

18TH ANNUAL

# REPORT TO CONGRESS

2024

**PMI**

U.S. PRESIDENT'S  
MALARIA INITIATIVE

LED BY



**USAID**  
FROM THE AMERICAN PEOPLE



# MESSAGE FROM U.S. GLOBAL MALARIA COORDINATOR

DR. DAVID WALTON

In my travels as U.S. Global Malaria Coordinator, I have seen first-hand the energy, dedication, and ingenuity of those working on the front lines of the fight to end malaria.

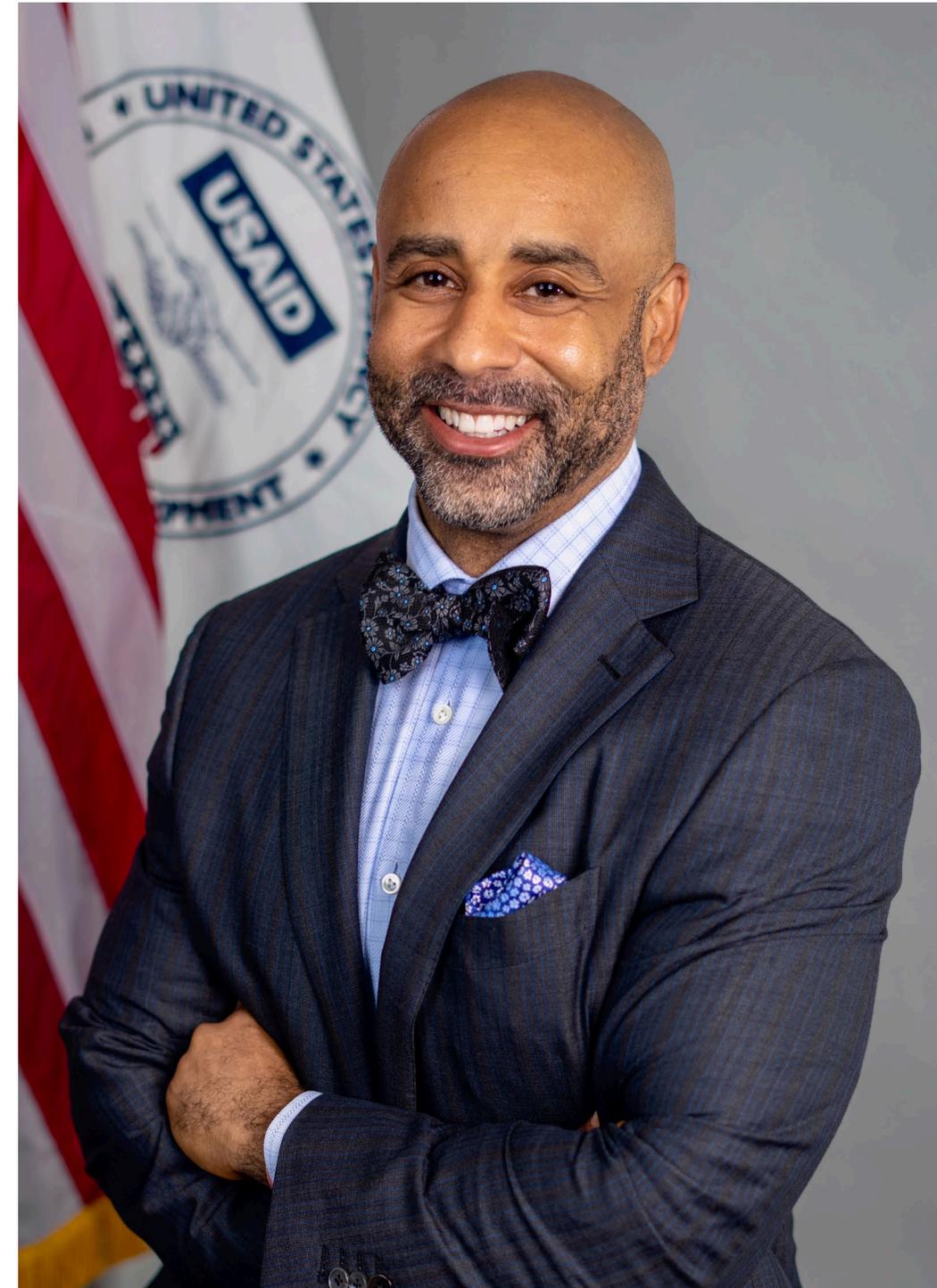
In my visit to Liberia, for example, I saw how that country's full-scale deployment of community health workers to promptly test and treat for malaria, along with nationwide delivery of a newer type of mosquito net, resulted in dramatic gains in malaria control, with a nationwide survey showing less than half as many children testing positive for malaria compared to six years ago. Efforts like these have helped bring the rate of deaths from malaria across U.S. President Malaria Initiative (PMI) partner countries back to pre-COVID-19 pandemic levels—a testament to PMI's approach, the resilience of our programs, and the commitment of our partners.

Progress is being made in the face of daunting challenges. Emerging biological threats are eroding the effectiveness of the malaria control tools that have driven the world's amazing progress against the disease over the last two decades. Climate shocks and changing weather patterns are increasingly impacting efforts to protect people from malaria and support resilient communities. Despite increased contributions from the U.S. government, global funding

to combat malaria has plateaued since 2010.<sup>1</sup> The World Health Organization reported five million more malaria cases globally in 2022 compared to 2021.<sup>2</sup>

Through the bipartisan support of the U.S. Congress and the generosity of the American people, PMI is striving to overcome these challenges as we drive toward our goal of a world without malaria. Our work shows countries around the world that the United States is an essential partner, a partner that helps tackle complex and difficult problems such as malaria, a partner who cares. By strengthening global health security, PMI is making the world safer and more equitable for everyone, including Americans.

PMI is continuing to find new ways to drive toward our objectives to reduce malaria cases and deaths as outlined in PMI's Strategy 2021-2026.<sup>3</sup> We are tailoring programs to meet the needs of each country and supporting local leadership to end malaria faster. Given what I see accomplished every day through PMI's programs in Africa and Asia, I believe it is possible to end malaria in our lifetime. With U.S. leadership and robust global commitment, we can turn the vision of a malaria-free world into a reality.





# ABOUT THE U.S. PRESIDENT'S MALARIA INITIATIVE

PMI is the U.S. government's largest program leading the fight against malaria, partnering with countries that account for almost 90 percent of the world's malaria cases and deaths.<sup>4</sup> Established by President George W. Bush in 2005, PMI is led by the U.S. Agency for International Development (USAID) and co-implemented with the U.S. Centers for Disease Control and Prevention (CDC). PMI partners with countries to support stronger, more resilient health systems that combat malaria and strengthen global health security. Working with governments, civil society and faith organizations, universities, the private sector, and local communities, PMI's work supporting healthier families that can thrive, makes the world safer and more prosperous for everyone.

“We can—and we will—end malaria. And together, we will build a more healthy, secure, and prosperous world for future generations.”

- President Joe Biden

“The goal of defeating malaria is a challenging goal, yet it can be done. It's not going to require a miracle, it just requires a smart, sustained, focused effort.”

- Former President George W. Bush

## Bipartisan Commitment Demonstrates American Generosity To The World

Thanks to the bipartisan support of Congress and the generosity of the American people, PMI has invested approximately \$10 billion since 2006 to help partner countries fight malaria, one of the world's deadliest diseases. With FY 2023 funding, PMI will invest \$778 million across 27 countries in sub-Saharan Africa and three programs in the greater Mekong subregion of Asia.



The U.S. government, through PMI and the U.S. contribution to the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund), plays a leading role in helping partner countries and saving lives. Together with our partners, PMI has helped save 11.7 million lives and prevent 2.1 billion malaria cases since 2000.

In FY 2023, PMI benefited more than **700 million people**

Since 2006, in countries where PMI works, global efforts have supported:

**44.1%**

Average decrease in child death rates from all causes<sup>5</sup>

**28.7%**

Decline in malaria case rates<sup>2</sup>

**48.2%**

Decline in malaria death rates<sup>2</sup>

PMI DELIVERED:

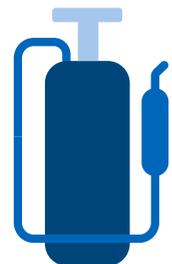


**36.8m**

mosquito nets (ITNs)

TO PROTECT:

**73.6m people**



Insecticide to spray

**4.2m**

homes (IRS)

TO PROTECT:

**15.5m people**



**15m**

preventive treatments in pregnancy (IPTp)

TO PROTECT:

**5m pregnancies**

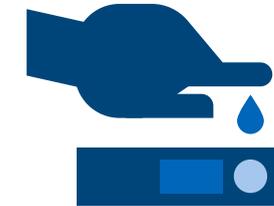


**48m**

seasonal preventive treatments (SMC)

TO PROTECT:

**12m children**



**102.7m**

rapid diagnostic tests (RDTs)

TO PROTECT:

**102.7m people**



**63.3m**

malaria medicines (ACTs)

TO PROTECT:

**63.3m people**

# MALARIA TODAY

Since 2000, the world has made incredible progress in preventing malaria cases and saving lives. In the past decade progress has slowed, however, and the world is now struggling to regain the upper hand in the fight against the disease.

WHO estimates there were 249 million malaria cases globally in 2022, five million more than in 2021. There was a marginal decline in deaths, from 610,000 deaths in 2021 to 608,000 in 2022. Africa accounted for around 95 percent of deaths and 94 percent of cases globally. Over three-quarters of deaths from malaria in 2022 were of children under five years of age.



**Malaria is a preventable and treatable disease that can be deadly if untreated.**

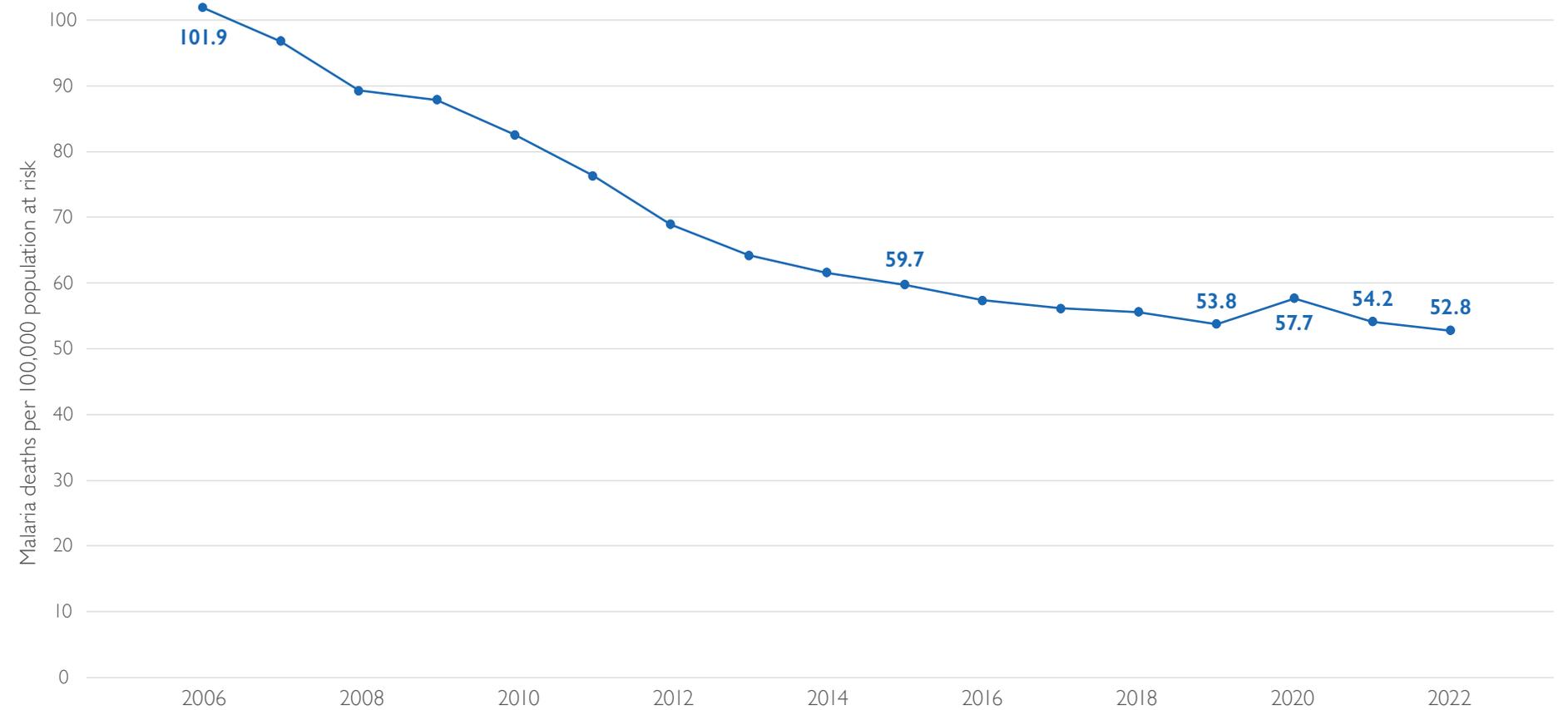
Pregnant women and children who have lower immunity, and those living in poverty or rural areas who may have difficulty accessing health care, are at greatest risk. **A child dies of malaria almost every minute.**





## Malaria Mortality Rate in PMI Partner Countries, 2006-2022

(Deaths per 100,000 population at risk)



Source: WHO World Malaria Report 2023

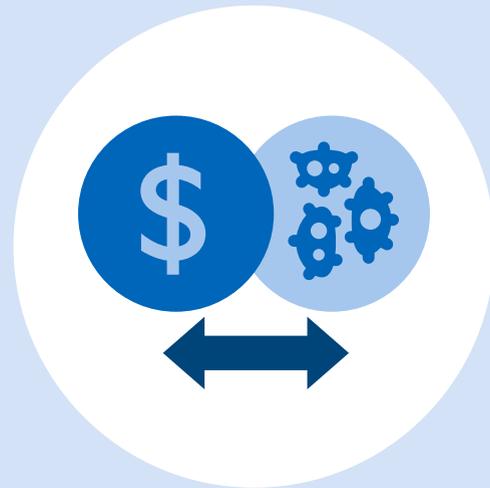
### Continuing to save lives despite rising case numbers

Death rates from malaria in PMI partner countries fell in 2022 (52.8 deaths per 100,000) to around pre-pandemic levels (53.8 deaths per 100,000 in 2019). While every death from malaria is a tragedy, this welcome reduction in the death rate demonstrates the determination of partner countries to protect people from malaria even in the toughest circumstances.

