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Niger

Malaria Operational Plan FY 2023

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This FY 2023 Malaria Operational Plan has been approved by the Acting U.S. Global Malaria Coordinator and reflects collaborative discussions with national malaria control programs and other partners. Funding available to support outlined plans relies on the final FY 2023 appropriation from U.S. Congress. Any updates will be reflected in revised postings.

This document was prepared in the early months of 2022 as the COVID-19 pandemic continued to evolve worldwide, including in PMI-partner countries. The effects of the pandemic on malaria control and elimination work in 2023 are difficult to predict. However, because U.S. Congressional appropriations for PMI are specific to work against malaria and any appropriations for work against the COVID-19 pandemic are specific for that purpose and planned through separate future U.S. government planning processes, this FY 2023 MOP will not specifically address the malaria-COVID-19 interface and will reassess any complementary work through timely reprogramming in countries.

CONTENTS

ABBREVIATIONS

ACT	Artemisinin-based Combination Therapy
AI	Active Ingredient
ANC	Antenatal Care
CDC	U.S. Centers for Disease Control and Prevention
CERMES	*Centre de Recherche Médicale et Sanitaire* (Medical and Health Research Center)
CHW	Community Health Worker
CM	Case Management
CSI	*Centre de Santé Integré* (Integrated Health Center)
DHIS2	District Health Information Software 2
DPH/MT	*Direction de la Pharmacie et de la Médecine Traditionnelle* (Directorate of Pharmacy and Traditional Medicine)
FETP	Field Epidemiology Training Program
FY	Fiscal Year
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
HF	Health Facility
HW	Health Worker
iCCM	Integrated Community Case Management
IPC	Interpersonal Communication
IPTp	Intermittent Preventive Treatment for Pregnant Women
IRS	Indoor Residual Spraying
ITN	Insecticide-treated Mosquito Net
LMIS	Logistics Management Information System
MIP	Malaria in Pregnancy
MIS	Malaria Indicator Survey
MOH	Ministry of Health, Population and Social Affairs
MOP	Malaria Operational Plan
malaria RDT	Malaria Rapid Diagnostic Test
NMCP	National Malaria Control Program
NMSP	National Malaria Strategic Plan
ONPPC	*Office National des Produits Pharmaceutiques et Chimiques* (National Office of Pharmaceutical Products and Chemicals)
PBO	Piperonyl Butoxide
PMI	U.S. President's Malaria Initiative
SARA	Service Availability Readiness Assessment
SBC	Social and Behavior Change
SM&E	Surveillance, Monitoring, and Evaluation
SMC	Seasonal Malaria Chemoprevention

SP	Sulfadoxine-pyrimethamine
SPAQ	Sulfadoxine-pyrimethamine + Amodiaquine
TES	Therapeutic Efficacy Study
USAID	U.S. Agency for International Development

EXECUTIVE SUMMARY

To review the specific country context for Niger, please refer to the country malaria profile, which provides an overview of the country's malaria situation, key indicators, the National Malaria Control Program (NMCP) strategic plan, and the partner landscape.

U.S. President's Malaria Initiative

Launched in 2005, the U.S. President's Malaria Initiative (PMI) supports implementation of malaria prevention and treatment measures as well as cross-cutting interventions. PMI's 2021–2026 strategy, *End Malaria Faster*, envisions a world free of malaria within our generation with the goal of preventing malaria cases, reducing malaria deaths and illness, and eliminating malaria in PMI partner countries. PMI currently supports 24 countries in sub-Saharan Africa and three programs across the Greater Mekong Subregion in Southeast Asia to control and eliminate malaria. Niger began implementation as a PMI partner country in fiscal year (FY) 2017.

Rationale for PMI's Approach in Niger

The epidemiological profile of malaria in Niger is characterized by stable endemicity marked by seasonal resurgence during and after the rainy season. In 2020, the NMCP reported a one-year increase in suspected and confirmed malaria cases, but the number of reported cases decreased in 2021 with 4,000,696 confirmed malaria cases (DHIS2 2021) and a prevalence among children between 6 and 59 months of age of 28.9 percent (malaria indicator survey [MIS] 2021). The monitoring of vector resistance to insecticides showed resistance in the populations *of Anopheles gambiae* s.l. at diagnostic doses of the three pyrethroids. The coverage of service delivery is only 53.7 percent.

Overview of Planned Interventions

The proposed FY 2023 PMI funding for Niger is $17.5 million. PMI will support the following intervention areas with these funds:

1. Vector Monitoring and Control

Since its launch in Niger, PMI has been supporting the *Centre de recherche médical et sanitaire* (CERMES) (Medical and Health Research Center) from the Ministry of Health, Population and Social Affairs (MOH) to conduct entomological monitoring in sentinel sites representing the different malaria risk zones. PMI also supported the insecticide-treated mosquito nets (ITN) routine distribution through purchase of nets, supervision, and social and behavior change (SBC) messages. With FY 2023 funding, PMI will continue supporting CERMES in conducting entomological monitoring, providing

technical assistance to NMCP and training regional staff to collect data. PMI will procure piperonyl butoxide ITNs for routine distribution and support this distribution in two PMI focus regions through supervision and SBC.

2. Malaria in Pregnancy

PMI Niger supports the MOH for malaria in pregnancy (MIP) case management during pregnancy and strengthening of intermittent preventive treatment for pregnant women (IPTp) by providing commodities, technical assistance, and training at the central level and in the two PMI focus regions. With FY 2023 funding, PMI will continue to support MIP case management strengthening, IPTp uptake, and ITN coverage through supportive supervision. PMI will support SBC activities to encourage early and frequent antenatal care attendance. PMI will continue providing technical assistance at the central level and procuring drugs for treatment of pregnant women as well as for IPTp.

3. Drug-based Prevention

Seasonal malaria chemoprevention (SMC) for children between three months and five years of age is a priority for the MOH, and PMI support includes all aspects of implementation, elaboration of the SBC messages, and procurement of sulfadoxine-pyrimethamine + amodiaquine. With FY 2023 funding, PMI will continue procuring commodities and will fund implementation of the SMC campaign in the regions of Dosso and Tahoua, targeting 1.6 million children in 21 districts following MOH guidelines. This also includes SBC activities in the two PMI focus regions and technical support at the national level.

4. Case Management

PMI supports the NMCP's goal of ensuring that all suspected malaria cases receive a confirmed diagnosis and that all confirmed cases receive effective treatment. To achieve this, PMI supports training of health workers, integrated community case management by community health workers (CHWs), and the procurement of malaria drugs. With FY 2023 funding, PMI will support integrated supervision of health care workers (HW) and CHWs to promote adherence to national case management (CM) guidelines. PMI will fund expansion of the role of CHWs, following MOH guidelines, in five PMI-supported districts, and will procure CM commodities to complement partners' procurements to cover national needs.

5. Health Supply Chain and Pharmaceutical Management

In addition to procuring and distributing malaria commodities and ITNs, PMI supported the NMCP and MOH in the areas of quantification, supply chain governance, and last mile distribution for malaria commodities in the regions of Dosso and Tahoua. With FY 2023 funding, PMI will continue to procure malaria commodities and will support

technical assistance for the implementation of the Logistics Management Information System and monitoring of malaria commodities, implement a last mile distribution for malaria commodities and other health products in the PMI focus regions (Dosso and Tahoua), and strengthen the warehouse management capacity of the *Office national des produits pharmaceutiques et chimiques* (National Office of Pharmaceutical Products and Chemicals) at the central and regional levels.

6. Social and Behavior Change

PMI supported the MOH in updating their national SBC strategy and the elaboration and dissemination of SBC messages on ITN use, MIP, CM, and adherence to SMC. With FY 2023 funding, PMI will continue its support to implement SBC activities in the two PMI focus regions. PMI will also support CHWs to disseminate messages on ITN use and health care-seeking behaviors.

7. Surveillance, Monitoring, and Evaluation

PMI provides support and technical assistance to ensure that accurate malaria data are collected and analyzed, and supported the MIS. With FY 2023 funding, PMI will support technical assistance to and formative supervision of health workers at all levels of the health system to ensure accurate data entry and analyses, and integrated coordination meetings at all levels. PMI will provide technical assistance for the preparation of a malaria bulletin and will co-finance the MIS.

8. Operational Research and Program Evaluation

Due to funding constraints, PMI is not prioritizing operational research in Niger.

9. Capacity Strengthening

To strengthen the capacity of the MOH, PMI supported an assessment of the organizational capacity of the NMCP and launched the three-month Field Epidemiology Training Program. Due to funding constraints, PMI will discontinue this support.

I. CONTEXT AND STRATEGY

1. Introduction

Niger began implementation as a U.S. President's Malaria Initiative (PMI) partner country in fiscal year (FY) 2017. This FY 2023 Malaria Operational Plan (MOP) presents a detailed implementation plan for Niger, based on the strategies of PMI and the National Malaria Control Program (NMCP). It was developed in consultation with the NMCP and with the participation of national and international partners. PMI is proposing activities that build on partner investments to improve and expand malaria-related services, including investments by the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund). This document provides an overview of the strategies and interventions in Niger, describes progress to date, identifies challenges and relevant contextual factors, and provides a description of activities that are planned with FY 2023 funding. For more detailed information on the country context, please refer to the Country Malaria Profile, which provides an overview of the country's malaria situation, key indicators, the NMCP strategic plan, and the partner landscape.

