Nationwide		Support Peace Corps volunteers based in Ghana to receive small grants from PMI to engage in malaria control and prevention activities, such as community mobilization for SBCC, ITN distribution, and (as needed) operational research.
Support to FETP	CDC IAA	\$150,000	Nationwide		Support long-term training of individuals to build capacity at the NMCP or GHS in epidemiology, M&E, or other malaria program management functions as needed through the Field Epidemiologic and Laboratory Training Program, which was established with USG support at the University of Ghana's School of Public Health in collaboration with the GHS.
Other Health Systems Strengthening Implementation	G2G Ghana	\$100,000	Central		Continue to provide support to the NMCP, GHS, and GOG for technical capacity building and improved malaria control systems. This activity will support: 1) attendance in malaria-specific trainings, conferences by select NMCP, GHS, and GOG employees to further build in-country capacity; 2) assisting NMCP with organizing meetings that are important for planning and management of malaria prevention and control activities; and 3) supporting limited information technology investments, such as computers, laptops, internet connection at the GHS's Regional Health Directorate level to ensure timely data reporting to DHIMS2. Includes regional staff.

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Other Health Systems Strengthening Implementation	TBD - Central Mechanism	\$350,000	To Be Determined		Provide technical assistance to the scale up of a primary health care capitated package of services to five additional regions; improve provider incentives to ensure appropriate case management services by working with key stakeholders to identify examples of best practices, real time data analysis, and communication materials to address the incentive constraints introduced with the preferred provider system. Specific investment will be co-funded with non-malaria USAID health funds, PMI will support NHIA to increase its efficiency and sustainability to improve access to health services in general and quality malaria treatment.
Other Health Systems Strengthening Implementation	G2G Ghana	\$250,000	Nationwide		Support to communication efforts to facilitate NHIA capitation roll out to five additional regions (Brong Ahafo, Central, Eastern, Northern, and Western) with the goal of promoting enrollment in NHIA and informing the public about how to access NHIA-accredited facilities among the general population. Since NHIS enrollment increases the likelihood of seeking formal care for malaria treatment, it is anticipated that this investment will contribute towards strengthening the overall health insurance program, increase enrollment, reduce the risk of insolvency, and ensure sustainability of NHIS.
Other Health Systems Strengthening Implementation	People for Health	\$200,000	Central	Ashanti, Central, Eastern, Northern, Volta, Western	Build the capacity of local Ghanaian non-governmental organizations and civil society organizations to monitor the quality and ease of access to health services, with a focus on malaria diagnostics and treatment. Work with DHMT to promote adherence to national malaria guidelines and promote the use of district and regional report cards to monitor progress on indicators. Strengthen community structures for advocating for patients' rights and client-centered care, including the availability of malaria commodities. Empower civil society organizations to engage citizens to demand and participate in health service delivery and advocate for their interest. Strengthen the health sector monitoring of government institutions, officials and policy processes, and civil society organization monitoring of issues, including: transparency, accountability health system, and compliance with service standards, regulations, and patients' charter code. PMI estimates that approximately 20 local community groups in five regions will be supported annually through this activity. These groups will monitor the quality of health services and help to identify areas for improvement.
Subtotal : \$1,080,000					
Total : \$6,665,000					

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STAFFING AND ADMINISTRATION					
USAID In-Country Staffing and Administration: Staffing	USAID	\$690,000	Central		To support the coordination and management of all in-country PMI activities including support for salaries and benefits for resident advisors and local staff, office equipment and supplies
USAID In-Country Staffing and Administration: Administration	USAID	\$540,000	Central		To support USAID Mision routine administration and coordination expenses
CDC In-Country Staffing and Administration	CDC IAA	\$660,000	Central		
Total : \$1,890,000					
GRAND TOTAL:		\$26,000,000			