# GLOBAL FUNDING TO FIGHT MALARIA:

**The population at risk for malaria has almost doubled since 2000, and funding has plateaued since 2010.**

The funding gap between the amount invested and the resources needed has continued to widen significantly, particularly over the past five years.



In 2022, there was a \$3.7 billion gap between the \$7.8 billion in global funding that WHO estimated was needed to fight malaria and the \$4.1 billion available.



Through a combination of bilateral and multilateral support, the United States provided \$1.5 billion in 2022, the largest contribution from a single country.



Governments of malaria endemic countries contributed over \$1.5 billion, a substantial increase of more than \$400 million since 2021, largely stemming from an influx of domestic spending in the African region.<sup>2</sup>

# DEFEATING MALARIA: A NATIONAL SECURITY IMPERATIVE

## A THREAT OVERSEAS AND AT HOME

In 2023, for the first time in 20 years, ten locally-acquired mosquito-transmitted malaria cases,<sup>6</sup> were reported in the United States—seven in Florida, one in Texas, one in Maryland, and one in Arkansas.

Malaria was eliminated in the United States by the early 1950s. Approximately 2,000 cases of malaria are diagnosed in the United States each year; the patients are primarily U.S. travelers returning from trips abroad. **With over 30 U.S. states home to species of mosquitoes that can transmit malaria, the risk of reintroduction of this deadly disease to the United States will persist until it is eliminated globally.**



### The benefits of combating malaria extend beyond health

By 2050, Africa is expected to be home to one-quarter of the world's population and one-third of the world's youth (people ages 15 to 24).<sup>7</sup> Defeating malaria would help boost the continent's productivity and educational and economic development. Studies have shown that children from households experiencing poverty have a significantly higher chance of getting malaria.<sup>8</sup> Parents suffering from malaria, or caring for sick children, often are unable to work to

support their families, creating a cycle of poverty and inequity. It is estimated that malaria reduces GDP growth by approximately 1.3 percent per year in some African countries.<sup>9</sup> **Healthy and thriving communities are more prosperous, stronger trading partners for the United States, are more politically stable, and help make the world more secure and equitable for everyone.**



### PMI adds three new partner countries

In FY 2023, PMI announced plans to form partnerships with and invest in the fight against malaria in three new countries—Burundi, The Gambia, and Togo—to further fulfill the initiative's mandate to reduce malaria cases and deaths by bringing lifesaving tools and treatments to more of those in need.



# ESCALATING THREATS REQUIRE URGENT RESPONSES

Escalating threats are increasingly and dramatically complicating efforts to control malaria and keep communities safe.

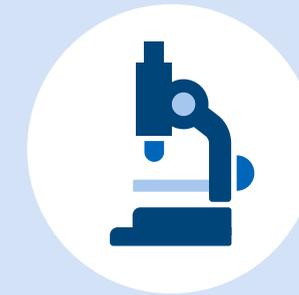
**Resistance in mosquitoes to the insecticides used on mosquito nets and sprayed in homes has been detected in all PMI partner countries.** PMI supports countries as they monitor insecticide resistance to make sure the tools used to protect communities are effective. In FY 2023, PMI supported Côte d'Ivoire in gathering and analyzing data that revealed that the number of health districts needing new types of nets with additional chemicals to combat resistance had nearly tripled since 2019. Angola

distributed more than 400,000 newer types of nets with additional chemicals for the first time in response to increasing insecticide resistance. In FY 2023, 85 percent of all nets provided by PMI to partner countries were of the newer types, compared to 60 percent the year before. Countries also rotate the types of insecticide used for indoor spraying of homes in response to emerging resistance by mosquitoes. USAID contributes to development of new insecticides for mosquito nets and spraying homes through the Innovative Vector Control Consortium to support a pipeline of new tools to stay ahead of ever-evolving mosquitoes.

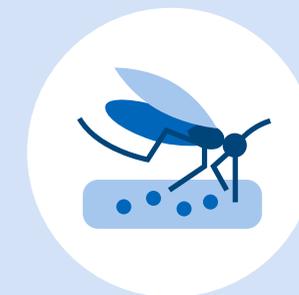
In FY 2023, PMI supported:



**360**  
sites monitoring  
insecticide resistance



**60**  
sites monitoring  
parasite drug resistance



**228**  
sites monitoring  
mosquito behavior

## Parasites are developing resistance to the drugs that treat malaria

Widespread use of artemisinin-based combination therapies (ACTs), which combine artemisinin with a partner drug, have contributed to tremendous reductions in malaria cases and deaths over the past 15 years. Today, these gains are threatened as partial resistance to artemisinin has been confirmed in Eritrea, Rwanda, Uganda, and Tanzania. There is also emerging evidence that the efficacy of the partner drug most commonly used in ACTs (lumefantrine) is declining in multiple countries including Angola, Burkina Faso, the Democratic Republic of the Congo (DRC), Kenya, Tanzania, and Uganda. **PMI works with partner countries and organizations to implement the actions recommended in WHO's Strategy to Respond to Antimalarial Drug Resistance in Africa.**<sup>10</sup> In countries with evidence of antimalarial resistance, PMI is supporting the switch to alternative, more effective ACTs and strengthening molecular

surveillance to detect changes in drug resistance, while also ensuring coverage with other malaria control tools such as insecticide-treated nets. PMI is working with global partners and national malaria programs to diversify the use of alternate ACTs—which unfortunately can be approximately two to three times as expensive (or \$1 more) per treatment—to protect populations as resistance emerges. In FY 2023, USAID continued to collaborate with the product development partnership Medicines for Malaria Venture (MMV) to increase access to newer antimalarial medicines. Cooperation with MMV included working to lower the price of newer antimalarials through volume procurement agreements and securing the supply of ingredients for malaria medicines.



Santigie Sesay, a laboratory officer at the Central Public Health Reference Laboratory in Sierra Leone strengthened his laboratory skills for identifying drug resistance by participating in a PMI-supported program that brings together malaria experts from across Africa to identify emerging drug resistance and adapt treatment practices if necessary. Through this network, PMI is helping numerous laboratories in partner countries enrich their skills to independently monitor for antimalarial drug resistance, in collaboration with CDC's Malaria Lab in Atlanta.

“**The training was the most sophisticated of my career, but it was done in a way that I truly learned and am able to bring back skills to my colleagues at the laboratory. I have already started to transfer new techniques of nucleic acid amplification to my fellow laboratory officers.**”

- Santigie Sesay



***Anopheles stephensi* mosquitoes continue to spread in Africa, risking decades of progress in the fight to end malaria.**

Common in Asia but newer to Africa, this species of mosquito has been detected in eight African countries. Its ability to thrive in urban environments, transmit malaria year-round, and evade the main malaria mosquito control tools currently available makes its spread particularly dangerous in rapidly urbanizing Africa. PMI is coordinating and collaborating with partners globally—as well as leading coordination with CDC, the Department of Defense, and other U.S. government agencies—to identify opportunities to enhance surveillance and early detection and facilitate rapid response.

PMI supported the first large-scale control campaign in Africa specifically targeting *An. stephensi* in eight towns in Ethiopia in FY 2022. These efforts involved adding larvicide, which kills mosquito larvae, to the water where these mosquitoes develop. In FY 2023, PMI started transitioning the larvicide activities to local authorities and communities, and supported research at Dire Dawa University in Ethiopia to continue assessing the effectiveness of using larvicide to control the spread of the mosquito. PMI also conducted laboratory

training workshops on detecting *An. stephensi* with participants from seven African countries. In FY 2023, PMI disseminated the PMI *Anopheles stephensi* (*An. stephensi*) Action Plan,<sup>11</sup> with recommended activities and protocols, to all partner countries.

**Adapting to weather variability is becoming increasingly central to how PMI approaches malaria prevention and control.**

Despite the need for more research to solidify the connection between malaria and weather variability, especially on impacts over the longer term, PMI partner countries are already experiencing the impact of changing weather patterns on their ability to protect populations from malaria. There is growing urgency around the need to monitor and adapt malaria prevention and control activities to build resilience in the face of changing rainy seasons and severe weather events.

The timing and duration of seasonal peaks in malaria transmission may be affected by changing weather patterns, so ongoing analysis of rainfall and disease data is used to determine the timing and duration of malaria prevention campaigns. For example, in FY 2023, Cameroon extended its campaigns from four to five months in nine health



districts after analyzing historic rainfall and disease incidence data and determining that the high-transmission season was lasting longer than four months. Zambia used similar data to prioritize insecticide spraying and distribution of insecticide-treated nets to communities often cut off by floods during the rainy season. Community health workers in these areas were given several months' worth of malaria tests and treatments before the rains began so they could continue to care for community members even when the roads were impassable and supplies could not make it through.

PMI is finding ways to be more efficient and create less waste when implementing malaria services. PMI partnered with Mozambique to reduce the size of the boxes used to provide community health workers with malaria tests and medicines, increasing the number of kits that can be loaded on a truck from 800 to 1,200. More PMI partner countries now also recycle the waste from insecticide spray campaigns, such as plastic basins, cardboard boxes, and rubber items. In 2023, PMI in Nigeria participated in a pilot program to recycle plastic packaging from 63,000 insecticide-treated nets. Previously the packaging would have been burned for disposal, generating pollution and negative health impacts for local communities.

# INVESTING FOR IMPACT TO END MALARIA FASTER

PMI is working with partner countries to support healthy and thriving communities and move closer to achieving our vision of a world without malaria. PMI is maximizing the impact of its investments by:

Using the right tools in the right place at the right time based on each country's unique situation and challenges

Innovating and working more efficiently with partners to get the most out of the tools available to fight malaria and keep malaria services resilient

Supporting local communities to plan and implement malaria services

Strengthening community health systems

Reaching the unreached with lifesaving care



# INVESTING FOR IMPACT

## USING THE RIGHT TOOLS IN THE RIGHT PLACE AT THE RIGHT TIME

### Malaria is not the same everywhere.

Given differences in geography, cultural and social norms within communities, climate and malaria seasons, mosquito behavior, and evolving drug resistance, it is important to identify the most effective mix of interventions for each setting. PMI works with partner countries to tailor malaria services so that the right tools are available in the right place at the right time to reduce malaria cases and deaths.



PMI supported the distribution of more than 17 million insecticide-treated nets to protect 34 million people in Nigeria in FY 2023. Based on data that showed which insecticides would be most effective at killing mosquitoes when they make contact with the nets, piperonyl butoxide (PBO) nets were distributed in five states. Insecticide resistance monitoring conducted over the past two years, however, indicated that PBO nets were no longer as effective for controlling mosquitoes in the state of Kebbi in the northwest of the country, where the malaria burden is extremely high. In response, almost 3 million nets with additional active ingredients were distributed in Kebbi in FY 2023 to ensure communities had the most effective tools available to help them stay safe.

After an upsurge in malaria cases in Rwanda from 2012 to 2016, the National Malaria Control Program's analysis of epidemiological and entomological data resulted in the decision to spray homes with insecticide in 15 districts. PMI has been supporting spraying in three districts over several years, which—alongside a robust investment in community health workers—has contributed to a significant decline in malaria cases. Data from one district showed an 85 percent decline in malaria incidence between 2020 and 2023. In FY 2023, PMI continued support for spraying in the three districts to protect more than 1.3 million people and ensure that malaria does not rebound.





Madagascar produces nearly five million tons of rice each year. Five years of data from certain high malaria burden regions identified agricultural rice fields as a key source of mosquitoes and found that malaria-transmitting mosquitoes were predominantly biting and resting outdoors. Since the primary tools to protect people from malaria-transmitting mosquitoes are insecticide-treated nets and indoor spraying of insecticide—which target mosquitoes that rest and bite indoors—a new approach was needed. As a result, Madagascar used drones to apply a larvicide (that is safe for the environment and humans) in rice-growing areas across two districts to control mosquito populations. Given that community acceptance is essential to the success of malaria programs, the project included a study to ensure rice field owners and workers were comfortable with the larviciding.

Analysis of malaria case data and data from insecticide resistance monitoring sites enabled Ghana to better target malaria prevention interventions. For example, Ghana identified additional areas of the country where rates of disease among young children were highly seasonal and expanded preventive treatment programs to children in those areas in 2023. In addition, analysis of data from 30 sites monitoring insecticide resistance and mosquito behavior indicated increases in insecticide resistance in the western part of the country; as a result, the National Malaria Elimination Programme and PMI delivered more appropriate nets to the western region in FY 2023.



# INVESTING FOR IMPACT

## INNOVATING TO GET THE MOST OUT OF THE TOOLS AVAILABLE TO FIGHT MALARIA



PMI works with partner countries to scale up the use of proven and effective tools to support each country's malaria strategy and reduce cases and deaths around the world. PMI and its partners find ways to innovate every day to obtain maximum impact from the tools currently available for malaria control and elimination.