2. U.S. President's Malaria Initiative (PMI)

The U.S. President's Malaria Initiative (PMI) is led by the U.S. Agency for International Development (USAID) and implemented together with the U.S. Centers for Disease Control and Prevention (CDC). Launched in 2005, PMI supports implementation of malaria prevention and treatment measures—insecticide-treated mosquito net (ITNs), indoor residual spraying (IRS), accurate diagnosis and prompt treatment with artemisinin-based combination therapies (ACTs), intermittent preventive treatment for pregnant women (IPTp), and drug-based prevention—as well as cross-cutting interventions such as surveillance, monitoring and evaluation; social and behavior change; and capacity strengthening. PMI's 2021–2026 strategy, *End Malaria Faster*, envisions a world free of malaria within our generation with the goal of preventing malaria cases, reducing malaria deaths and illness, and eliminating malaria in PMI partner countries. PMI currently supports 24 countries in sub-Saharan Africa and three programs in the Greater Mekong Subregion in Southeast Asia to control and eliminate malaria. Over the next five years, PMI aims to save lives, reduce health inequities, and improve disease surveillance and global health security.

Under the strategy, and building upon the progress to date in PMI-supported countries, PMI will work with NMCPs and partners to accomplish the following objectives by 2026:

1. Reduce malaria mortality by 33 percent from 2015 levels in high-burden PMI partner countries, achieving a greater than 80 percent reduction from 2000.

2. Reduce malaria morbidity by 40 percent from 2015 levels in PMI partner countries with high and moderate malaria burden.
3. Bring at least 10 PMI partner countries toward national or subnational elimination and assist at least one country in the Greater Mekong Subregion to eliminate malaria.

These objectives will be accomplished by emphasizing five core areas of strategic focus:

1. **Reach the unreached:** Achieve, sustain, and tailor deployment and uptake of high-quality, proven interventions with a focus on hard-to-reach populations.
2. **Strengthen community health systems:** Transform and extend community and frontline health systems to end malaria.
3. **Keep malaria services resilient:** Adapt malaria services to increase resilience against shocks, including COVID-19 and emerging biological threats, conflict, and climate change.
4. **Invest locally:** Partner with countries and communities to lead, implement, and fund malaria programs.
5. **Innovate and lead:** Leverage new tools, optimize existing tools, and shape global priorities to end malaria faster.

3. Rationale for PMI's Approach in Niger

3.1. Malaria Overview for Niger

In 2020, there was an increase in reported cases of malaria, with 6,280,942 suspected cases and 4,289,620 confirmed cases reported.[1] In 2021, the NMCP reported 6,138,162 suspected malaria cases and 4,000,696 confirmed cases. The test positivity rate was 70.7 percent in 2020 and 67.9 percent in 2021, and the number of malaria deaths decreased from 3,521 in 2020 to 2,551 in 2021. The malaria incidence is 144 per 1,000 population at risk (National Malaria Strategic Plan 2017–2023), and malaria prevalence among children between 6 and 59 months of age is 28.9 percent (malaria indicator survey [MIS] 2021). The increase in suspected and confirmed cases is consistent with the annual population growth; however, the more than 27 percent decrease in reported malaria deaths is quite remarkable in this interval.

The epidemiological profile of malaria in Niger is characterized by stable endemicity with seasonal resurgence during and after the rainy season, from July to November, with relatively high lethality, especially in children under five years of age. From a spatial perspective, the intensity, duration of transmission, and associated disease burden vary

[1] DHIS2. 2020.

considerably across the country depending on geo-ecological and climatic conditions. The parasite responsible for malaria is almost exclusively *Plasmodium falciparum* with *Anopheles gambiae* s.l. the main vector species (>96 percent), followed by *An. funestus* (about 2 percent). The NMCP and its partners conducted monitoring of vector resistance to insecticides from 2017 to 2019 which showed resistance in the populations of *An. gambiae* s.l. at diagnostic doses of the three pyrethroids (deltamethrin 0.05 percent, alphacypermethrin 0.05 percent, and permethrin 0.75 percent) with a mortality rate of less than 90 percent (PSN Review Report 2017–2021).

Niger's Malaria Diagnostic and Treatment Guidelines, updated in December 2017, state that any suspected case of malaria must be confirmed by a diagnostic test—either malaria rapid diagnostic test (malaria RDT) or microscopy—followed by treatment with an ACT. Microscopy is performed in district hospitals and in the private sector, while malaria RDTs are used in health centers and at the community level. The results from the 2019 Service Availability Readiness Assessment (SARA) survey showed that the availability of malaria diagnostics in public and private health facilities (HFs) improved slightly compared with the 2015 survey results: 91 percent of HFs offered rapid diagnostic tests (88 percent in 2015) and 24 percent microscopy (20 percent in 2015). The SARA survey showed an increase from 52 percent (2015) to 61 percent of facilities having a health worker trained in malaria diagnostics and treatment. The 2020 end-use verification survey that PMI supported showed an increase in the malaria diagnosis by malaria RDT (from 82 percent in 2019 to 87 percent in 2020), while the microscopy rate decreased (from 9 percent in 2019 to 1 percent in 2020).

For more detailed information on malaria indicators, please refer to the Country Malaria Profile.

3.2. Key Challenges and Contextual Factors

Niger's harsh climate and state-dominated economy are challenges to development. Resources to cope with the world's highest fertility rate (7.2 children per woman) and fastest population growth (3.8 percent per year) are limited. Niger is economically underdeveloped, with little industry and a large agricultural sector (87 percent of the nation's workforce).

Niger also faces a series of persistent and growing security threats in different border areas (Nigeria and Lake Chad Basin and in the tri-border region along the Mali–Burkina Faso borders), and in Niger itself. Long-standing farmer-herder conflict cycles, the lack of a strong state presence and access to justice in the border regions, and persistent poverty are factors contributing to the growth of extremist groups. In addition, insecurity in neighboring countries such as Nigeria and Mali result in thousands of refugees coming into Niger. This increased insecurity in the border areas and the recent COVID-

19 pandemic resulted in higher operational costs for all partners and the NMCP and increased numbers of internally displaced people.

Some of the main challenges in the fight against malaria are the shortage of and high turnover of health care workers at the *Centre de santé integré* (CSI) [Integrated Health Center] level, who also lack training in malaria treatment and prevention and in health information system (HIS) and Logistics Management Information System (LMIS) data management. Although the country accepted the District Health Information Software 2 (DHIS2) system as the only health information system, data entry at the peripheral level is challenging due to lack of staff and unreliable access to electricity and internet. Another point of weakness is the public sector supply chain, with a lack of staff trained in supply planning processes and the limited availability and poor quality of LMIS data, resulting in multiple stockouts. Commodities are stored at several central-level locations, and the public health system distributes them through zonal and/or regional warehouses to district warehouses. Some HFs use their own funds to travel to retrieve their commodities from the district. Other HFs combine commodity collection with meetings at the health district and/or district supervision missions.

3.3. PMI's Approach for Niger

The vision of the Niger 2017–2023 National Malaria Strategic Plan (NMSP) is to achieve a malaria-free Niger, with the goal of reducing malaria morbidity and mortality by 40 percent as compared to 2015. To achieve this, the NMCP supports the following major intervention areas: vector control, malaria case management (CM), IPTp for malaria in pregnancy (MIP), social and behavior change (SBC), surveillance, monitoring, and evaluation (SM&E) and seasonal malaria chemoprevention (SMC). These strategies and interventions are closely aligned with those currently prioritized by PMI. Notable exceptions include the NMCP's promotion and implementation of larval source management and IRS.

PMI coordinates closely with the NMCP and Global Fund to ensure complementarity of support for implementation of the 2017–2023 NMSP. PMI provides financial and technical assistance for most of the strategies described in the strategic plan with the exception of IRS. PMI/Niger support at the national level focuses on procurement of common malaria commodities, and at the central level focuses on technical assistance to different entities of the Ministry of Health (MOH) for SM&E and commodity management. Other components such as malaria CM, SBC, SMC, and SM&E are targeted to the regional, district, and community levels in the two PMI target regions of Dosso and Tahoua.

PMI and Global Fund are trying to cover all the needs of the country to control malaria as much as possible. For service delivery strengthening and SMC, support is divided by region or by the type of support provided (e.g., implementation support vs. technical

assistance). For instance, PMI and Global Fund both support routine ITN distribution in different geographical areas, but Global Fund fully supports ITN distributions through campaigns while PMI supports the entomology monitoring.

PMI/Niger is implementing the malaria activities in an environment that limits free movement in several border areas. The NMCP and partners have to adapt the activities (use of cars instead of motorbikes) or change the approach (door-to-door SMC instead of distribution posts), which results in increased cost.

To contend with the high turnover of health care workers at the CSI level and their lack of training on malaria treatment and prevention, PMI/Niger, at the request of NMCP, replaced the approach of training and retraining staff by focusing on increased integrated formative supervision visits. This activity also includes data entry and level-appropriate analysis to improve the weak health information system. More than half of the PMI/Niger budget is dedicated to commodities and strengthening the supply chain. PMI implements the last mile distribution as a solution to prevent multiple stockouts in two regions.

3.4. Key Changes in this MOP

This MOP does not include any significant changes in strategies. Some activities, such as the Field Epidemiology Training Program (FETP), had to be cut due to budget constraints despite the increased population and the high cost of certain key interventions such as the seasonal malaria chemoprevention campaign.