In the Democratic Republic of the Congo (DRC), PMI is using artificial intelligence (AI) to interpret rapid diagnostic malaria tests. This helps detect errors in interpreting or recording of test results by health workers, which can lead to incorrect diagnoses, overprescribing of malaria medicines, and the use of inaccurate data to guide malaria services. This information allowed health managers to explore the reasons that test results were being misreported and to identify solutions to correct the behavior.

In FY 2023, multiple PMI partner countries— including Côte d'Ivoire, Kenya, Nigeria, Tanzania, and Zimbabwe— applied digital tools,

including geospatial data, to make the distribution of insecticide-treated nets more efficient and accountable. Using these tools enables countries to make sure no homes are missed, keep more accurate records of where nets were delivered, and track training and payment of personnel who work on the distribution campaigns. In Tanzania, text messages were sent to parents each night to remind them to use their insecticide-treated nets to keep their families safe.

PMI collaborates with local communities to make programs more cost-effective. In Mali, for example, PMI trained community members to collect mosquitoes. The samples are sent to laboratories for analysis to guide the most appropriate malaria control approaches for the setting. This community involvement avoids the expense of technicians traveling to the area, promotes sustainability, and allows data collection in hard-to-reach locations and in areas inaccessible due to security issues. In FY 2023, local community members in Mali collected 2,000 mosquitoes for analysis.

### Creating more cost-effective and resilient supply chains

From FY 2019 to FY 2023, PMI's supply chain activities **generated approximately \$66 million in cost savings** through transitioning from primary reliance on air freight to using sea and land freight to transport malaria prevention and treatment commodities. These adjustments also resulted in an 85 percent reduction in greenhouse gas emissions related to commodity transport.

# INVESTING FOR IMPACT

## PRIORITIZING LOCAL LEADERSHIP

From its beginning, PMI has been built on a model of partnership with countries and communities around the world. People in the countries where PMI works know best the challenges they face and how to overcome them. PMI is committed to shifting leadership, decision-making, and implementation to local partners to enable each country to progressively take on more of the planning and implementing of malaria programs.

In FY 2023, PMI made a five-year, up to \$30 million, award to a local organization, the Cameroonian Association for Social Marketing, to lead and implement evidence-based malaria prevention, diagnosis, and treatment services in the far northern region of Cameroon. PMI also made a five-year, up to \$3.5 million award to the Noguchi Memorial Institute for Medical Research in Ghana to conduct research and entomological surveillance on the efficacy of antimalarial drugs and the status of insecticide resistance in the country.

By working hand in hand with PMI on the breadth of malaria control activities, countries are increasingly taking on either full campaigns or elements of malaria control and elimination work independently. In FY 2023, the Ministry of Health's National Malaria Control Program in Benin conducted its first fully locally led campaign to provide preventive malaria medicines to children. More than 113,000 children were protected from malaria during the campaign. Rwanda became the first PMI partner country where a local procurement agency, Rwanda Medical Supply Limited, procured PMI-funded malaria commodities for use in the country,

rather than procurement being arranged through a PMI-managed global mechanism. The company procured quality-assured malaria treatments in FY 2023, with plans to procure mosquito nets and additional malaria medicines in FY 2024.

Following equipment and training support from PMI, scientists in Angola independently conducted laboratory testing of mosquito samples at the Instituto Nacional de Investigação em Saúde (National Health Research Institute – INIS) for the first time in FY 2023. The local scientists are now using their skills to inform future efforts to control malaria in their country. In Zimbabwe, PMI partner Africa University became the first private institution in the country to have its mosquito surveillance data fed into the country's District Health Information System. The data is used to pinpoint malaria outbreaks and determine the most appropriate actions for malaria prevention and response. In Ethiopia, PMI trained 27 biomedical engineer trainers and 200 biomedical engineering students on how to maintain laboratory equipment. Due to equipment maintenance by those trained, and equipment procurements by PMI, by the end of FY 2023 the percentage of PMI-supported health facilities in Ethiopia with fully functioning microscopes increased from 66 to 95 percent, setting the facilities on the path to sustainability.

In 2023, PMI's flagship operational research project awarded 100 percent of its implementation funding to local research partners. The project is now in its fourth year and more than 73 percent of the sub-awardees under the project are local institutions.







## PMI's support for CDC's Field Epidemiology Training Program (FETP) strengthens countries' capabilities to identify and stop health threats

Marie Gorreti Zalwango, an FETP fellow from Uganda, was assigned to her country's National Malaria Control Division to assist in making data driven decisions. During her two-year fellowship, Marie led the investigation into a surge in deaths from malaria in a district in Uganda. The team's investigations revealed that the malaria deaths were associated with patients with severe disease not reaching a higher-level health facility, as well as stockouts of malaria medicines, leading to no treatment or incomplete treatment. The investigation provided key insights that informed the health district's efforts to reduce deaths. Marie and her team also discovered that deaths from malaria in the district were under-reported in the national health information system. In response, Marie trained health facility staff and scheduled frequent data reviews to address the inaccurate death counts and ensure that malaria prevention and control efforts are guided by accurate data. **In 2023, approximately 400 field epidemiologists, or "disease detectives," were trained in CDC's FETP across 18 PMI partner countries. Many FETP graduates hold leadership positions in their countries.**



# MADE IN AFRICA FOR AFRICANS

## Regional manufacturing of malaria commodities

The COVID-19 pandemic highlighted both the inequity and the vulnerability of the global health supply chain. Africa is home to 94 percent of the world's malaria cases but produces only a small fraction of the commodities needed to keep its populations safe from malaria. **In FY 2023, PMI sourced around 10 percent of its commodity procurements from Africa, more than double what was procured from the continent in FY 2021. PMI is actively working to support African manufacturing by:**



Using PMI's procurement volumes to signal demand and increase incentives for local manufacturers.



Working to increase the number of qualified suppliers and types of products sourced across the continent.



Introducing African manufacturing as a key criterion for procurement tenders.



Coordinating with other funders, such as the Global Fund, to harmonize procurement strategies.

PMI is providing technical support to three pharmaceutical manufacturers in Nigeria, three in Ghana, and one in Burkina Faso as they prepare for WHO's quality approval process for their malaria medicines.

# INVESTING FOR IMPACT

## STRENGTHENING COMMUNITY HEALTH SYSTEMS

Outbreaks start and stop in communities. Strong community health systems with well-trained and well-supported community health workers are essential for rapid detection and treatment of malaria, especially in more remote areas where health care can be difficult to access.

**In FY 2023, PMI provided \$37.6 million to support approximately 100,000 community health workers in partner countries** to deliver case management of malaria at the community level, most often through integrated platforms that enable treatment of other common childhood illnesses such as diarrhea and pneumonia. Community-based care is one of the cornerstones of malaria control and prevention, and is a proven approach for reducing severe malaria cases and deaths. PMI's support for community health workers in FY 2023 aligned with country plans and met country-specific needs; provided training and equipment; strengthened supervision, data reporting, and digitalization; and facilitated payment and support for professionalizing the role of these vital health workers.

A policy shift in 2021 to allow PMI funds to be used to pay salaries or stipends to community health workers was designed to catalyze investments in these vital workers. The change has been part of global momentum toward and commitments to strengthening community health systems. It aligns with the Monrovia Call to Action in March 2023,<sup>12</sup> which was written with contributions from PMI and calls for investment in country-led community health strategies and making professional (paid, skilled, supervised, and supplied) community health workers the norm. Alongside the call to action, the Government of Liberia, where PMI has been supporting community health worker stipends, announced that it would allocate \$1.6 million to support the payment of community health worker supervisors. In April 2023, the President of Guinea signed a new law committing the

government to pay community health worker salaries. In FY 2023, Sierra Leone began to use PMI funds to pay community health workers in the country's hardest to reach districts and partnered with telecommunications companies to increase access to timely digital payment. This leadership from country governments showcases how advocacy and leveraging of the resources of PMI and other partners can drive change.

Historically, PMI support for community health workers has primarily focused on them diagnosing and treating malaria. In 2022, WHO changed its recommendation to allow community health workers to also distribute lifesaving malaria prevention medicines to pregnant women. Malaria in pregnancy can lead to miscarriage, stillbirth, prematurity, and low birth weight (a leading cause of infant death), and currently no country is meeting the target of 80 percent coverage for three or more doses. Women who receive three or more doses of preventive medicines have their risk of contracting malaria in pregnancy reduced by half. The long distances many women need to travel to reach a health facility can be a barrier to receiving this preventive medicine. PMI worked with partner countries in FY 2023 to implement this expanded role for community health workers. Eight PMI partner countries are exploring the approach through pilot programs, policy changes, and implementation in select geographic areas. PMI supported virtual workshops with participants from over 30 countries to help prepare countries to implement this promising new strategy for keeping mothers and babies safe.



In 2023, PMI distributed **2,000 bicycles** to community health workers in five regions in Senegal to facilitate their moving between households and villages to detect and treat malaria and other childhood diseases.

In FY 2023, PMI funded 262,390 trainings for health workers



**27,013**

trained on indoor residual spraying



**32,968**

trained on preventive treatment in pregnancy



**89,038**

trained on seasonal preventive treatment for children



**46,864**

trained on diagnosis



**66,511**

trained on clinical care



# INVESTMENTS IN COMMUNITY HEALTH WORKERS CAN UNBURDEN HEALTH FACILITIES TO FOCUS ON OTHER HEALTH PRIORITIES

## Investments in malaria can be leveraged to protect communities from other health outbreaks

As PMI and local health officers were planning a campaign to spray 100,000 structures with insecticide in October 2022 to protect families from malaria, Malawi's worst cholera outbreak in history was spreading across the country. PMI and its local partners quickly adjusted so that community mobilizers already planning to meet with homeowners to prepare them for the spraying also shared cholera prevention information so that communities could protect themselves from both deadly diseases.

“ From the time community health workers started testing and treating community members for malaria in their respective zones, we see fewer malaria patients at the facility. Thankfully, this gives us more time to attend to other health care concerns, especially antenatal care and child health services.”

- Victoria Nakafunda, In-Charge, Sikalembe Health Post, Zambia



## Driving Towards Malaria Elimination

Cambodia saw a 92 percent reduction in *Plasmodium falciparum* malaria cases in 2023, with only seven cases reported from January to September in the provinces PMI supports. Village health workers like Vuthy SaoRy, who test their neighbors for malaria, are a big part of the reason that Cambodia is closer than ever to eliminating malaria.

## Heralding a new trilateral agreement for USAID and the governments of Thailand and Laos

PMI partnered with the Thai Division of Vector-Borne Diseases and the Thailand International Cooperation Agency to conduct a two-week workshop for 21 entomological staff from Laos and border provinces in Thailand to learn techniques for studying mosquitoes. The workshop strengthened each country's capacity to quickly detect disease outbreaks and built cross-border collaboration to stop the spread of malaria and other vector-borne diseases, such as dengue fever and Zika virus.



# INVESTING FOR IMPACT

## REACHING THE UNREACHED WITH LIFESAVING CARE

PMI remains focused on reaching those who do not have easy access to a health facility and have not previously been covered by malaria services—typically remote, rural, and other populations living in regions where malaria incidence is high. Bringing care to people where they live can address inequities in health care and protect more people from malaria.

To bring vital malaria prevention and treatment services to hard-to-reach communities in Guinea, PMI supported the setup of 19 mobile clinics in four regions in FY 2023. The clinics provided malaria testing and treatment services to 3,000 people, along with screening and treatment for respiratory illnesses, diarrhea, and malnutrition.

Sometimes people are temporarily displaced due to violence or weather events, often removing them from established malaria services. When a coup occurred in Burma in 2021, malaria cases surged near the border with Thailand following an influx of people

to the area. In FY 2023, PMI worked with the Global Fund and a community-based organization to distribute 14,000 insecticide-treated nets, 15,000 malaria tests, and more than 35,000 doses of malaria medicines to protect 132,000 people along the border. Preventing and treating cases in Burma protected people in Thailand as well, where cases had doubled between 2021 and 2022 following the surge of cases in neighboring Burma.

To increase the use of insecticide-treated nets by indigenous communities in DRC, PMI involved indigenous associations in the planning and delivery of nets, translated net campaign information into the local language, and included students and teachers from the communities in school-based net distribution programs to make sure local populations had the support they needed to fully take advantage of the nets distributed.



Students in Koranic schools, or Daaras, in Senegal have historically had limited or no access to health care. Local health authorities in the district of Kaolack, where the highest number of Daaras are located, identified that a significant proportion of severe malaria cases in the district were young students who live in the schools. PMI distributed 35,000 insecticide-treated nets to more than 600 schools to help students stay safe and healthy.

## Acting fast to reach those cut off from malaria services during the 2023 coup in Niger

PMI pivoted quickly to keep malaria supplies flowing to communities by working with local transportation companies that had the expertise to navigate the complex transportation landscape. Radio broadcasts alerted the military when pharmaceutical deliveries would need to pass through military checkpoints. Where delivery was not possible due to movement restrictions, alternate pick-up locations were identified outside of the restricted zones. These adjustments allowed more than 460 cut-off health facilities to receive life saving supplies.



# LEVERAGING PARTNERSHIPS TO ADVANCE PROGRESS BEYOND PROGRAMS

Malaria remains a U.S. foreign assistance priority and a critical component of the U.S. government's global health efforts. PMI collaborates with the White House and the National Security Council, the Department of State, the Department of Defense, the National Institutes of Health, the Peace Corps, and other U.S. government entities.

The Global Fund is a key partner, with PMI's on-the-ground technical assistance complementing and leveraging the fund's investments in every PMI partner country. In one of many examples of collaboration in FY 2023, PMI provided planning and analysis support to inform decisions about what kinds of nets to distribute as part of the insecticide-treated net campaign in Mali that was financed by the Global Fund. The first phase of the campaign in July 2023 delivered more than 10 million nets to five regions of the country. PMI provided additional funding to deliver nets to two health districts.

No single government or funder can rally the resources needed to end malaria. In FY 2023, PMI continued to leverage the unique

skills and additional resources available in the private sector to keep communities safe from malaria. In Zambia, the logistics company Africa AGL warehoused 6.2 million mosquito nets for five months at no cost, an in-kind donation with an estimated value of \$1 million. PMI in Nigeria partnered with Olam Food Ingredients (ofi) and the local health ministry to help ensure that more than 3,500 cocoa-farmer households received insecticide-treated nets during the statewide mass distribution campaign in the southeast of the country, and that the households received information on the importance of using the nets to protect themselves and their families. UNITEL, Angola's leading telecommunications company, provided free airtime for district health managers to access the PMI-supported national health management information system and for health workers to access a PMI-supported nationwide on-line training platform. UNITEL also provided free airtime for malaria-specific behavior change messages to be broadcast via text message to communities throughout the country.



## Using NASA's Satellites to Predict Areas at Increased Risk of Malaria

In Thailand, PMI leveraged a collaboration between the United States National Aeronautics and Space Administration (NASA), USAID, and Thailand's malaria program to incorporate satellite data on the environment—such as forest cover, rainfall, urban development, and cropland— into malaria information systems to identify possible future malaria hotspots and strengthen local strategies to prevent the disease from re-emerging.



# THE PROMISE OF NEW TOOLS

The world has many effective and proven tools to drive down malaria cases and deaths. PMI is constantly finding better and more effective ways to use those tools to reach more people and save more lives.

The evaluation, adoption, and scaling up of newer tools currently in the pipeline—such as new types of nets, insecticides, repellents, rapid diagnostic tests, antimalarial drugs, and malaria vaccines—have the potential to end malaria in our lifetime. **PMI is in a unique position—through its boots on the ground, the systems in place with partner countries, and supply chains that can reach the last mile—to ensure that the new tools live up to their promise.**

## Malaria Vaccines Bring Hope

Two vaccines are now recommended by the World Health Organization to prevent malaria in young children, representing a giant leap forward in the fight to end malaria. The RTS,S/AS01 vaccine was approved in 2021 and the R21/Matrix-M vaccine was approved in 2023. Demand for a malaria vaccine is high, and having two vaccines available will allow countries to scale up the introduction of this exciting new tool. **The vaccines, when combined with other malaria prevention tools such as mosquito nets and preventive medicines, have the potential to save tens of thousands of children’s lives every year. Implementation of the RTS,S vaccine in Ghana, Kenya, and Malawi was associated with a 13 percent reduction in all-cause mortality in young children.** Over two million children across these three African countries have been vaccinated with the RTS,S vaccine. PMI will assist countries with successful implementation of the vaccines as part of each country’s malaria control strategy, including through development of social and behavior change strategies to support uptake of the vaccine. Meanwhile, USAID continues to invest in research and development of new vaccine candidates to ensure there is a robust pipeline of vaccines for the future.

# ACTING NOW TO END MALARIA IN OUR LIFETIME

The world is at a pivotal point in its quest to eliminate malaria. PMI partner countries are scaling up implementation of proven tools to combat this disease that cuts young lives short and undermines nations' development. Scientists are working around the clock to create new tools to stay ahead of the ever-evolving malaria parasite and save more lives. PMI and our partners are innovating and tailoring the mix of malaria services to advance efforts to end malaria once and for all.

Ending malaria is achievable. In 2023, three more countries were certified by WHO as malaria-free—Azerbaijan, Belize, and Tajikistan.<sup>2</sup> The world has the tools and the know-how, along with constant advances in science and innovation, to achieve the vision of a world without malaria. What is required is unwavering global commitment and the leveraging of every resource available.

PMI is committed to continuing to play a leading role, working with partner countries to move ever closer to a world where no one loses a loved one because of a mosquito bite. Together we can make malaria a disease of the past and create a brighter future for everyone.



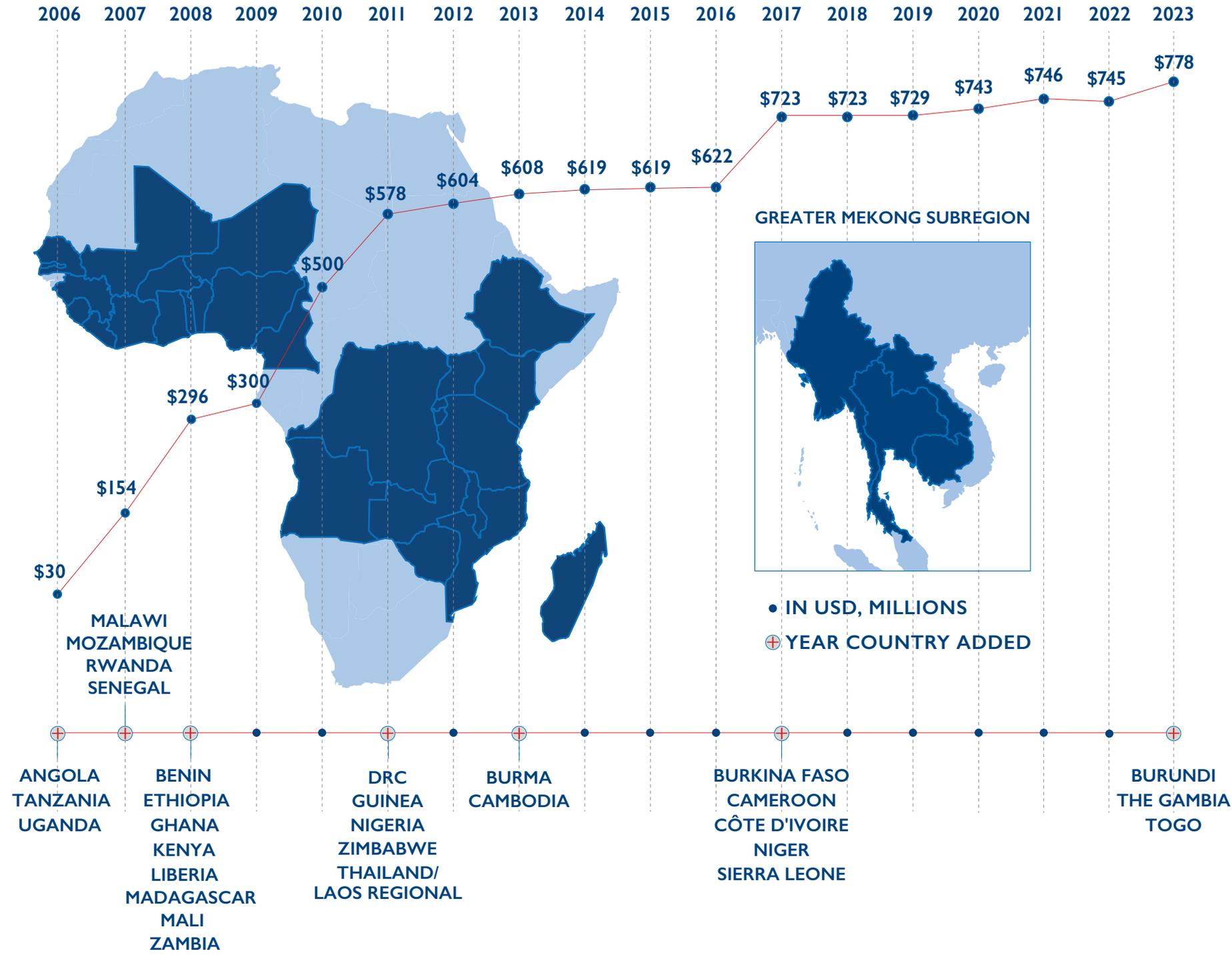
# ANNEX I

## COUNTRY INVESTMENTS MADE BY THE U.S. PRESIDENT'S MALARIA INITIATIVE

Reducing malaria enables countries to unlock economic growth and realize greater human potential, paving their path out of poverty and fostering more productive partnerships with the United States.

Thanks to the bipartisan support of Congress and the generosity of the American people, PMI has invested approximately \$10 billion since 2006 to help partner countries fight malaria.

(1) This graphic has investments rounded to the nearest million and does not include funding programmed for malaria beyond PMI's partner countries. (2) In FY 2005, USAID provided a total of \$4,250,775 in jump-start funds to Angola (\$1,740,000), Tanzania (\$2 million), and Uganda (\$510,775). (3) In FY 2006, USAID also provided a total of \$35,554,000 in jump-start funds to Benin (\$1,774,000), Ethiopia (\$2,563,000), Ghana (\$1,478,000), Kenya (\$5,470,000), Madagascar (\$2,169,000), Malawi (\$2,045,000), Mali (\$2,490,000), Mozambique (\$6,259,000), Rwanda (\$1,479,000), Senegal (\$2,168,000), and Zambia (\$7,659,000). (4) In FY 2007, \$25 million plus-up funds included \$22 million allocated to 15 PMI partner countries (\$19.2 million for Round 2 countries and \$2.8 million for jump starts in Round 3 countries). USAID also provided a total of \$42,820,000 in jump-start funds to Benin (\$3,600,000), Ethiopia (\$6,700,000), Ghana (\$5 million), Kenya (\$6,050,000), Liberia (\$2,500,000), Madagascar (\$5 million), Mali (\$4,500,000), and Zambia (\$9,470,000). (5) Levels in FY 2008 reflect USAID 0.81 percent rescission. (6) In FY 2010, USAID also provided a total of \$36 million in jump-start funding to the DRC (\$18 million) and Nigeria (\$18 million), and provided funding for malaria activities in Burkina Faso (\$6 million), Burundi (\$6 million), Pakistan (\$5 million), South Sudan (\$4.5 million), the Amazon Malaria Initiative (\$5 million), and the Mekong Malaria Programme (\$6 million). (7) In FY 2011, USAID also provided funding for malaria activities in Burkina Faso (\$5,988,000), Burundi (\$5,988,000), South Sudan (\$4,491,000), and the Amazon Malaria Initiative (\$4,990,000). (8) In FY 2012, USAID also provided funding for malaria activities in Burkina Faso (\$9 million), Burundi (\$8 million), South Sudan (\$6,300,000), and the Amazon Malaria Initiative (\$4 million). (9) In FY 2013, USAID also provided funding for malaria activities in Burkina Faso (\$9,421,000), Burundi (\$9,229,000), South Sudan (\$6,947,000), and the Amazon Malaria Initiative (\$3,521,000). (10) Starting in FY 2011, PMI funding to the Greater Mekong Subregion was programmed through the Mekong Regional Program (Burma, Cambodia, Laos, Thailand, and Vietnam). With FY 2013 funding, PMI began supporting activities in Burma (\$8 million) and Cambodia (\$4.5 million) directly. In addition, PMI continued to provide FY 2013 funding to the Mekong Regional Program (Laos, Thailand, and Vietnam) (\$3 million) for activities in the region outside the PMI Burma and PMI Cambodia bilateral programs. (11) In FY 2014, USAID also provided funding for malaria activities in Burkina Faso (\$9,500,000), Burundi (\$9,500,000), South Sudan (\$6,000,000), and the Amazon Malaria Initiative (\$3,500,000). (12) In FY 2015, USAID also provided funding for malaria activities in Burkina Faso (\$12 million), Burundi (\$12 million), South Sudan (\$6 million), and Latin America and the Caribbean region (\$3,500,000). (13) In FY 2016, USAID also provided funding for malaria activities in Burkina Faso (\$14 million), Burundi (\$9,500,000), South Sudan (\$6 million), and Latin America and the Caribbean region (\$5 million). (14) In FY 2017, USAID also provided funding for malaria activities in Burundi (\$9 million) and Latin America and the Caribbean region (\$5 million). (15) In FY 2018, USAID also provided funding for malaria activities in Burundi (\$9 million) and Latin America and the Caribbean region (\$5 million). (16) In FY 2019, USAID also provided funding for malaria activities in Burundi (\$8 million) and Latin America and the Caribbean region (\$5 million). (17) In FY 2020, USAID also provided funding for malaria activities in Burundi (\$8 million) and Latin America and the Caribbean region (\$5 million). (18) In FY 2021, USAID also provided funding for malaria activities in Burundi (\$7.5 million) and Latin America and the Caribbean region (\$5 million). (19) In FY 2022, USAID also provided funding for malaria activities in Burundi (\$11 million) and Latin America and the Caribbean region (\$5 million). (20) In FY 2023, PMI funding for Mali was readjusted to \$24 million after the 2023 PMI Annual Report was published, changing the total PMI funding from \$746 million to \$745 million. Please refer to the funding table for more information. **While PMI is reporting funding to Burundi, The Gambia, and Togo, reporting on activities in these countries will begin in the FY 2024 annual report.**



	PMI Funding Start	FY 2023 (\$ million)	All Years (\$ Million)
ANGOLA	2006	19	415
BENIN	2008	17	268
BURKINA FASO*	2017	26	181
BURMA	2013	12	106
BURUNDI	2023	15	15
CAMBODIA	2013	8	87
CAMEROON	2017	23.5	158
CÔTE D'IVOIRE	2017	25	175
DRC	2011	54.5	633
ETHIOPIA	2008	36	580
GHANA	2008	28	439
GUINEA	2011	17	182
KENYA	2008	33.5	531
LIBERIA	2008	15	218
MADAGASCAR	2008	26	409
MALAWI	2007	24	388

	PMI Funding Start	FY 2023 (\$ million)	All Years (\$ Million)
MALI	2008	25	388
MOZAMBIQUE	2007	29	474
NIGER	2017	20	131
NIGERIA	2011	73	914
RWANDA	2007	19	311
SENEGAL	2007	24	389
SIERRA LEONE	2017	16	108
TANZANIA	2006	44	747
THAILAND/LAOS**	2011	3	59
THE GAMBIA	2023	4	4
TOGO	2023	12	12
UGANDA	2006	34	549
ZAMBIA	2008	30	412
ZIMBABWE	2011	15	191
HEADQUARTERS	2006	50.2	642
<b>TOTAL OVERALL</b>		<b>777.7</b>	<b>10,116</b>

Cumulative (“all years”) funding numbers and overall totals have been rounded to the nearest million. While PMI is reporting on FY 2023 funding to Burundi, The Gambia, and Togo, reporting on activities in these countries will begin in the FY 2024 annual report. In FY 2023, USAID also provided funding for malaria activities in Latin America and the Caribbean region (\$5 million). In addition, the U.S. government is the largest donor to the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund). The Global Fund was the other leading source of donor funding for country malaria programs over the same period. \*Burkina Faso also received \$66 million in USAID funding for malaria activities between 2010 and 2016. \*\*The cumulative total for Thailand/Laos also includes regional funding for Burma, Cambodia, and Vietnam from 2011 to 2012.