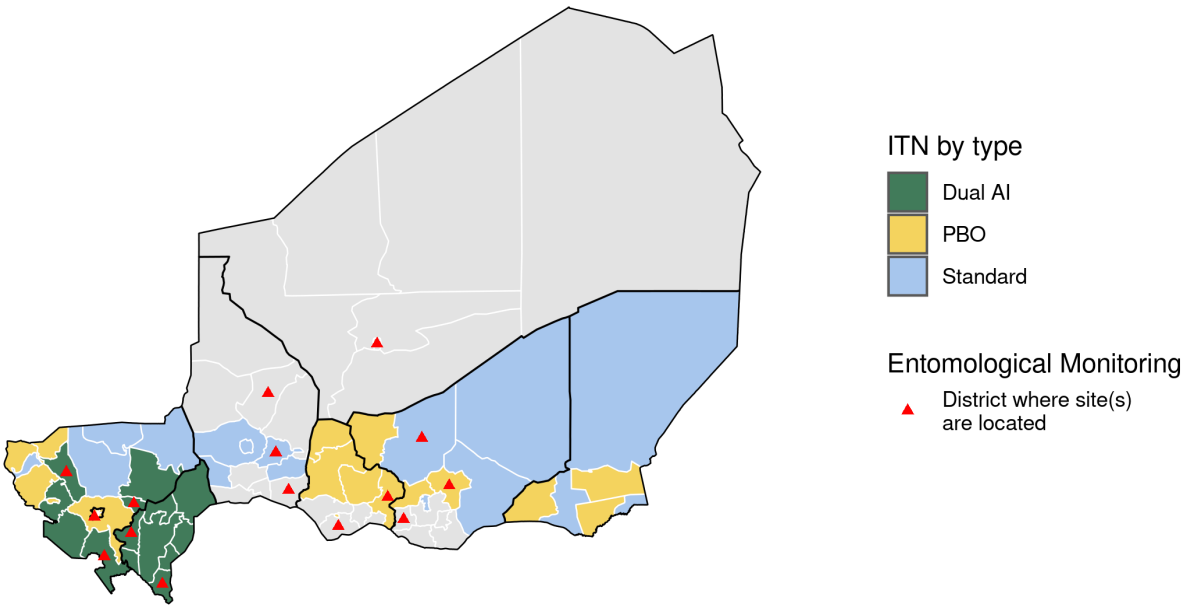
II. OPERATIONAL PLAN FOR FY 2023

1. Vector Monitoring and Control

1.1. PMI Goal and Strategic Approach

The Niger 2017–2023 NMSP calls for several insecticide-based vector control interventions: ITN, IRS, and outdoor residual spraying; larval control; improved management of insecticide resistance and waste management; and reinforcement of entomology capacities. PMI supports the use of all of these interventions, with the exception of indoor and outdoor residual spraying, waste management, and larval control, which are all implemented sporadically with the support of other donors. PMI supports routine vector surveillance at 6 sentinel sites and insecticide resistance monitoring in 15 sentinel sites representing all the malaria endemicity zones in Niger. The entomological monitoring activities provide baseline data to support the allocation of resources and deployment of ITNs. The sites were adapted according to an updated malaria risk map in 2020 and due to inaccessibility as a result of security concerns. Global Fund supports ITN mass campaigns targeting the whole country every three years using a rolling campaign strategy, but this is evolving to a national campaign in 2024 with only routine distribution in 2023. PMI supports the continuous distribution of nets in the two PMI focus regions (Dosso and Tahoua).

Figure 1. Map of Vector Control Activities in Niger (2022)



1.2. Recent Progress (between January 2021 and December 2021)

- Supported entomological monitoring in 15 sentinel sites in seven regions in collaboration with NMCP and the *Centre de recherche médical et sanitaire* (CERMES) [Medical and Health Research Center]. Monitoring activities included identification of the major vector mosquito species, their spatial and temporal distribution, density, ecology, biting and resting behavior, and susceptibility to insecticides used for malaria control. For more information about entomological monitoring, please refer to the 2020 PMI Entomology Report.
- Provided technical assistance to NMCP and CERMES for entomological monitoring through training of insectary technicians, provision of susceptible *Anopheles gambiae* Kisumu eggs from Liverpool and Abidjan, and training of field technicians.
- Supported the procurement and distribution of standard ITNs to pregnant women and to children one year of age in the two PMI focus regions of Tahoua and Dosso through continuous distribution channels (during prenatal consultations and Expanded Program for Immunization visits).
- Completed 36 months of durability monitoring of Olyset ITNs in two locations.
- Promoted the use of the DHIS2-based VectorLink Collect database for improved entomological data monitoring, reporting, and decision-making by relevant stakeholders.
- Supported national, facility, and community-level SBC activities to improve demand for ITNs, increase appropriate use, promote care, and mitigate against misuse. For more information, please refer to the Social and Behavior Change section.

1.3. Plans and Justification for FY 2023 Funding

The FY 2023 funding tables contain a full list of vector monitoring and control activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

1.3.1. Entomological Monitoring

Niger will continue to support entomological monitoring activities as described in the Recent Progress section (1.2). Activities will include insecticide resistance monitoring and vector bionomics. PMI will also continue to provide technical assistance to strengthen the capacity of NMCP and CERMES.

PMI will conduct entomological monitoring in districts receiving dual active ingredient (AI) and piperonyl butoxide PBO ITNs. These data will help inform decisions to monitor the impact of new nets and to better understand vector–human interactions.

Summary of Distribution and Bionomics of Malaria Vectors in Niger
As of 2021, the primary vector is *An. gambiae* s.l. and *An. funestus* s.l.; the secondary vectors are *An. nili* and *An. rufipes*. The peak transmission season is from July to October. The biting behavior of *An. gambiae* s.l. and *An. funestus* s.l. varies across sites. The preferred biting location of the primary vector is endophage, based on the endophagic index. The preferred resting location is indoors, and the peak biting time is between 11:00 pm and 4:00 am. The preferred host is human. There is a higher abundance of *An. gambiae* s.l vector over *An. funestus* s.l. vector throughout the country.

Status of Insecticide Resistance in Niger
In Niger, pyrethroid insecticides resistance is widespread in *An. gambiae* s.l. In 2021, susceptibility tests of the main malaria vectors, *An. gambiae* s.l. in 15 sites (Agadez, Balleyara, Boboye, Gaya, Guidimouni, Matameye, Tessaoua, Keita, Madaoua, Madarounfa, Say, Sabon Kafi, Tchintabaraden, Tillabery and Niamey V) and *An. funestus* s.l. (in Guidimouni) showed resistance to pyrethroids: alpha-cypermethrin, deltamethrin, and permethrin at all the sentinel sites. Exposure of mosquitoes to PBO before deltamethrin, permethrin, and alpha-cypermethrin exposure did not completely reverse the resistance status at any of the sentinel sites, but a significant increment of mortality was observed for deltamethrin + PBO and alpha-cypermethrin + PBO. No significant increment of mortality was observed for permethrin + PBO at any of the sites. Data on pyrethroid resistance intensity are being collected. *An. gambiae* s.l. from all sites were also susceptible to chlorfenapyr (200µg/bottle) and clothianidin (4µg micrograms/bottle) in addition to pirimiphos-methyl in seven sites (Agadez, Balleyara, Boboye, Gaya, Guidimouni, Matameye, and Tessaoua), and moderately resistant to pirimiphos-methyl in eight sites (Keita, Madaoua, Madarounfa, Say, Sabon Kafi, Tchintabaraden, Tillabery, and Niamey V).

Given the resistance to pyrethroids, PMI will be encouraging the Global Fund and NMCP to use dual AI or PBO nets.

1.3.2. Insecticide-treated Mosquito Nets (ITNs)
Niger will continue to support ITN activities as described in the Recent Progress section (1.2). PMI will provide technical support to the country's 2024 mass campaign through participation on the national committee and support in the two PMI focus areas. PMI also supports SBC to develop messages.

Please see the Social and Behavior Change section for details on challenges and opportunities to improve intervention uptake or maintenance.

ITN Distribution in Niger

Until 2022, ITNs traditionally were distributed via mass campaigns targeting the whole country through a rolling campaign strategy every three years. There is no mass campaign planned in 2023, but in 2024, NMCP and Global Fund will support a universal distribution campaign targeting the whole country. Continuous distribution channels inclue distribution to pregnant women during antenatal care (ANC) visits and to children during vaccination. The country transitioned from standard ITNs to PBO and dual AI nets in 2022 in targeted districts during mass and continuous distribution based on resistance data.

Because 2024 is the start year of a new Global Fund malaria grant, their contribution is not yet known. The ITN gap is indicative and considers only PMI and the Government of Niger contribution for this year. The total need for the 2024 ITN mass campaign (estimated quantity of 14.6 million nets) should be covered by the Global Fund. For continuous distribution, PMI will support the procurement of around 100,000 nets, leaving a gap of 2.2 million for the continuous distribution.

Please refer to the ITN **Gap Analysis Table** in the annex for more detail on planned quantities and distribution channels.

1.3.3. Indoor Residual Spraying

PMI does not support IRS in Niger.

2. Malaria in Pregnancy

2.1. PMI Goal and Strategic Approach

The guidelines for MIP in the 2017–2023 NMSP include the provision of ITNs at the first ANC visit, a minimum of three doses of IPTp starting at 13 weeks gestational age, and an case management of malaria following World Health Organization guidelines.

PMI supports the NMCP to achieve its goal through improving the quality of service and the availability of commodities. The 2017–2023 NMSP aims to have 80 percent of pregnant women receiving at least three doses of IPTp (in 2019, only 56 percent of pregnant women did so).[2] The barriers to IPTp uptake include women's late initiation of pregnancy care, the insufficient training in MIP of health providers, and the noncompliance to MIP national guidelines. Based on the 2019 SARA, 86 percent of HFs had IPTp commodities available while 71 percent had ITNs available; only 47 percent of providers were trained on IPTp, and national guidelines for IPTp were available in 54 percent of HFs.[3] PMI will continue to support MIP case management strengthening and

[2] NMCP report, 2019.
[3] SARA, 2019.

enhancement of IPTp uptake in its two focus regions through training, mentoring, and supportive supervision at the facility and community levels, as well as through technical assistance and policy support at the central level. The supportive supervision provides the NMCP and PMI with the opportunity to reinforce the guidelines, ensure that pregnant women are receiving ITNs, and ensure health providers are offering malaria diagnosis and treatment of uncomplicated and severe malaria (first and second trimesters).

PMI will collaborate with NMCP, Global Fund, *Direction de la pharmacie et de la médecine traditionnelle* (DPH/MT) [Directorate of Pharmacy and Traditional Medicine], and *Office national des produits pharmaceutiques et chimiques* (ONPPC) [National Office of Pharmaceutical Products and Chemicals] to coordinate procurement and delivery schedules to ensure appropriate stock levels of sulfadoxine-pyrimethamine (SP) at service delivery points.

Please see the Social and Behavior Change section for details on challenges and opportunities to improve intervention uptake or maintenance.

2.2. Recent Progress (between January 2021 to and December 2021)

PMI-supported MIP activities were impacted by the COVID-19 pandemic and the associated restrictions and mitigation measures implemented by the Government of Niger, the persistent and substantial human resource issues that continue to impact the Niger health care system, and continued security issues. PMI worked with the NMCP and partners to adjust to these difficult circumstances and implement the following:

- Collaborated with the NMCP and Global Fund to coordinate procurement and delivery schedules to ensure appropriate stock levels of SP in all HFs
- Supported the NMCP and the *Direction Générale de la Population et de la Santé de la Reproduction* (DGP/SR)[General Directorate for Population and Reproductive Health] for quarterly meetings of the national MIP technical working group
- Supported the procurement of 1 million doses of SP and 100,000 nets for routine distribution during ANC visits
- In the two PMI focus regions:
    - Targeted quarterly outreach training and supportive supervision (OTSS+) by 12 health district management teams to identify and resolve barriers to quality malaria service delivery and develop action plans to address key issues arising related to malaria case management and prevention of MIP at the facility level
    - Trained 81 and 136 facility-based health workers (HWs) in MIP and CM, respectively

- Supported capacity building of 30 HWs to manage severe malaria

See Case Management section for additional activities that affected MIP programming and implementation.

2.3. Plans and Justification for FY 2023 Funding

The FY 2023 funding tables contain a full list of malaria in pregnancy activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

PMI will continue to support MIP case management strengthening and enhancement of IPTp uptake in PMI focus regions through supportive supervision at the facility and community levels, as well as technical assistance and policy support at the central level as described in the Recent Progress section (2.2).

PMI will collaborate with the NMCP, Global Fund, DPH/MT, and ONPPC to coordinate the procurement and delivery schedules to ensure appropriate stock levels of SP in the HFs. Based on the most recent national quantification estimates, PMI plans to procure 1,360,000 doses of SP with MOP FY 2023 funding and will continue to fund SP distribution to facilities in PMI focus regions. The Global Fund contribution is unknown for 2024 as that year is the start of the new malaria grant. For this reason, a gap of SP appear.

Please refer to the **SP Gap Analysis Table** in the annex for more detail on planned quantities and distribution channels.

Please see the Social and Behavior Change section for details on challenges and opportunities to improve intervention uptake or maintenance.

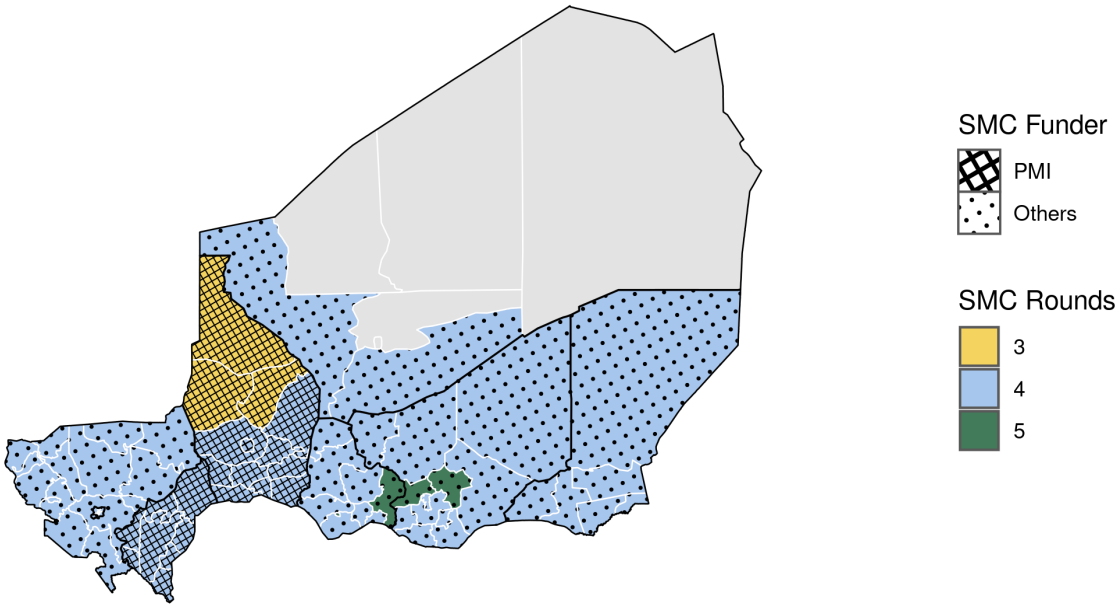
3. Drug-based Prevention

3.1 Seasonal Malaria Chemoprevention

PMI Goal and Strategic Approach

The NMSP promotes SMC as a malaria prevention intervention in areas with high seasonal malaria transmission. PMI funds this intervention in 21 districts, including procurement of sulfadoxine-pyrimethamine + amodiaquine (SPAQ), to meet the needs of the eligible population and all aspects of implementation (planning, training, paying distributors, SBC and SM&E activities). The Global Fund supports SMC in the other 46 eligible districts. PMI also provides technical support to the NMCP at the central level for SMC planning and development of the SBC messages.

Figure 2. Map of SMC Implementation in Niger (2022)



3.2. Recent Progress (between January 2021 and December 2021)

PMI supported the NMCP in SMC and malnutrition screening, covering 1.3 million children between 3–59 months of age in 17 districts for four rounds. Coverage of 94–100 percent was achieved in the PMI-supported districts.

- Procured SPAQ blister packs to cover the 21 districts in the two PMI focus regions for the 2022 campaign.
- Supported implementation activities including micro planning meetings, and training and support of supervisors, distributors, and social mobilizers to implement the SMC campaign and conduct malnutrition screening in 17 districts.
- Supported monitoring activities including independent monitoring in 17 districts.
- Supported the NMCP to hold planning and post-implementation validation meetings at regional and national level.
- Funded SBC activities focused on demand generation at the community level through support of social mobilizers and diffusion of messages through radio and television spots.
- Completed data analyses and writing a manuscript, “Analysis of attitudes and practices influencing adherence to seasonal malaria chemoprevention in children under 5 years of age in the Dosso Region,” which indicated the need for strengthening community health worker (CHW) training, providing them with tools for interpersonal communication, developing behavioral

interventions or a combination of behavioral interventions to strengthen parent adherence for the second and third dose, and strengthening supervision.

For more information, please refer to the Social and Behavior Change section.

3.3. Plans and Justification for FY 2023 Funding

Niger will continue to support SMC activities as described in the Recent Progress section (3.2), but will scale up its support to cover all 21 districts in the two PMI focus regions.

The FY 2023 funding tables contain a full list of SMC activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

PMI will procure all needed SPAQ quantities to cover the 1.6 million children between 3–59 months of age in the 21 districts with three SMC rounds in three districts and four rounds in 18 districts. However, gaps will persist for these two regions because the NMCP wishes to target children 60–119 months in one district and implement five SMC rounds in 15 districts of Dosso and Tahoua.

Please refer to the **SPAQ Gap Analysis Table** in the annex for more detail on the planned quantities and distribution channels.

Please see the Social and Behavior Change section for details on challenges and opportunities to improve intervention uptake or maintenance.

4. Case Management

4.1. PMI Goal and Strategic Approach

The 2017–2023 NMSP promotes a comprehensive case management strategy including universal, quality-assured parasitological testing of all cases of suspected malaria. It also promotes prompt and effective treatment with ACT of all cases of confirmed uncomplicated malaria, and rapid pre-referral and/or definitive management of severe febrile illness and severe malaria. The NMSP focuses on ensuring proper management (diagnosis and treatment) of at least 90 percent of malaria cases and having at least 80 percent of the population aware of the major malaria symptoms and national malaria prevention measures.