# ANNEX 2

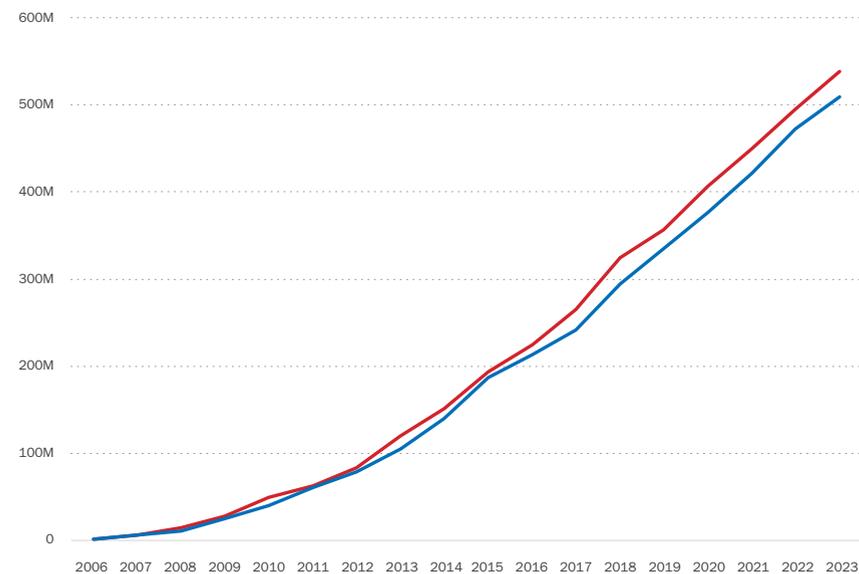
## U.S. PRESIDENT'S MALARIA INITIATIVE COMMODITY AND TRAINING INVESTMENTS

- **The reporting timeframe is the 2023 federal fiscal year (FY), which ran from October 1, 2022, to September 30, 2023.**
- PMI counts commodities as “procured” once the procurement service agent has released a purchase order or invoice for those commodities. PMI reports commodities as “delivered” once PMI receives proof of delivery to the partner country.
- Intervention packages are tailored and depend on many factors, including demographics, national policies, weather and climate, resistance patterns, mosquito/parasite type, and available contributions by partner governments and other donors. PMI only delivers commodities where they are recommended and needed. Therefore, commodities and training provided will differ by country and from year to year. PMI works closely with national malaria programs and other donors to optimize coordination and avoid duplications or gaps.
- Procurements and deliveries may be listed as “zero” because they occurred just outside (before or after) the fiscal year. Differences between these numbers are also expected because of factors such as production timelines, shipping duration, stocks held temporarily in reserve before delivery, and other factors.



# INSECTICIDE-TREATED NETS (ITNS)

ITNs kill mosquitoes that land on them and physically block mosquitoes at night when they are most likely to bite. PMI maintains ITN coverage through a combination of mass distribution campaigns and continuous distribution via health clinics, schools, and other channels.



## ALL YEARS CUMULATIVE



**538,859,935**  
ITNs Procured



**509,348,790**  
ITNs Delivered

	ITNs Procured	ITNs Delivered		ITNs Procured	ITNs Delivered
<b>ANGOLA</b>	734,050	734,050	<b>RWANDA</b>	870,000	1,571,700
<b>BENIN</b>	835,000	1,157,103	<b>SENEGAL</b>	1,532,986	400,000
<b>BURKINA FASO</b>	520,000	520,000	<b>TANZANIA</b>	6,345,959	6,188,682
<b>BURMA</b>	100,000	0	<b>THAILAND/LAOS</b>	30,000	150,300
<b>CAMEROON</b>	360,000	300,000	<b>UGANDA</b>	1,103,729	3,999,516
<b>CÔTE D'IVOIRE</b>	3,999,527	172,304	<b>ZAMBIA</b>	600,000	600,000
<b>DRC</b>	3,216,515	2,594,100	<b>ZIMBABWE</b>	900,000	1,200,000
<b>ETHIOPIA</b>	50,000	2,990,605			
<b>GHANA</b>	4,500,000	800,000			
<b>KENYA</b>	4,864,254	2,561,000			
<b>LIBERIA</b>	352,000	300,400			
<b>MALAWI</b>	2,069,721	1,533,150			
<b>MALI</b>	1,830,000	1,180,000			
<b>NIGER</b>	100,000	0			
<b>NIGERIA</b>	10,254,650	7,884,582			

## FY 2023 HIGHLIGHTS:



**45,168,391**  
ITNs Procured

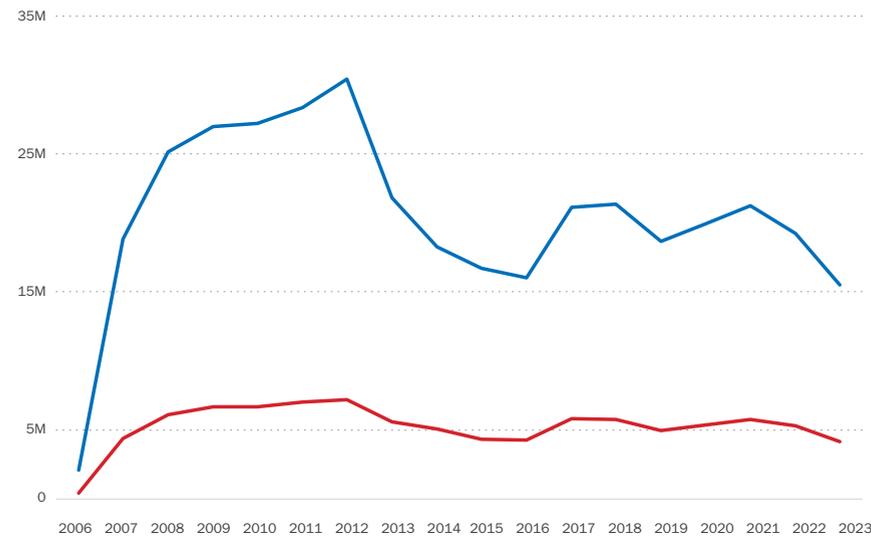


**36,837,492**  
ITNs Delivered

**Notes:** This table reports the number of ITNs procured and delivered with PMI funding. In some cases (due to lead time, etc.), ITNs procured in a given fiscal year are not delivered until the subsequent one. In addition, PMI coordinates with other donors to distribute commodities purchased with non-PMI resources. During FY 2023, PMI also provided support for ITN activities in Burundi and Guyana. In Guyana, 3,000 ITNs were procured. In Burundi, 1,605,086 ITNs were procured and 1,085,868 ITNs were delivered. The all years total of ITNs procured includes updates made to previous years' values. These changes occur after the purchase order is issued so while the values were correct at the time they are initially reported, in limited circumstances they change due to the dynamic commodity needs in a country. They are identified during a routine data quality assessment. Starting with the FY 2024 PMI Annual Report, Burundi will be included in the partner country commodities tables.

# INDOOR RESIDUAL SPRAYING (IRS)

IRS treats the inside walls of homes with long-lasting insecticides. It is an effective way to kill mosquitoes and disrupt the transmission of malaria.



	Houses Sprayed	People Protected
<b>ETHIOPIA</b>	776,698	2,172,031
<b>GHANA</b>	381,151	1,021,269
<b>KENYA</b>	379,921	1,502,836
<b>MADAGASCAR</b>	198,311	886,329
<b>MALAWI</b>	119,400	476,625
<b>MOZAMBIQUE</b>	142,463	620,567
<b>RWANDA</b>	363,305	1,387,690
<b>SIERRA LEONE</b>	159,013	753,214
<b>TANZANIA</b>	241,470	945,879
<b>UGANDA</b>	774,173	3,235,862
<b>ZAMBIA</b>	619,328	2,484,465



## ALL YEARS ANNUAL



**Houses Sprayed**



**Residents Protected**

## FY 2023 HIGHLIGHTS:



**4,155,233**  
Houses Sprayed



**15,486,767**  
People Protected

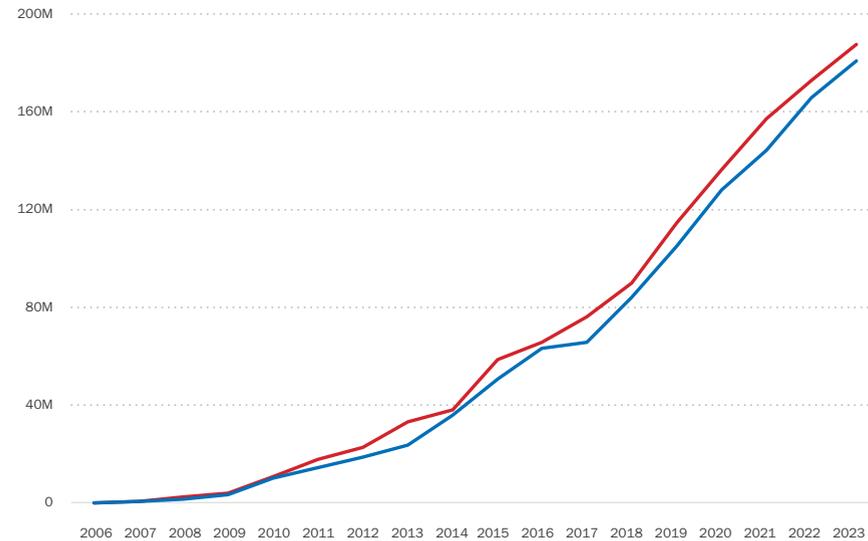


**27,013**  
IRS Spray Personnel Trained

**Notes:** PMI defines “spray personnel” as spray operators, supervisors, and ancillary personnel. It does not include the many people trained to conduct information and community mobilization programs for IRS campaigns. PMI also offers technical assistance to non-PMI IRS campaigns.

# INTERMITTENT PREVENTIVE TREATMENT IN PREGNANCY (IPTp)

Malaria is dangerous for pregnant women and their babies. Ensuring that women receive IPTp at prenatal visits after the first trimester can prevent malaria. Ideally, women receive at least three doses.



## ALL YEARS CUMULATIVE

**187,495,362**  
IPTp Doses Procured

**180,779,158**  
IPTp Doses Delivered

	Doses Procured	Doses Delivered
ANGOLA	853,000	1,136,000
BENIN	0	515,000
CAMEROON	518,800	400,000
DRC	0	4,266,200
GHANA	1,800,000	0
LIBERIA	0	326,133
MALAWI	3,922,667	2,356,000
MALI	1,936,667	1,818,933
MOZAMBIQUE	2,133,333	2,133,333
NIGER	1,360,000	0
ZAMBIA	2,083,333	2,083,333



## FY 2023 HIGHLIGHTS:



**14,607,800**  
Doses Procured



**15,034,932**  
Doses Delivered

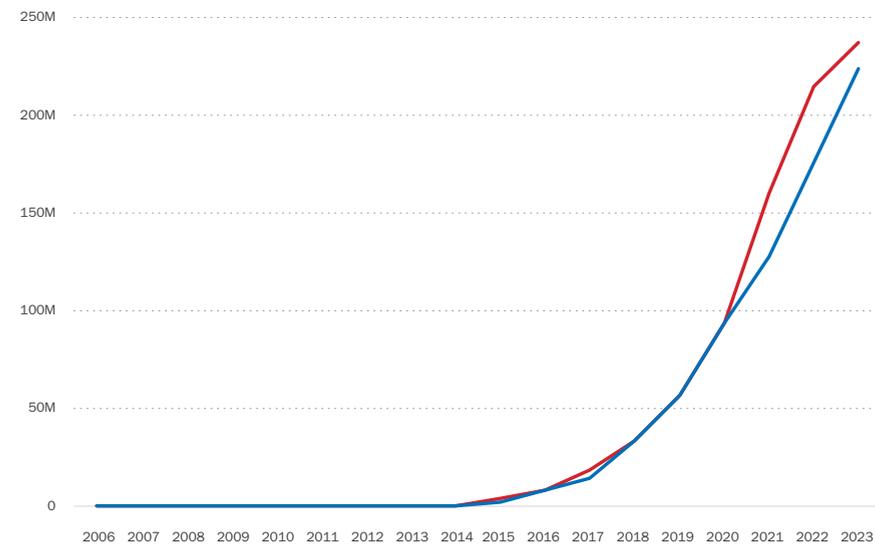


**32,968**  
Health workers trained in IPTp

**Notes:** This table reports the number of IPTp doses purchased and delivered with PMI funding. In some cases (due to lead time, etc.), doses procured in a given fiscal year are not delivered until the subsequent one. Each dose comprises three sulfadoxine-pyrimethamine tablets. PMI also funds the provision and promotion of ITNs, as well as the prompt diagnosis and appropriate treatment of malaria and anemia as part of a multipronged approach to preventing malaria in pregnancy.