PMI supports all aspects of this approach through support to national policies and programs, commodity procurement, and improvement of facility and community-level health worker performance. PMI supports nationwide procurement of malaria RDTs, ACTs, and injectable and rectal artesunate, accounting for approximately 40 percent of

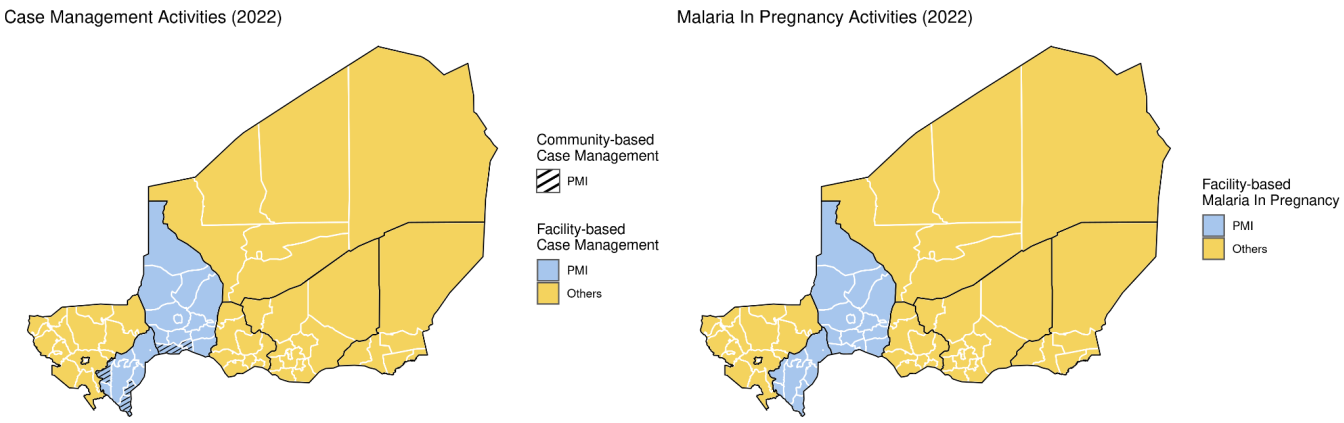
country needs; the Global Fund and the Government of Niger support procurement of the remaining 60 percent.

PMI works with the NMCP, the DPH/MT, the ONPPC, and Global Fund to ensure timely product availability according to current needs. PMI commodities are added to a pooled commodity management system and distributed nationwide.

PMI currently supports (through equipment, training, and supervision) 623 CHWs in five districts to deliver community-based case management services that include integrated community case management (iCCM) and pre-referral of rectal artesunate. The national community health strategy calls for expansion of CHWs by 2023, and with FY 2023 funds, PMI will support up to 2,000 CHWs across the five districts. Among those, more than 600 CHWs are located within the five-kilometer radius of a HF and conduct integrated health promotion only. The biggest current challenge the community health system is facing is the lack of accurate CHW mapping and insufficient coordination. To address this, PMI is providing technical assistance to the MOH Directorate of Community Health while other partners are supporting the mapping.

PMI also funds OTSS+ activities in 96 HFs in12 districts within the two PMI focus regions. PMI is providing assistance to the NMCP to support regional and district-level coordination quarterly meetings to improve case management and to adopt an integrated formative supervision instead of a siloed approach. PMI does not currently provide routine stipend payments to CHWs, but PMI-supported CHWs are financially supported by the Global Fund and the United Nations Children's Fund (UNICEF); provisions have been made to pay CHWs starting in FY 2022. The national community health strategy recommends payment of CFA20,000 for CHWs implementing both promotional and curative packages, with partners paying CFA15,000.

Figure 3. Map of Case Management, Community Health, and Malaria in Pregnancy Service Delivery Activities in Niger (2022)



Note: All the regions except Agadez are supported by other donors for community-based cases management.

4.2. Recent Progress (between January 2021 and December 2021)

The COVID-19 pandemic and the associated restrictions and mitigation measures implemented by the Government of Niger had an impact on PMI-supported case management activities. These activities were also impacted by the persistent and substantial human resource issues in the Niger health care system, as well as continued security issues in the country. PMI worked with the NMCP and partners to adjust to these circumstances and implement the following:

National-Level Case Management Activities

- Collaborated and coordinated with other relevant country government officials, partners, and stakeholders (Maternal and Child Health Directorate, Health Statistics Directorate, Community Health Directorate) on the implementation of MIP and iCCM.
- Funded outreach training and supportive supervision.
- Conducted malaria case management internship program for HWs from regional hospitals and regional mother and child health centers.
- Convened a national lessons learned workshop.

Commodities

- Worked with NMCP, Global Fund, DPH/MT, and ONPPC to coordinate the procurement and delivery schedules to ensure appropriate stock levels of CM commodities at service delivery points.
- Supported the procurement of 4,260,625 malaria RDTs for the common basket, accounting for approximately 70 percent of needs, and distributed 1,658,589 malaria RDTs in the two PMI focus regions.
- Supported the procurement of 1,859,550 ACTs for the common basket, accounting for approximately 50 percent of needs, and distributed 1,376,208 ACTs in the two PMI focus regions.
- Supported the procurement and distribution of 365,000 vials of parenteral artesunate for nationwide common basket, accounting for approximately 30 percent of national needs.

Facility Level

- Contributed to progress in key case management indicators after conducting four rounds of on-site training and supportive supervision visits in 96 CSI within 12 districts:
    - The proportion of HWs demonstrating competency in using malaria RDTs almost doubled between rounds 1 and 4, from 47 percent to 80 percent

    - The proportion of HWs with skills in the correct management of uncomplicated malaria increased from 11 percent in round 1 to 44 percent in round 4
    - 100 percent of the supervised HWs adhere to negative malaria RDT results
- Funded a malaria coordination meeting in the two PMI focus regions and 17 targeted health districts to promote data use and improve best practices in malaria diagnosis and treatment.

Community Level

- Expanded iCCM to two new health districts (total of five districts) and supported the training of 273 newly recruited CHWs.
- Trained 33 supervisors in OTSS+ for CHWs.
- Supported monthly supervision visits for 211 CHWs, accounting for 60 percent of active CHWs in the five PMI-supported districts.

Please note that recent progress with monitoring antimalarial efficacy and the therapeutic efficacy study (TES) approach is presented in the Plans and Justification for FY 2023 Funding section below (4.3).

4.3. Plans and Justification for FY 2023 Funding

The FY 2023 funding tables contain a full list of case management activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

National-Level Case Management Activities

PMI Niger will continue to support the national case management activities as described in the Recent Progress section (4.2).

Commodities

PMI Niger will continue to procure ACT, malaria RDT, injectable artesunate, and artesunate suppository as described in the Recent Progress section (4.2). Based on the most recent national quantification estimates, there is a projected need for additional malaria RDT procurement to ensure adequate commodity availability in 2024. PMI plans to procure 3.5 million malaria RDTs and 3,000,060 ACTs, 300,000 artesunate injectable vials, and 74,300 artesunate suppositories. It should be noted that the current Niger Global Fund grant ends in December 2023, and there will be an opportunity to program Global Fund resources to cover the anticipated gap for these commodities.

Please refer to the **ACT, malaria RDT, injectable artesunate, and artesunate suppository Gap Analysis Tables** in the annex for more detail on planned quantities and distribution channels.

Facility Level
PMI will continue to support supportive supervision as needed to strengthen CM activities in the PMI focus districts, as described in the Recent Progress section above (4.2).

Community Level
PMI/Niger will continue to support training, supervision, and payment of compensation (CFA15,000/month) to approximately 620 currently supported CHWs, 600 promotional CHWs, as well as the identified gap of 700 CHWs (for iCCM strengthening in the PMI focus districts, as described in the Recent Progress section, 4.2, above).

4.4. Monitoring Antimalarial Efficacy

Table 1. Ongoing and Planned Therapeutic Efficacy Studies (TES)

Ongoing Therapeutic Efficacy Studies (TES)			
Year	**Site name**	**Treatment arm(s)**	**Plan for laboratory testing of samples**
N/A	N/A	N/A	N/A
Planned TESs (funded with previous or current MOP)			
Year	**Site name**	**Treatment arm(s)**	**Plan for laboratory testing of samples**
2022	TBD	AL	In country at CERMES PARMA* hub in Senegal

*PMI-supported antimalarial resistance monitoring in Africa.

Please see the Social and Behavior Change section for details on challenges and opportunities to improve intervention uptake or maintenance.

5. Health Supply Chain and Pharmaceutical Management

5.1. PMI Goal and Strategic Approach

In 2019, the MOH, through the DPH/MT and with the support of partners (including PMI), developed its national supply chain strategic plan. The plan's goal is to establish an integrated health product supply chain mechanism called *chaine unique d'approvisionnement* (single supply chain) focused on ONPPC, coordinated by DPH/MT, and bringing together the various stakeholders to ensure regular availability of quality health products at all levels of the health pyramid. The MOH, through its vision of an integrated supply chain, aims to ensure that all people in Niger can access quality health products for full coverage of health needs, no matter where they are. For this reason, the MOH is committed to last mile distribution of health products.

PMI, other donors, DPH/MT, and the NMCP agreed on the need for an integrated pharmaceutical management system and to support the implementation of the national strategic plan for the management of medical supplies. PMI will prioritize its supply

chain interventions to address the strategic objective of reducing malaria commodity stockouts to a target of less than 10 percent of HFs. To this end, PMI will:

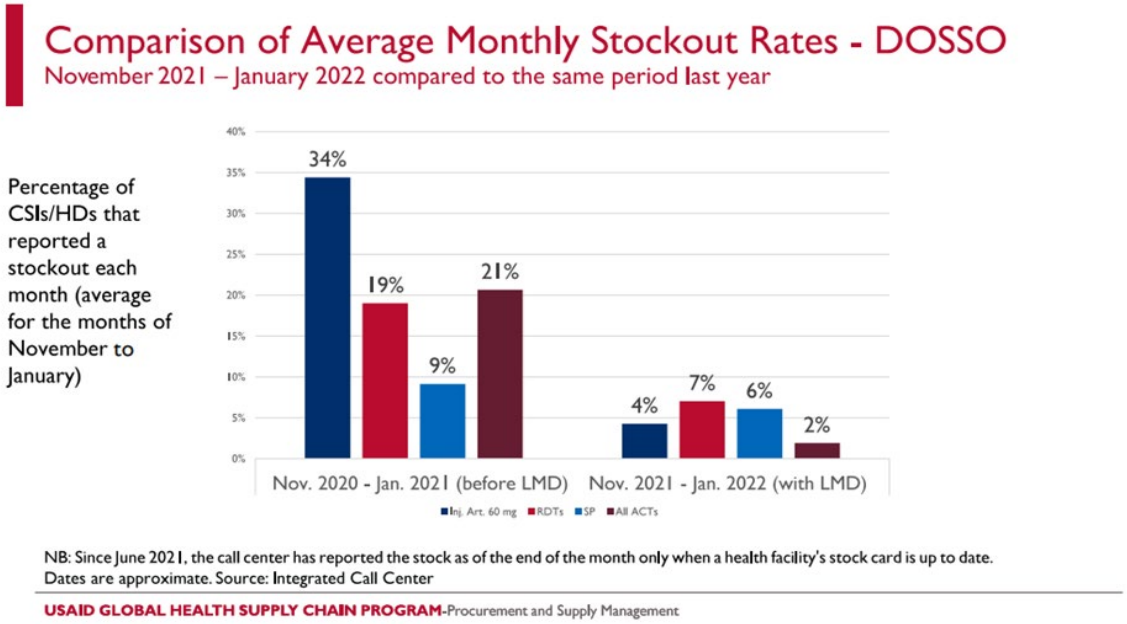
- Support the MOH by providing on-the-job training, supervision, and monitoring of regional, district, and HF staff on the reporting and use of malaria commodity data to better maintain appropriate stock levels at the facility level, and to improve stock and logistics information for malaria commodities.
- Implement last mile distribution of malaria commodities to HFs in the two PMI focus areas.
- Support ONPPC, DPH/MT and NMCP in coordination, quantification, warehousing, and distribution efforts, in addition to periodically assessing the use of malaria commodities via end-use verification surveys and data quality assessments.
- Coordinate the implementation of the PMI stockout reduction strategy that was developed in 2021 in collaboration with NMCP, DPH/MT, and partners. Through this strategy, PMI prioritizes activities to improve malaria commodity stock management at service delivery points, such as providing more support for a functioning LMIS and for improved data quality, analysis, and stock management in the two PMI focus regions.

5.2. Recent Progress (between January 2021 and December 2021)

PMI's principal supply chain investments to improve malaria commodity availability at service delivery sites included forecasting, supply planning, and management information systems. Some outcomes of these investments included:

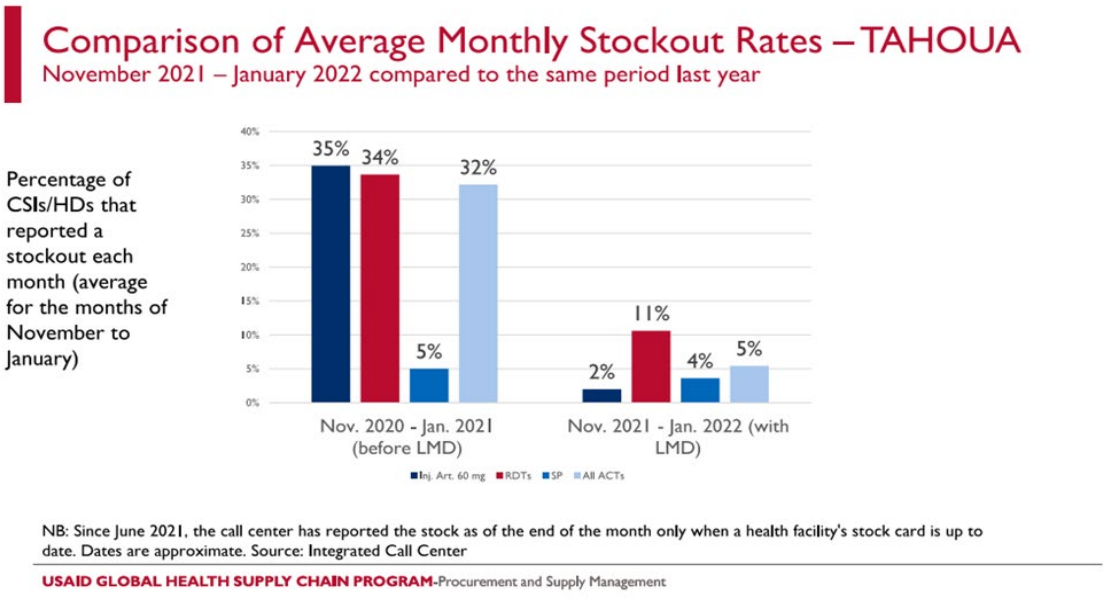
- Use of data collected through the call center to estimate average monthly consumption and inform and adjust the malaria distribution plan to health facilities.
- Monthly delivery of malaria commodities, including ITNs, to health sites through implementation of the last mile distribution approach in Dosso and Tahoua regions.
- Increased availability of key commodities (Figures 4 and 5), with a stockout rate of less than 10 percent in the public HFs in Dosso and Tahoua. The primary reasons for this improvement include availability of commodities at the central level and improved implementation of last mile distribution, informed by consumption data collected by the call center.

Figure 4. Average quarterly stockout rates in Dosso, Nov. 2020–Jan. 2021 and Nov 2021–Jan. 2022



Data source: Call center.

Figure 5. Average quarterly stockout rates in Tahoua, Nov. 2020–Jan. 2021 and Nov. 2021–Jan. 2022



Data source: Call center.

5.3. Plans and Justification with FY 2023 Funding

The FY 2023 funding tables contain a full list of health supply chain and pharmaceutical management systems strengthening that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

PMI Niger will continue to support forecasting and supply planning, warehouse and distribution technical assistance including last mile distribution, and LMIS activities, as described in the Recent Progress section (5.2).

6. Social and Behavior Change

6.1. PMI Goal and Strategic Approach

Niger's 2020–2025 National Strategic Plan for Malaria SBC was designed to support the 2017–2023 NMSP and promotes positive behavioral change among various stakeholders through their involvement in malaria prevention. PMI supports coordinated communication interventions deployed across PMI focus areas. Through partnerships with community radios and organizations (including religious and community leaders), and collaboration with promotional CHWs, PMI supports the NMCP's efforts to expand mass media and community-level interpersonal communication (IPC) activities. At the district level, PMI will support the development of work plans and materials, and support partner coordination efforts at the district level.

Under the guidance of the NMCP and in coordination with the Global Fund and other donors, PMI provided technical assistance at the central to develop and roll out the national malaria SBC strategy. The design of SBC interventions and messages aims to encourage uptake of IPTp, promote distribution of ITN during first ANC appointment and routine childhood vaccination visits through the Expanded Program on Immunization, promote use of ITNs, encourage communities to participate in SMC, promote early initiation of ANC through community-level activities, and promote care-seeking behavior. However, priorities and approaches in the strategy are based on almost no behavioral data.

6.2. Recent Progress (between January 2021 and December 2021)

- Developed messages and materials, including radio spots, encouraging prompt care-seeking among caregivers of children under five years of age and pregnant women to seek care at ANCs early and frequently so they can receive IPTp. This support included pre-testing the audio in rural areas and ensuring accurate local language translations and was provided at the central level.

- Broadcasted radio and television spots to promote SMC (support provided at central level).
- Engaged with religious leaders and community leaders in Dosso and Tahoua to adapt the French Malaria SBC toolkit for Community and Faith Leaders.
- Contributed to World Malaria Day activities.
- Collected SBC data through the SBC module of the 2021 MIS.
- Introduced the Community Action Cycle to the NMCP and all SBC implementing partners.

Implementation Challenges

- **ITNs:** Despite high access to nets, rates of use continue to be low; more data are needed to understand this issue.
- **MIP:** In addition to the distance from health centers, low ANC attendance is influenced by the gender dynamic within the couple which places women at a decision-making disadvantage.[4] This is compounded by poor perception of health posts, which are understaffed and have restricted operating times, long wait times, lack of equipment and diagnostic capabilities, lack of medicines, and not enough female providers.[5]
- **SMC:** Unknown compliance for second and third doses.
- **Case management:** A considerable barrier to prompt care-seeking in Niger is perceived economic cost. Much of the population does not know that malaria commodities are free for all and not just children under 5 years of age and pregnant women.
- **Service delivery:** Poor client reception is one of the biggest challenges in Niger's public health care system, deterring many from early care-seeking. Additional challenges include the lack of knowledge of the rights of women and children to health, inadequate training of HWs, weakness of MIP programs, and cultural norms that lead women to conceal their pregnancies.

6.3. Plans and Justification with FY 2023 Funding

The FY 2023 funding tables contain a full list of SBC activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

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[4] Rapport genre et recours aux CPN au Niger: Étude de Nassirou Ibrahim sur l'influence du rapport genre au CPN (June 18, 2014).

[5] Bedford, J.K., & Sharkey, A.B. Local barriers and solutions to improve care-seeking for childhood pneumonia, diarrhoea and malaria in Kenya, Nigeria and Niger: A qualitative study. PLoS One. 2014;9:e100038. doi: 10.1371/journal.pone.0100038.

Priorities

While PMI supports SBC activities that promote the uptake and maintenance of all key malaria interventions, the following three behaviors presented in Table 2 will be prioritized with FY 2023 funds.