# SEASONAL MALARIA CHEMOPREVENTION (SMC)

SMC is a monthly preventive treatment given to children at high risk of malaria that protects them from contracting malaria during peak transmission season.

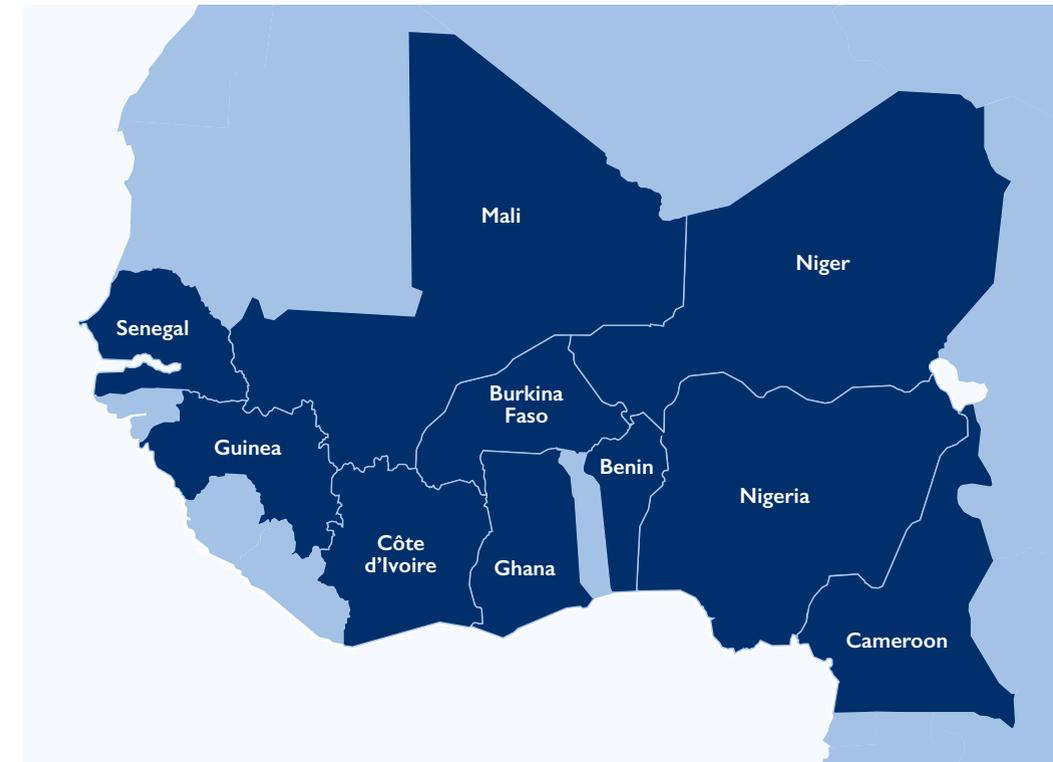


## ALL YEARS CUMULATIVE

**237,305,471**  
SMC Doses Procured

**223,715,771**  
SMC Doses Delivered

	Doses Procured	Doses Delivered
<b>BENIN</b>	0	580,000
<b>BURKINA FASO</b>	4,386,050	4,386,050
<b>CAMEROON</b>	327,000	8,595,600
<b>CÔTE D'IVOIRE</b>	123,000	123,000
<b>GHANA</b>	4,018,550	4,018,550
<b>MALI</b>	0	6,072,850
<b>NIGER</b>	0	6,200,050
<b>NIGERIA</b>	13,589,700	11,500,000
<b>SENEGAL</b>	0	6,551,050



## FY 2023 HIGHLIGHTS:



**22,444,300**  
Doses Procured



**48,027,150**  
Doses Delivered

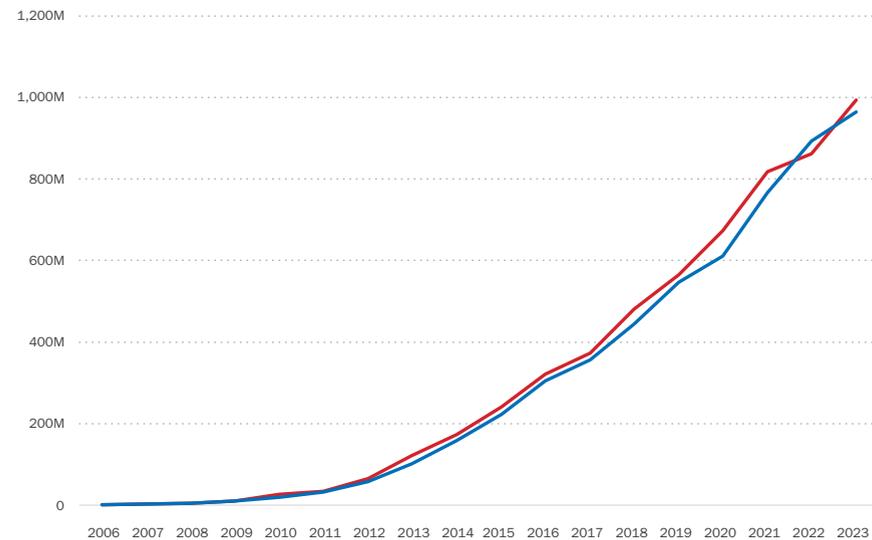


**89,038**  
Health workers trained in SMC

**Notes:** SMC is recommended in certain geographic regions in which malaria transmission is moderate to high and highly seasonal. PMI funds SMC in eligible areas of the countries shown in the map above. Three to five cycles of treatment are given to each eligible child depending on the length of the transmission season (a cycle consists of a treatment dose given once every 28 days during peak transmission season). In some cases (due to lead time, etc.), SMC commodities procured in a given fiscal year are not delivered until the subsequent one.

# RAPID DIAGNOSTIC TESTS (RDTs)

RDTs are a quick, easy, and inexpensive way to test a suspected malaria case. As other common diseases can cause symptoms similar to those for malaria, testing helps ensure patients get the right diagnosis.



## ALL YEARS CUMULATIVE



**993,627,245**  
RDTs Procured



**963,791,480**  
RDTs Delivered

	RDTs Procured	RDTs Delivered		RDTs Procured	RDTs Delivered
<b>ANGOLA</b>	3,296,000	9,396,000	<b>MALAWI</b>	7,329,250	12,329,250
<b>BENIN</b>	2,000,000	2,000,000	<b>MALI</b>	2,500,000	3,500,000
<b>BURKINA FASO</b>	7,500,000	7,500,000	<b>MOZAMBIQUE</b>	18,168,825	13,616,250
<b>BURMA</b>	0	300,000	<b>NIGER</b>	4,831,200	1,471,500
<b>CAMEROON</b>	1,795,115	1,525,425	<b>NIGERIA</b>	21,413,450	12,631,400
<b>CÔTE D'IVOIRE</b>	6,164,600	7,164,600	<b>SENEGAL</b>	4,092,500	3,792,500
<b>DRC</b>	10,584,025	10,584,025	<b>SIERRA LEONE</b>	900,000	1,400,000
<b>ETHIOPIA</b>	1,156,000	156,000	<b>THAILAND/LAOS</b>	118,750	18,750
<b>KENYA</b>	0	5,000,000	<b>UGANDA</b>	3,118,525	3,118,525
<b>LIBERIA</b>	1,050,000	750,000	<b>ZAMBIA</b>	7,203,600	3,920,000
<b>MADAGASCAR</b>	2,502,200	2,502,200			

## FY 2023 HIGHLIGHTS:



**105,724,040**  
RDTs Procured



**102,676,425**  
RDTs Delivered

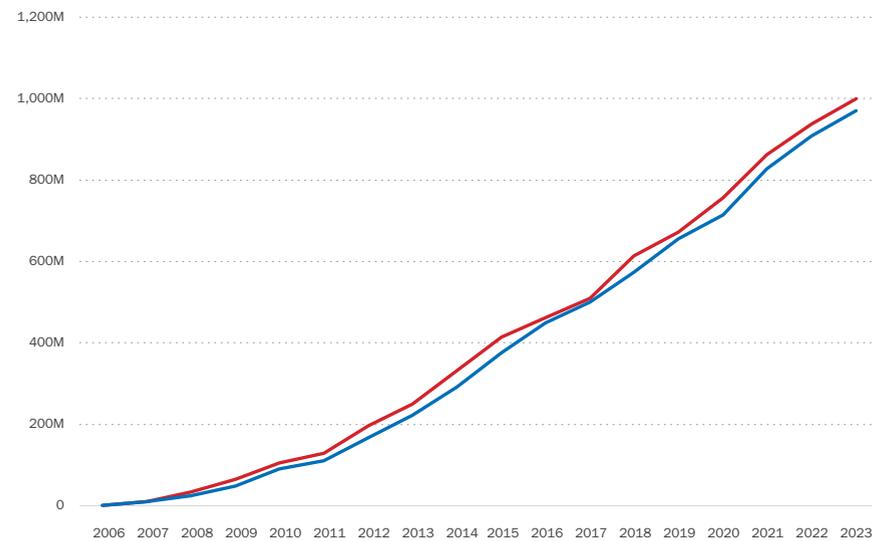


**46,864**  
Health workers trained in malaria diagnosis  
(RDTs and/or microscopy)

**Notes:** In some cases (due to lead time, etc.), RDTs procured in a given fiscal year are not delivered until the subsequent one. During FY 2023, PMI also provided support for case management activities in Burundi, procuring and delivering 904,075 RDTs. Starting with the FY 2024 PMI Annual Report, Burundi will be included in the partner country commodities tables. The all years total of RDTs procured includes updates made to previous years' values. These changes occur after the purchase order is issued. While the values are correct at the time they are initially reported, in limited circumstances they change due to the dynamic commodity needs in a country. They are identified during a routine data quality assessment.

# ARTEMISININ-BASED COMBINATION THERAPIES (ACTs)

ACTs are the best medicine available for treating the most common form of malaria. Patients are typically cured after a three-day course.



## ALL YEARS CUMULATIVE

 **999,643,313**  
ACTs Procured

 **971,306,196**  
ACTs Delivered

	ACTs Procured	ACTs Delivered		ACTs Procured	ACTs Delivered
<b>ANGOLA</b>	4,860,100	2,467,025	<b>MALI</b>	4,576,050	2,076,150
<b>BENIN</b>	0	1,999,980	<b>MOZAMBIQUE</b>	7,527,390	12,242,010
<b>BURKINA FASO</b>	9,403,520	3,935,470	<b>NIGER</b>	3,513,450	2,520,480
<b>BURMA</b>	35,040	10,020	<b>NIGERIA</b>	11,902,620	12,996,150
<b>CAMBODIA</b>	221,260	63,610	<b>RWANDA</b>	459,840	581,980
<b>CAMEROON</b>	1,197,750	1,197,750	<b>SENEGAL</b>	925,353	1,294,101
<b>CÔTE D'IVOIRE</b>	1,279,320	1,189,320	<b>SIERRA LEONE</b>	2,000,010	1,610,640
<b>DRC</b>	6,626,250	9,464,310	<b>TANZANIA</b>	13,500	0
<b>KENYA</b>	319,920	319,920	<b>UGANDA</b>	1,670,880	2,071,380
<b>LIBERIA</b>	397,770	1,136,280	<b>ZAMBIA</b>	4,482,300	4,482,300
<b>MADAGASCAR</b>	971,250	1,476,120	<b>ZIMBABWE</b>	1,176,930	198,810
<b>MALAWI</b>	450,000	0			

## FY 2023 HIGHLIGHTS:



**64,010,503**  
ACTs Procured



**63,333,806**  
ACTs Delivered



**66,511**  
Health workers trained in clinical care

**Notes:** This table reports the number of ACTs purchased and delivered with PMI funding. In some cases (due to lead time, etc.), ACTs procured in a given fiscal year are not delivered until the subsequent one. In addition, PMI coordinates with other donors to distribute commodities purchased with non-PMI resources. During FY 2023, PMI also provided support for case management activities in Burundi, procuring 962,730 ACTs and delivering 1,261,890 ACTs. Starting with the FY 2024 PMI Annual Report, Burundi will be included in the partner country commodities tables. The all years total of ACTs procured includes updates made to previous years' values. These changes occur after the purchase order is issued so while the values were correct at the time they are initially reported, in limited circumstances they change due to the dynamic commodity needs in a country. They are identified during a routine data quality assessment.

# ANNEX 3

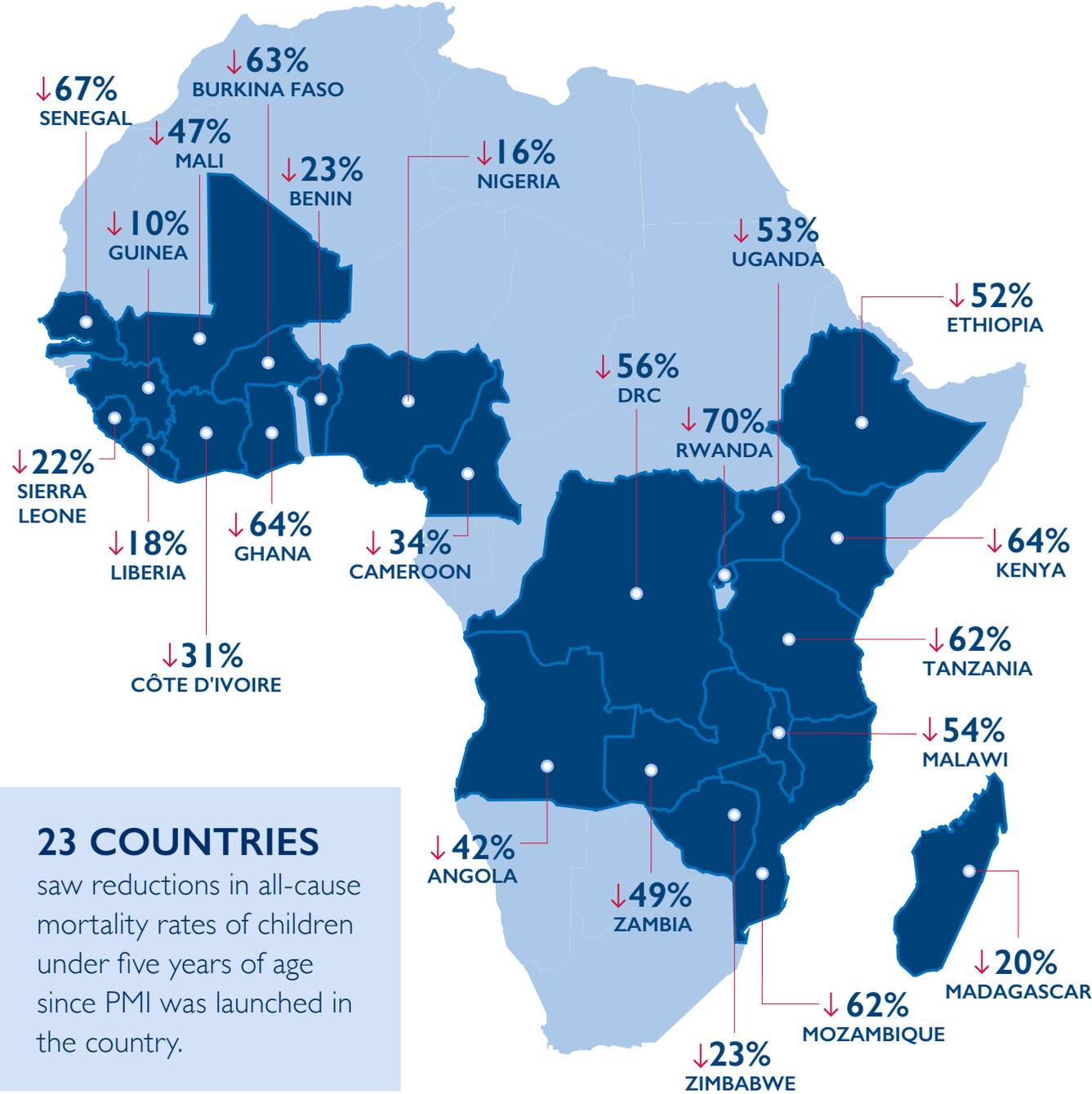
## ALL-CAUSE MORTALITY RATES AND INTERVENTION COVERAGE IN U.S. PRESIDENT'S MALARIA INITIATIVE PARTNER COUNTRIES

Data in this annex include a baseline survey for each indicator from before PMI began working in each country and the most recent comparable endline survey available.

For more information on survey data, visit the Demographic and Health Surveys Program website and the United Nations Children's Fund Multiple Indicator Cluster Surveys website.



# ALL-CAUSE DEATH RATES IN CHILDREN UNDER AGE FIVE (U5) IN PMI PARTNER COUNTRIES



## 23 COUNTRIES

saw reductions in all-cause mortality rates of children under five years of age since PMI was launched in the country.

**Notes:** The 23 countries highlighted in blue have at least two data points from nationwide household surveys that measured all-cause mortality in children under the age of five. Niger is outlined in white but was not included as a data point, as it does not yet have two comparable household surveys available. For more detail on all-cause death rates in children under age five in PMI partner countries, the PMI baseline and the most recent survey, see the tables to the right.

	U5 DEATHS PER 1,000 LIVE BIRTHS	SURVEY		U5 DEATHS PER 1,000 LIVE BIRTHS	SURVEY
ANGOLA	118	MIS 2011	MALAWI	122	MICS 2006
	68	DHS 2015-2016		56	MICS 2019-2020
BENIN	125	DHS 2006	MALI	191	DHS 2006
	96	DHS 2017		101	DHS 2018
BURKINA FASO	129	DHS 2010	MOZAMBIQUE	153	DHS 2003
	48	DHS 2021 KIR		60	DHS 2022-2023 KIR
CAMEROON	122	DHS 2011	NIGER	127	DHS 2012
	80	DHS 2018			
CÔTE D'IVOIRE	108	DHS 2011-2012	NIGERIA	157	DHS 2008
	74	DHS 2021		132	DHS 2018
DRC	158	MICS 2010	RWANDA	152	DHS 2005
	70	MICS 2018		45	DHS 2019-2020
ETHIOPIA	123	DHS 2005	SENEGAL	121	DHS 2005
	59	DHS 2019		40	DHS 2023 KIR
GHANA	111	MICS 2006	SIERRA LEONE	156	DHS 2013
	40	DHS 2022-2023 KIR		122	DHS 2019
GUINEA	123	DHS 2012	TANZANIA	112	DHS 2004-2005
	111	DHS 2018		43	DHS 2022
KENYA	115	DHS 2003	UGANDA	137	DHS 2006
	41	DHS 2022 KIR		64	DHS 2016
LIBERIA	114	MIS 2009	ZAMBIA	119	DHS 2007
	93	DHS 2019-2020		61	DHS 2018
MADAGASCAR	94	DHS 2003-2004	ZIMBABWE	84	DHS 2010-2011
	75	DHS 2021		65	MICS 2019

## OWNERSHIP OF ITNS IN PMI PARTNER COUNTRIES

	HOUSEHOLDS WITH AT LEAST ONE ITN (%)		HOUSEHOLDS WITH AT LEAST ONE ITN (%)		
		SURVEY		SURVEY	
<b>ANGOLA</b>	11	MIS 2006-2007	<b>MALAWI</b>	38	MICS 2006
	31	DHS 2015-2016		74	MICS 2019-2020
<b>BENIN</b>	25	DHS 2006	<b>MALI</b>	50	DHS 2006
	92	DHS 2017		91	MIS 2021
<b>BURKINA FASO</b>	57	DHS 2010	<b>MOZAMBIQUE</b>	16	MIS 2007
	83	DHS 2021 KIR		57	DHS 2022-2023 KIR
<b>CAMEROON</b>	36	DHS 2011	<b>NIGER</b>	61	DHS 2012
	72	MIS 2022		96	MIS 2021 KIR
<b>CÔTE D'IVOIRE</b>	68	DHS 2011-2012	<b>NIGERIA</b>	42	MIS 2010
	72	DHS 2021		56	MIS 2021
<b>DRC</b>	51	MICS 2010	<b>RWANDA</b>	15	DHS 2005
	63	MICS 2018		66	DHS 2019-2020
<b>ETHIOPIA</b>	65	MIS 2007	<b>SENEGAL</b>	36	MIS 2006
	64	MIS 2015-2016		61	DHS 2023 KIR
<b>GHANA</b>	19	MICS 2006	<b>SIERRA LEONE</b>	60	MIS 2016
	67	DHS 2022 KIR		68	DHS 2019
<b>GUINEA</b>	8	MICS 2007	<b>TANZANIA</b>	23	DHS 2004-2005
	63	MIS 2021		67	DHS 2022
<b>KENYA</b>	48	MIS 2007	<b>UGANDA</b>	16	DHS 2006
	54	DHS 2022		83	MIS 2018-2019
<b>LIBERIA</b>	47	MIS 2009	<b>ZAMBIA</b>	38	MIS 2006
	72	MIS 2022		53	MIS 2021
<b>MADAGASCAR</b>	57	DHS 2008-2009	<b>ZIMBABWE</b>	29	DHS 2010-2011
	69	DHS 2021		37	MICS 2019

Ownership is defined as the percentage of households that own at least one ITN.

## ACCESS TO ITNS IN PMI PARTNER COUNTRIES

	ITN ACCESS (%)		ITN ACCESS (%)		
		SURVEY		SURVEY	
<b>ANGOLA</b>	15	MIS 2006-2007	<b>MALAWI</b>	19	DHS 2004
	20	DHS 2015-2016		57	MICS 2019-2020
<b>BENIN</b>	15	DHS 2006	<b>MALI</b>	30	DHS 2006
	77	DHS 2017		72	MIS 2021
<b>BURKINA FASO</b>	36	DHS 2010	<b>MOZAMBIQUE</b>	37	DHS 2011
	64	DHS 2021		69	MIS 2018
<b>CAMEROON</b>	56	MICS 2014	<b>NIGER</b>	37	DHS 2012
	64	MIS 2022		80	MIS 2021 KIR
<b>CÔTE D'IVOIRE</b>	64	MICS 2016	<b>NIGERIA</b>	29	MIS 2010
	65	DHS 2021		43	MIS 2021
<b>DRC</b>	30	MICS 2010	<b>RWANDA</b>	9	DHS 2005
	44	MICS 2018		51	DHS 2019-2020
<b>ETHIOPIA</b>	2	DHS 2005	<b>SENEGAL</b>	18	MIS 2006
	49	MIS 2015-2016		58	MIS 2020-2021
<b>GHANA</b>	2	DHS 2003	<b>SIERRA LEONE</b>	37	MIS 2016
	67	MIS 2019		47	DHS 2019
<b>GUINEA</b>	2	DHS 2005	<b>TANZANIA</b>	16	DHS 2004-2005
	42	MIS 2021		53	DHS 2022
<b>KENYA</b>	42	DHS 2008	<b>UGANDA</b>	9	DHS 2006
	50	DHS 2022 KIR		72	MIS 2018
<b>LIBERIA</b>	25	MIS 2009	<b>ZAMBIA</b>	34	DHS 2007
	52	MIS 2022		67	MIS 2018
<b>MADAGASCAR</b>	35	DHS 2008-2009	<b>ZIMBABWE</b>	20	DHS 2010-2011
	48	DHS 2021		27	MICS 2019

Access is defined as the percentage of the population who could sleep under an ITN if each ITN in the household were used by up to two people.

## USE OF ITNs IN PMI PARTNER COUNTRIES - CHILDREN UNDER AGE FIVE

	U5 ITN USE (%)	SURVEY		U5 ITN USE (%)	SURVEY
<b>ANGOLA</b>	18	MIS 2006-2007	<b>MALAWI</b>	25	MICS 2006
	22	DHS 2015-2016		68	MICS 2019-2020
<b>BENIN</b>	20	DHS 2006	<b>MALI</b>	27	DHS 2006
	78	DHS 2017		73	MIS 2021
<b>BURKINA FASO</b>	47	DHS 2010	<b>MOZAMBIQUE</b>	7	MIS 2007
	67	DHS 2021 KIR		43	DHS 2022-2023 KIR
<b>CAMEROON</b>	21	DHS 2011	<b>NIGER</b>	20	DHS 2012
	58	MIS 2022		86	MIS 2021 KIR
<b>CÔTE D'IVOIRE</b>	37	DHS 2011-2012	<b>NIGERIA</b>	29	MIS 2010
	59	DHS 2021		41	MIS 2021
<b>DRC</b>	38	MICS 2010	<b>RWANDA</b>	13	DHS 2005
	51	MICS 2018		56	DHS 2019-2020
<b>ETHIOPIA</b>	41	MIS 2007	<b>SENEGAL</b>	16	MIS 2006
	45	MIS 2015-2016		37	DHS 2023 KIR
<b>GHANA</b>	22	MICS 2006	<b>SIERRA LEONE</b>	44	MIS 2016
	49	DHS 2022 KIR		59	DHS 2019
<b>GUINEA</b>	5	MICS 2007	<b>TANZANIA</b>	16	DHS 2004-2005
	38	MIS 2021		59	DHS 2022
<b>KENYA</b>	39	MIS 2007	<b>UGANDA</b>	10	DHS 2006
	51	MIS 2022 KIR		60	MIS 2018
<b>LIBERIA</b>	26	MIS 2009	<b>ZAMBIA</b>	24	MIS 2006
	50	MIS 2022		46	MIS 2021
<b>MADAGASCAR</b>	46	DHS 2008-2009	<b>ZIMBABWE</b>	10	DHS 2010-2011
	56	DHS 2021		15	MICS 2019

Use is defined as the percentage of children under age five who slept under an ITN the night before the survey.