Table 2. Priority Behaviors to Address

Behavior	Target Population	Geographic Focus	Programming to Address Behavior
Prompt care-seeking for fever for children under five years of age	Caregivers of children under 5 years of age	Tahoua and Dosso	• Dissemination of key messages in the local language, emphasizing that there is no cost for the malaria services • Engagement of schools to utilize children as messengers/change agents in the community • Formative supervision for HWs to incorporate appropriate IPC about malaria prevention during their patient consultations • Training and supervision of CHWs who provide health education and promotion
Early and frequent ANC attendance	Women of reproductive age (with a focus on adolescents and women in their first and second pregnancies)	Tahoua and Dosso	• Dissemination of key messages in the local language, with a particular emphasis on free malaria services for pregnant women • Engagement of female leaders • Formative supervision for HWs to incorporate appropriate IPC about malaria prevention during consultations • Training and supervision of CHWs who provide health education and promotion
Increased ITN use	Pregnant women and caregivers of children under five years of age	Tahoua and Dosso	• Engage schools to utilize children as messengers/change agents in the community • Community engagement through meetings and household visits • Formative supervision for HWs to incorporate appropriate IPC about malaria prevention during their patient consultations • Training and supervision of CHWs who provide health education and promotion

Additional Support Activities

Given the size of Niger's population under 5 years of age and its vulnerability to malaria, communications support is needed for the annual SMC campaign. Acceptance of SMC is fairly high, but efforts are needed each year to inform caregivers about the date of the campaign and how to administer the second and third doses.

Because the MIS was conducted in 2021 with the expanded SBC module, no SBC data collection is planned for FY 2023. The awaited results will help inform SBC work in FY 2023.

Due to budget limitations, PMI/Niger has decided to prioritize funding activities to encourage uptake and maintenance of malaria-related health behaviors rather than directly supporting NMCP capacity strengthening around communications.

7. Surveillance, Monitoring, and Evaluation

7.1. PMI Goal and Strategic Approach

In Niger, PMI collaborates with the NMCP and Global Fund to provide technical assistance and resources for SM&E activities. In support of the NMCP strategy and needs in Niger, PMI and the NMCP have prioritized interventions such as technical assistance for data analyses and use of data at all levels (national, regional, and HF) to produce bulletins, data quality assessments, and strengthened use of the DHIS2 platform.

7.2. Recent Progress (between January 2021 and December 2021)

PMI supported the following activities at the central level:

- Quarterly meetings for the monitoring and evaluation technical working group
- Planning and implementation of the MIS
- Data review and analysis through a technical advisor
- Training of central-level staff on the use of DHIS2 for data analysis
- Investigation of an increased number of reported malaria cases in 2021

PMI supported the following activities at the regional, district, and facility levels in the two PMI focus regions, Dosso and Tahoua:

- Streamlined data collection, reporting and use
- Data quality assessments and supportive supervision
- Trained regional level staff on the use of DHIS2 for data analysis
- Provided equipment (laptop and solar panel) to CSI
- Organized a 2-week malaria SM&E training to strengthen the capacity of 20 participants from the NMCP and districts

The DHIS2 system remains weak due to data entry challenges at the HF level and ongoing revisions of the DHIS2 system. The timeliness of reporting is acceptable, but the completeness and accuracy remains challenging due to lack of internet connection and electricity. Despite training efforts, there are human resources issues due to lack of health staff, high turnover, and overstretched staff.

7.3. Plans and Justification with FY 2023 Funding

The FY 2023 funding tables contain a full list of SM&E activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

Niger will continue to support routine activities on regional, district, and HF levels in the two PMI focus regions (Tahou and Dosso) to improve data quality and analyses by supporting technical advisors in these regions. Due to decreased funding, PMI will continue providing technical assistance to the NMCP but will no longer support a technical advisor at the national level. In collaboration with other donors, PMI will also support the MIS.

Table 3. Available Malaria Surveillance Sources

Source	Data Collection Activity	2020	2021	2022	2023	2024	2025
Household Surveys	Demographic Health Survey						
Household Surveys	Malaria Indicator Survey		X			P	
Household Surveys	Multiple Indicator Cluster Survey						
Household Surveys	Expanded Program of Immunization Survey						
Health Facility Surveys	Service Provision Assessment						
Health Facility Surveys	Service Availability Readiness Assessment Survey						
Health Facility Surveys	Other Health Facility Survey						
Malaria Surveillance and Routine System Support	Therapeutic Efficacy Studies	X		P		P	
Malaria Surveillance and Routine System Support	Support to Parallel Malaria Surveillance System						
Malaria Surveillance and Routine System Support	Support to HMIS	X	X	X	P	P	P
Malaria Surveillance and Routine System Support	Support to Integrated Disease Surveillance and Response		X	X	P	P	P
Malaria Surveillance and Routine System Support	Electronic Logistics Management Information System				P	P	P
Malaria Surveillance and Routine System Support	Malaria Rapid Reporting System						
Other	End-Use Verification	X	X	X	P	P	P
Other	School-based Malaria Survey						

Source	Data Collection Activity	2020	2021	2022	2023	2024	2025
Other	Knowledge, Attitudes and Practices Survey, Malaria Behavior Survey						
Other	Malaria Impact Evaluation						
Other	Entomologic Monitoring Surveys	X	X	X	P	P	P

X denotes completed activities and P denotes planned activities.

8. Operational Research and Program Evaluation

8.1. PMI Goal and Strategic Approach

The Niger 2017–2023 NMSP goal for operational research is to support the documentation of good practices and successful experiences. PMI will not support operational research with FY 2023 funding but will instead to prioritize other programmatic needs.

8.2. Recent Progress (between January 2021 and December 2021)

Due to budget constraints, no operational research is currently implemented

Table 4. Non-PMI funded Operational Research/Program Evaluation Studies Planned/Ongoing in Niger

Source of Funding	Implementing institution	Research Question/Topic	Current status/ timeline
OPT-SMC (EDCTP)	CERMES	Impact of SMC	Institutional Review Board approval obtained; study start before 2022 SMC campaign
KOICA	CRS	Increasing the target age of SMC to 10 years	Protocol development

8.3. Plans and Justification with FY 2023 Funding

No operational research or program evaluation activities are proposed with FY 2023 funding.

9. Capacity Strengthening

9.1. PMI Goal and Strategic Approach

PMI Niger has two main objectives for capacity strengthening interventions. PMI wants to support the governance of the NMCP program by mentoring and coaching the leadership to strengthen management and oversight of malaria program

implementation. PMI also wants to support workforce development and strengthening of the surveillance system through the support of the field FETP.

9.2. Recent Progress (between January 2021 and December 2021)

The frontline FETP, implemented by the epidemiology and surveillance division of the MOH, became operational. PMI supported the development of a strategic plan, adaptation of the training materials developed by CDC through south-to-south technical assistance, training of trainers and training of mentor sessions, and the implementation of the first cohort of 30 staff from the MOH, the Ministry of Environment, and the Ministry of Livestock. PMI worked with CDC, Global Fund and USAID to identify support for a long-term FETP resident advisor and to fund at least five other sessions.

9.3. Plans and Justification with FY 2023 Funding

The FY 2023 funding tables contain a full list of capacity strengthening activities that PMI proposes to support in Niger with FY 2023 funding. Please visit www.pmi.gov/resources/malaria-operational-plans-mops for these FY 2023 funding tables.

PMI will continue its investment in supporting the leadership and governance of the NMCP program by supporting capacity building in governance and leadership and providing opportunities to meet with peers in international meetings. PMI Niger is not able to support additional FETP frontline cohorts due to budget constraints but will provide mentorship and support.

10. Staffing and Administration

A minimum of three health professionals oversee PMI in Niger. The USAID Mission Director or their designee leads single interagency team, which consists of a Resident Advisor representing USAID, a Resident Advisor representing CDC, and one or two locally hired experts known as Foreign Service Nationals. The PMI interagency team works to oversee all technical and administrative aspects of PMI, including finalizing details of the project design, implementing malaria prevention and treatment activities, monitoring and evaluation of outcomes and impact, reporting of results, and providing guidance and direction to PMI implementing partners.

ANNEX: GAP ANALYSIS TABLES

Table A-1. ITN Gap Analysis Table

Calendar Year	2022	2023	2024
Total country population	24,465,615	25,363,503	26,312,032
Total population at risk for malaria	24,465,615	25,363,503	26,312,032
PMI-targeted at-risk population	7,723,210	8,009,925	8,311,196
Population targeted for ITNs	24,465,615	25,363,503	26,312,032
Continuous Distribution Needs			
Channel 1: ANC	**1,021,809**	**1,074,647**	**1,129,671**
	341,284	358,932	377,310
Channel 1: ANC Type of ITN	Single Pyrethroid	Single Pyrethroid	Single Pyrethroid
	372,960	392,246	412,330
Channel 1: ANC Type of ITN	PBO	PBO	PBO
	307,565	323,469	340,031
Channel 1: ANC Type of ITN	Dual AI	Dual AI	Dual AI
Channel 2: EPI	**1,233,066**	**1,269,189**	**1,308,503**
	411,844	423,909	437,040
Channel 2: EPI Type of ITN	Single Pyrethroid	Single Pyrethroid	Single Pyrethroid
	450,069	463,254	477,604
Channel 2: EPI Type of ITN	PBO	PBO	PBO
	371,153	382,026	393,859
Channel 2: EPI Type of ITN	Dual AI	Dual AI	Dual AI
Channel 3: School			
Channel 3: School Type of ITN			
Channel 4: Community			
Channel 4: Community Type of ITN			
Channel 5:			
Channel 5: Type of ITN			
Estimated Total Need for Continuous Channels	**2,254,875**	**2,343,836**	**2,438,174**
Mass Campaign Distribution Needs			
Mass distribution campaigns			
	3,147,859	0	4,882,344
Mass distribution ITN type	Single Pyrethroid	Single Pyrethroid	Single Pyrethroid
	3,440,025	0	5,335,495
Mass distribution ITN type	PBO	PBO	PBO
	2,836,843	0	4,399,956
Mass distribution ITN type	Dual AI	Dual AI	Dual AI
Estimated Total Need for Campaigns	**9,424,727**	**0**	**14,617,795**
Total ITN Need: Continuous and Campaign	**11,679,602**	**2,343,836**	**17,055,969**
Partner Contributions			
ITNs carried over from previous year	935,930	0	0
ITNs from Government	60,000	60,000	60,000
Type of ITNs from Government	PBO	PBO	PBO