## USE OF ITNs IN PMI PARTNER COUNTRIES - PREGNANT WOMEN

	PREGNANT WOMEN ITN USE (%)	SURVEY		PREGNANT WOMEN ITN USE (%)	SURVEY
<b>ANGOLA</b>	22	MIS 2006-2007	<b>MALAWI</b>	15	DHS 2004
	23	DHS 2015-2016		66	MICS 2019-2020
<b>BENIN</b>	20	DHS 2006	<b>MALI</b>	29	DHS 2006
	80	DHS 2017		76	MIS 2021
<b>BURKINA FASO</b>	45	DHS 2010	<b>MOZAMBIQUE</b>	7	MIS 2007
	71	DHS 2021 KIR		47	DHS 2022-2023 KIR
<b>CAMEROON</b>	20	DHS 2011	<b>NIGER</b>	20	DHS 2012
	63	DHS 2022		90	MIS 2021 KIR
<b>CÔTE D'IVOIRE</b>	40	DHS 2011-2012	<b>NIGERIA</b>	34	MIS 2010
	64	DHS 2021		50	MIS 2021
<b>DRC</b>	43	MICS 2010	<b>RWANDA</b>	17	DHS 2005
	52	MICS 2018		56	DHS 2019-2020
<b>ETHIOPIA</b>	43	MIS 2007	<b>SENEGAL</b>	17	MIS 2006
	44	MIS 2015-2016		40	DHS 2023 KIR
<b>GHANA</b>	3	DHS 2003	<b>SIERRA LEONE</b>	44	MIS 2016
	48	DHS 2022 KIR		64	DHS 2019
<b>GUINEA</b>	3	MICS 2007	<b>TANZANIA</b>	16	DHS 2004-2005
	39	MIS 2021		58	DHS 2022
<b>KENYA</b>	40	MIS 2007	<b>UGANDA</b>	10	DHS 2006
	45	DHS 2022 KIR		65	MIS 2018
<b>LIBERIA</b>	33	MIS 2009	<b>ZAMBIA</b>	25	MIS 2006
	53	MIS 2022		41	MIS 2021
<b>MADAGASCAR</b>	46	DHS 2008-2009	<b>ZIMBABWE</b>	9	DHS 2010-2011
	55	DHS 2021		25	MIS 2016

Use is defined as the percentage of pregnant women who slept under an ITN the night before the survey.

## IPT<sub>p</sub> COVERAGE IN PMI PARTNER COUNTRIES - TWO DOSES

	IPTP2 (%)	SURVEY		IPTP2 (%)	SURVEY
<b>ANGOLA</b>	3	MIS 2006-2007	<b>MALAWI</b>	47	MICS 2006
	37	DHS 2015-2016		75	MICS 2019-2020
<b>BENIN</b>	3	DHS 2006	<b>MALI</b>	10	DHS 2006
	34	DHS 2017		57	MIS 2021
<b>BURKINA FASO</b>	39	DHS 2010	<b>MOZAMBIQUE</b>	16	MIS 2007
	79	DHS 2021 KIR		46	DHS 2022-2023 KIR
<b>CAMEROON</b>	27	DHS 2011	<b>NIGER</b>	35	DHS 2012
	67	MIS 2022		56	MIS 2021 KIR
<b>CÔTE D'IVOIRE</b>	18	DHS 2011-2012	<b>NIGERIA</b>	13	MIS 2010
	58	DHS 2021		46	MIS 2021
<b>DRC</b>	21	MICS 2010	<b>SENEGAL</b>	49	MIS 2006
	31	MICS 2018		72	DHS 2023 KIR
<b>GHANA</b>	28	MICS 2006	<b>SIERRA LEONE</b>	71	MIS 2016
	78	DHS 2022 KIR		74	DHS 2019
<b>GUINEA</b>	4	DHS 2005	<b>TANZANIA</b>	22	DHS 2004-2005
	74	MIS 2021		58	DHS 2022
<b>KENYA</b>	14	MIS 2007	<b>UGANDA</b>	18	DHS 2006
	20	DHS 2022 KIR		72	MIS 2018
<b>LIBERIA</b>	45	MIS 2009	<b>ZAMBIA</b>	57	MIS 2006
	80	MIS 2022		79	MIS 2021
<b>MADAGASCAR</b>	6	DHS 2008-2009	<b>ZIMBABWE</b>	8	DHS 2010-2011
	41	DHS 2021		36	MIS 2016

Data come from nationwide household surveys that measured coverage of IPT<sub>p</sub>2 for pregnant women, defined as the percentage of surveyed women who received at least two doses of sulfadoxine-pyrimethamine during their last pregnancy in the past two years. IPT<sub>p</sub> is not part of the national policy in Ethiopia and Rwanda. Kenya, Madagascar, and Zimbabwe implement IPT<sub>p</sub> subnationally because of heterogeneous malaria transmission with areas of low risk. Data here are national and likely underestimate coverage in priority areas.

## IPT<sub>p</sub> COVERAGE IN PMI PARTNER COUNTRIES - THREE DOSES

	PREGNANT WOMEN ITN USE (%)	SURVEY		PREGNANT WOMEN ITN USE (%)	SURVEY
<b>ANGOLA</b>	1	MIS 2006-2007	<b>MALAWI</b>	14	DHS 2004
	19	DHS 2015-2016		48	MICS 2019-2020
<b>BENIN</b>	0	DHS 2006	<b>MALI</b>	18	MIS 2015
	14	DHS 2017		34	MIS 2021
<b>BURKINA FASO</b>	5	DHS 2010	<b>MOZAMBIQUE</b>	10	DHS 2011
	57	DHS 2021 KIR		25	DHS 2022-2023 KIR
<b>CAMEROON</b>	12	DHS 2011	<b>NIGER</b>	9	DHS 2012
	46	MIS 2022		25	MIS 2021 KIR
<b>CÔTE D'IVOIRE</b>	7	DHS 2011-2012	<b>NIGERIA</b>	5	MIS 2010
	35	DHS 2021		31	MIS 2021
<b>DRC</b>	5	DHS 2013	<b>SENEGAL</b>	7	MIS 2006
	13	MICS 2018		38	DHS 2023 KIR
<b>GHANA</b>	27	DHS 2008	<b>SIERRA LEONE</b>	31	MIS 2016
	60	DHS 2022 KIR		36	DHS 2019
<b>GUINEA</b>	30	MICS 2016	<b>TANZANIA</b>	3	DHS 2004-2005
	50	MIS 2021		32	DHS 2022
<b>KENYA</b>	7	MIS 2007	<b>UGANDA</b>	6	DHS 2006
	13	DHS 2022 KIR		41	MIS 2018
<b>LIBERIA</b>	10	MIS 2009	<b>ZAMBIA</b>	41	DHS 2007
	63	MIS 2022		68	MIS 2021
<b>MADAGASCAR</b>	2	DHS 2008-2009	<b>ZIMBABWE</b>	5	DHS 2010-2011
	31	DHS 2021		20	MIS 2016

Data come from nationwide household surveys that measured coverage of IPT<sub>p</sub>3 for pregnant women, defined as the percentage of surveyed women who received at least three doses of sulfadoxine-pyrimethamine during their last pregnancy in the past two years. IPT<sub>p</sub> is not part of the national policy in Ethiopia and Rwanda. Kenya, Madagascar, and Zimbabwe implement IPT<sub>p</sub> subnationally because of heterogeneous malaria transmission with areas of low risk. National coverage estimates included here are national and therefore likely underestimate coverage in priority areas.

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# PHOTO CREDITS

## Cover

Martha Malikomo in Malawi hangs her insecticide treated bednet up to dry after washing it. **Photo Credit:** Walker Kaulembe, Development Aid from People to People (DAPP) Malawi

## Page 1

U.S. Global Malaria Coordinator Dr. David Walton **Photo Credit:** PMI

## Page 2

A homeowner provides water for a spray operator who is mixing insecticide to spray homes in Malawi. **Photo Credit:** Abdoulaye Bangoura, PMI Evolve Malawi

## Page 4

Community health worker Hafsat Owusoweshi meets with Comfort Samuel and her child during a community meeting on malaria in Nigeria. **Photo Credit:** Bolatito Aiyenigba, Breakthrough ACTION-Nigeria

## Page 5

Kenyan mother Petronila Auma and her son in front of their mosquito net. **Photo Credit:** Afya Ugavi, USAID

## Page 7

Irene Atim, an SBC Officer, presents a homeowner with mosquitoes gathered from their home to raise awareness about malaria in Otuke district, northern Uganda. **Photo Credit:** Angela Kateemu, John Snow Inc. (JSI), PMI Uganda Malaria Reduction Activity

## Page 8

A spray operator looks on as a mobilizer explains to a homeowner what to expect before, during and after the spraying of their home with insecticide in Kenya. **Photo Credit:** Joel Mulwa/USAID

## Page 9

Santigie Sesay, a laboratory officer at the Central Public Health Reference Laboratory, Sierra Leone. **Photo Credit:** Raymond Alpha, Impact Malaria, Sierra Leone

## Page 10

A community technician in Ethiopia applying larvicide to a cistern. **Photo Credit:** Aaron Pied, PMI VectorLink, Abt Associates

Tropical Cyclone Freddy made landfall in Malawi's Southern Region in March 2023. To protect cyclone survivors, especially pregnant women and children, PMI distributed 14,500 insecticide-treated bed nets in March 2023 to health facilities and households in 12 of the most affected districts. In this photo, people carry bed nets to survivors across the river after floods washed away a bridge. **Photo Credit:** USAID Global Health Supply Chain Program—Procurement and Supply Management (GHSC-PSM)

## Page 11

A mobile clinic allows community members in Tak Province, Thailand to be screened for malaria close to home. **Photo Credit:** Todd Brown/RTI International

## Page 12

A community member receiving a dual AI mosquito net in Kebbi, Nigeria. **Photo Credit:** Olumide Oyebamij, GHSC-PSM Nigeria

A spray operator in Rwanda marks the door of a home where spraying has been completed. **Photo Credit:** Juste Rwangalinde, PMI Evolve, Abt Associates

## Page 13

A drone spraying larvicide in Madagascar. **Photo Credit:** PMI Madagascar

A drone returned to the launch site for a larvicide refill so it can move on to the next habitat. **Photo Credit:** Sarah Zohdy, PMI

A mother administers a dose of malaria preventive medicine to her child in Ghana. **Photo Credit:** Sixte Zigirumugabe, PMI

## Page 14

A community health worker engaging miners in Kagera, Tanzania in discussion about malaria prevention and treatment. Miners are at high risk of malaria since they live away from their homes when working and therefore need tools, such as insecticide-treated nets, to protect them when sleeping in camps. **Photo Credit:** Breakthrough ACTION Tanzania

## Page 15

Petros Kawadza, Senior Insectary Assistant at Africa University, sorting reference mosquitoes for dispatching to malaria control districts in Zimbabwe. **Photo Credit:** Wesley Kuture, Africa University

## Page 16

Medical Technician Susana Tovela assists Laboratory Technician Antonia Geveta with detecting, recording, and analyzing malaria cases in Mozambique. **Photo Credit:** USAID Malaria Capacity Strengthening program

A trained community member checking for holes in a mosquito net after one year of use by a household in Cameroon. **Photo Credit:** Souleymanou, PMI

## Page 17

Marie Gorreti Zalwango (right) and colleagues review medical records during an investigation of severe malaria deaths in a district in Eastern Uganda. **Photo Credit:** George Katwala

## Page 18

Forklift operator Djingarey Ibrahim moves boxes of preventive medicine at the central warehouse ahead of Niger's 2023 seasonal prevention campaign. **Photo Credit:** Africa Communication Network Agency Niger for GHSC-PSM

## Page 19

Community Health Worker Founèba Traoré (right) talks to Konimba Bagayoko about her newborn in Kalaban Coro District, Mali. **Photo Credit:** Mwangi Kirubi, PMI Impact Malaria

## Page 20

Community health worker Dinkie Kalie Marah (left) conducts a malaria test on a child in Falaba District, Sierra Leone. **Photo Credit:** PMI Impact Malaria

## Page 21

Victoria Nakafunda, in-Charge, Sikalembe Health Post, Zambia. **Photo Credit:** Augustine Chinyama, PAMO Plus

Village health workers like Vuthy SaoRy, who test their neighbors for malaria, are a big part of the reason that Cambodia is closer than ever to eliminating malaria. **Photo Credit:** Kinn RidaRaksmei- URC

# PHOTO CREDITS

## Page 22

Workshop participants practice using animal baits to sample adult mosquitoes during a training for entomologists from Thailand and Laos.

Workshop instructors demonstrate to entomologists from Thailand and Laos how to use a light trap to collect mosquitoes. **Photo Credit:** Todd Brown, RTI International

## Page 23

Community members discuss malaria prevention activities using sign language during a community dialogue at Magwero school, Chipata, Eastern Province, Zambia. **Photo Credit:** PATH/Chanda Mando

This mobile clinic in Kindia, Guinea, was one of 19 set up with PMI support to improve access to healthcare. In addition to malaria services, the clinics provided essential care for common illnesses such as respiratory infections, diarrhea, and malnutrition. **Photo Credit:** USAID Notre Santé

## Page 24

Loading a vehicle with malaria commodities for delivery to hard-to-reach areas in Niger. **Photo Credit:** GHSC-PSM Niger

## Page 25

A community health worker in Angola conducting a community dialogue to promote malaria prevention behaviors to safeguard the health of the community. **Photo Credit:** Mário Lemos, Health for All/PSI Angola

## Page 26

Nurse Janet Wanyama vaccinates 7-month-old Beverly Wakasa against malaria while her mother Sylvia Kadesa watches at the Malava County Hospital, Kakamega, Kenya. **Photo Credit:** Lameck Orina for Gavi Gavi/2021/White Rhino Films-Lameck Orina

## Page 27

Sharon Akoth and her baby in Kenya had their home sprayed with insecticide to protect them from malaria. **Photo Credit:** Joel Mulwa/USAID

## Page 30

At the central medical warehouse for Niger, Rahina Ibrahim determines the right kind of medicine and how much should leave Niger's central warehouse for health facilities ahead of the 2023 seasonal chemoprevention campaign.

**Photo Credit:** Africa Communication Network Agency Niger for GHSC-PSM

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Supervisors accompany spray operators to ensure the correct application of insecticide in homes in Kenya. **Photo Credit:** Joel Mulwa/USAID

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A pregnant woman taking preventive malaria medicine with assistance from a midwife at Gbozounmè health center in Benin. **Photo Credit:** Karl Job, USAID

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Nets being examined as part of durability efforts in Kampala, Uganda. **Photo Credit:** Raymond Sudoi, PMI VectorLink, PSI

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A child in Guinea receiving malaria preventive medicine. **Photo Credit:** USAID Notre Santé

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