Calendar Year	2022	2023	2024
ITNs from Global Fund	**9,883,850**	**1,121,081**	**0**
	3,120,650	868,322	0
Type of ITNs from Global Fund	Single Pyrethroid	Single Pyrethroid	Single Pyrethroid
	3,706,600	0	0
Type of ITNs from Global Fund	PBO	PBO	PBO
	3,056,600	252,760	0
Type of ITNs from Global Fund	Dual AI	Dual AI	Dual AI
ITNs from other donors			
Type of ITNs from other donors			
ITNs planned with PMI funding	**402,500**	**100,000**	**100,000**
Type of ITNs with PMI funding	PBO	PBO	PBO
Total ITNs Contribution Per Calendar Year	**11,282,280**	**1,281,081**	**160,000**
Total ITN Surplus (Gap)	**(397,322)**	**(1,062,755)**	**(16,895,969)**

Table A-2. RDT Gap Analysis Table

Calendar Year	2022	2023	2024
Total country population	24,465,615	25,363,503	26,312,032
Population at risk for malaria	24,465,615	25,363,503	26,312,032
PMI-targeted at-risk population	7,723,210	8,009,925	8,311,196
RDT Needs			
Total number of projected suspected malaria cases	9,188,599	9,744,544	10,404,287
Percent of suspected malaria cases tested with an RDT	90%	90%	90%
RDT Needs (tests)	8,415,297	8,929,041	9,544,096
Needs Estimated based on Other (specify in comments)			
Partner Contributions (tests)			
RDTs from Government	0	200,000	0
RDTs from Global Fund	0	0	
RDTs from other donors	0	0	0
RDTs planned with PMI funding	2,920,250	3,443,000	3,500,000
Total RDT Contributions per Calendar Year	**2,920,250**	**3,643,000**	**3,500,000**
Stock Balance (tests)			
Beginning Balance	2,304,725	0	0
- Product Need	8,415,297	8,929,041	9,544,096
+ Total Contributions (received/expected)	2,920,250	3,643,000	3,500,000
Ending Balance	**(3,190,322)**	**(5,286,041)**	**(6,044,096)**
Desired End of Year Stock (months of stock)	6	6	6
Desired End of Year Stock (quantities)	4,207,649	4,464,521	4,772,048
Total Surplus (Gap)	**(7,397,971)**	**(9,750,562)**	**(10,816,144)**

Table A-3. ACT Gap Analysis Table

Calendar Year	2022	2023	2024
Total country population	24,465,615	25,363,503	26,312,032
Population at risk for malaria	24,465,615	25,363,503	26,312,032
PMI-targeted at-risk population	7,723,210	8,009,925	8,311,196
ACT Needs			
Total projected number of malaria cases	5,101,528	5,411,987	5,807,500
Total ACT Needs (treatments)	**5,101,528**	**5,411,987**	**5,807,500**
Needs Estimated based on Other (specify in comments)			
Partner Contributions (treatments)			
ACTs from Government	735,671	0	
ACTs from Global Fund	1,878,030	544,849	0
ACTs from other donors	0	0	0
ACTs planned with PMI funding	2,066,010	2,157,000	3,000,060
Total ACTs Contributions per Calendar Year	**4,679,711**	**2,701,849**	**3,000,060**
Stock Balance (treatments)			
Beginning Balance	2,285,130	0	0
- Product Need	5,101,528	5,411,987	5,807,500
+ Total Contributions (received/expected)	4,679,711	2,701,849	3,000,060
Ending Balance	**1,863,313**	**(2,710,138)**	**(2,807,440)**
Desired End of Year Stock (months of stock)	6	6	6
Desired End of Year Stock (quantities)	2,550,764	2,705,993	2,903,750
Total Surplus (Gap)	**(687,451)**	**(5,416,131)**	**(5,711,190)**

Table A-4. Inj. Artesunate Gap Analysis Table

Calendar Year	2022	2023	2024
Injectable Artesunate Needs			
Projected number of severe cases	402,612	397,604	379,836
Projected number of severe cases among children	257,417	255,276	246,659
Average number of vials required for severe cases among children	3	3	3
Projected number of severe cases among adults	115,764	114,775	110,168
Average number of vials required for severe cases among adults	9	9	9
Total Injectable Artesunate Needs (vials)	**2,852,174**	**2,831,377**	**2,732,931**
Needs Estimated based on Other (specify in comments)			
Partner Contributions (vials)			
Injectable artesunate from Government	0	0	0
Injectable artesunate from Global Fund	0	0	
Injectable artesunate from other donors	0	0	0
Injectable artesunate planned with PMI funding	354,210	300,000	300,000
Total Injectable Artesunate Contributions per Calendar Year	**354,210**	**300,000**	**300,000**
Stock Balance (vials)			
Beginning Balance	585,360	0	0
- Product Need	2,852,174	2,831,377	2,732,931
+ Total Contributions (received/expected)	354,210	300,000	300,000
Ending Balance	**(1,912,604)**	**(2,531,377)**	**(2,432,931)**
Desired End of Year Stock (months of stock)	6	6	6
Desired End of Year Stock (quantities)	1,426,087	1,415,688	1,366,465
Total Surplus (Gap)	**(3,338,691)**	**(3,947,065)**	**(3,799,396)**

Table A-5. RAS Gap Analysis Table

Calendar Year	2022	2023	2024
Artesunate Suppository Needs			
Number of severe cases expected to require pre-referral dose (or expected to require pre-referral dose based on number of providers for the service)	47,008	48,033	49,290
Total Artesunate Suppository Needs (suppositories)	**70,850**	**72,394**	**74,289**
Needs Estimated based on Other (please specify in comment section)			
Partner Contributions (suppositories)			
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	61,000	20,416	74,300
Total Artesunate Suppositories Available	**61,000**	**20,416**	**74,300**
Stock Balance (suppositories)			
Beginning Balance	5,600	0	0
- Product Need	70,850	72,394	74,289
+ Total Contributions (received/expected)	61,000	20,416	74,300
Ending Balance	**(4,250)**	**(51,978)**	**11**
Desired End of Year Stock (months of stock)	6	6	6
Desired End of Year Stock (quantities)	35,425	36,197	37,144
Total Surplus (Gap)	**(39,674)**	**(88,175)**	**(37,133)**

Table A-6. SP Gap Analysis Table

Calendar Year	2022	2023	2024
Total Country Population	24,465,615	25,363,503	26,312,032
Total Population at Risk for Malaria	24,465,615	25,363,503	26,312,032
PMI Targeted at Risk Population	7,723,210	8,009,925	8,311,196
SP Needs			
Total Number of Pregnant Women	1,282,874	1,322,318	1,363,021
Couverture CPNR 1	79.65%	81.27%	82.88%
Percent of pregnant women expected to receive IPTp1	72.12%	75.28%	78.43%
Percent of pregnant women expected to receive IPTp2	64.99%	67.84%	70.68%
Percent of pregnant women expected to receive IPTp3	47.31%	49.98%	52.65%
Percent of pregnant women expected to receive IPTp4			
Total SP Needs (doses)	**1,884,420**	**2,075,145**	**2,279,226**
Needs Estimated based on HMIS Data			
Partner Contributions (doses)			
SP from Government	0	0	0
SP from Global Fund	1,443,340	1,059,815	0
SP from other donors	0	0	0
SP planned with PMI funding	1,000,000	1,360,000	1,360,000
Total SP Contributions per Calendar Year	**2,443,340**	**2,419,815**	**1,360,000**
Stock Balance (doses)			
Beginning balance	290	559,210	903,880
- Product Need	1,884,420	2,075,145	2,279,226
+ Total Contributions (Received/expected)	2,443,340	2,419,815	1,360,000
Ending Balance	**559,210**	**903,880**	**(15,346)**
Desired End of Year Stock (months of stock)	6	6	6
Desired End of Year Stock (quantities)	942,210	1,037,572	1,139,613
Total Surplus (Gap)	**(383,001)**	**(133,693)**	**(1,154,959)**

Table A-7. SMC Gap Analysis Table

Calendar Year	2022	2023	2024
Total population in the SMC targeted age range	23,916,290	24,801,692	25,731,323
SMC Drug (SP+AQ) Needs			
National population 3-11 months targeted for SMC	1,003,347	1,034,180	1,066,104
National population 12-59 months targeted for SMC	3,668,006	3,777,577	3,890,981
National population 60-119 months targeted for SMC	564,442	315,881	483,020
Total national population targeted for SMC	**5,235,795**	**5,127,638**	**5,440,105**
PMI population 3-11 months targeted for SMC	324,008	333,998	344,431
PMI population 12-59 months targeted for SMC	1,184,498	1,220,000	1,257,076
National population 60-119 months targeted for SMC	0	61,566	63,657
Total PMI population targeted for SMC	**1,508,506**	**1,615,564**	**1,665,164**
Total SP+AQ Needs (co-blisters)	**20,524,429**	**43,284,139**	**45,572,201**
Partner Contributions (co-blisters, national)			
SP+AQ carried over from previous year	1,329,300	573,114	0
SP+AQ from Government	0	0	0
SP+AQ from Global Fund	13,753,993	13,129,654	0
SP+AQ from other donors	0	0	0
SP+AQ planned with PMI funding	6,014,250	6,200,050	6,908,900
Total SP+AQ Contributions per Calendar Year	**21,097,543**	**19,902,817**	**6,908,900**
Total SP+AQ Surplus (Gap)	**573,114**	**(23,381,322)**	**(38,663,301)**