



USAID
FROM THE AMERICAN PEOPLE



U.S. President's Malaria Initiative



INTEGRATED DATA ANALYTICS, VISUALIZATION, AND EVALUATION

BACKGROUND:

Vector control interventions are critical to maintaining malaria control gains and for continued progress towards elimination. Using data to inform decisions can support efficient use of resources to ensure high vector control coverage. Data use is key to developing strategies to adapt to changes in insecticide resistance and can facilitate effective use of the expanded toolbox for vector control as new indoor residual spray (IRS) and insecticide-treated net (ITN) products are introduced. Conducting timely evaluations of vector control interventions is important in the current context of new IRS and ITN products, including dual insecticide and piperonyl butoxide (PBO) ITNs to address pyrethroid resistance. Although evidence is critical for effective malaria vector control strategy development and implementation, relevant data are often not integrated and readily available to decision makers in easily accessible and actionable reports or data dashboards.

INTEGRATED DATA ANALYTICS, VISUALIZATION, AND EVALUATION:

PMI VectorLink is working with national malaria programs to compile, analyze, and visualize data to guide vector control decisions and strategies. This includes answering questions about the impact of IRS and ITN interventions on malaria burden. National program and partner datasets are integrated for review and analysis, including entomological, epidemiological, intervention coverage, and climate data. The goal of this work is to increase the use of evidence in malaria vector control decision-making with a focus on better use of existing data.

To achieve project goals, PMI VectorLink is addressing barriers to data use by integrating datasets to produce reports and/or dashboards that make relevant data more easily accessible, digestible, and action-oriented. The dashboards facilitate data review at the more granular levels optimal for planning, stratification, and targeting (i.e. to the district or sub-district level).

The PMI VectorLink team facilitates data review meetings with a focus on interpreting and using data for strategic and operational planning. Individuals making vector control decisions, including national malaria programs, PMI, and PMI VectorLink, are the target users for data dashboards and evaluation reports. Use cases may include:

- Supporting national vector control strategy, for example selecting approaches or products to meet program goals.
- Stratification and targeting for specific vector control interventions such as IRS and ITN campaigns.
- Optimizing vector control implementation, for example informing strategies to achieve coverage targets.
- Addressing and managing insecticide resistance through insecticide rotation.

DATA ANALYTICS & VISUALIZATIONS FOR PROGRAM PLANNING

In 2022, PMI VectorLink will continue support to vector control program planning in Zambia through supporting the integration of entomological data in the National Malaria Elimination Program's District Health Information Software (DHIS2).

May 2022



USAID
FROM THE AMERICAN PEOPLE



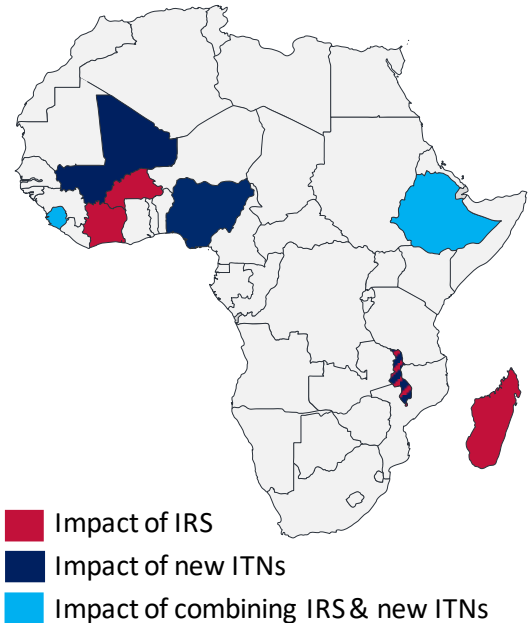
U.S. President's Malaria Initiative



IMPACT EVALUATIONS

In 2022, PMI VectorLink is conducting observational evaluations of the impact of IRS and ITN campaigns on malaria case incidence using formal statistical analyses, in the following PMI-supported countries:

- **Burkina Faso:** PMI VectorLink will finalize a manuscript summarizing the impact evaluation of the 2018-2021 **IRS campaigns** in two districts.
- **Cote d'Ivoire:** PMI VectorLink will complete an impact evaluation of the 2020-2021 **IRS campaign**. This evaluation will include collection of malaria case data directly from health facility registers.
- **Ethiopia:** PMI VectorLink will update dashboards assessing the impact of **IRS and standard pyrethroid ITNs compared to PBO ITNs** in the Amhara region, one year post intervention. These dashboards will inform the on-going impact evaluation, which will be completed three years after implementation.
- **Madagascar:** PMI VectorLink will finalize a manuscript summarizing an evaluation of the 2016-2020 **IRS campaigns**, assessing the impact on case incidence, effect of multiple years of IRS, and the effect of varying levels of IRS coverage.
- **Mali:** PMI VectorLink will complete an impact evaluation **dual insecticide ITN campaign** (Interceptor® G2) compared to standard pyrethroid ITNs distributed in the Sikasso region in late July 2020. The evaluation will assess the impact on malaria case incidence two years after ITN distribution.
- **Malawi:** PMI VectorLink will evaluate the impact of the **dual insecticide ITN campaigns** (Interceptor® G2, Royal Guard), **PBO ITN campaign**, and **IRS campaigns** that took place in different districts in 2021.
- **Nigeria:** PMI supported a universal **PBO ITN campaign** in 2019 in Ebonyi State. PMI VectorLink will complete an evaluation comparing malaria case incidence before and after the campaign in Ebonyi state with neighboring Cross River State, which received pyrethroid ITNs in the same year. The impact on key entomological indicators will also be assessed. PMI will also evaluate the impact of the **dual insecticide ITN campaign** (Interceptor® G2) in Kebbi State and **PBO ITN campaign** in Sokoto State, which will take place in 2022. The evaluation will assess the impact on malaria burden and key entomological indicators and will be finalized two years after the ITN distribution.
- **Sierra Leone:** A national universal coverage PBO ITN campaign was conducted in 2020. In 2021, PMI supported IRS implementation in Bo and Bombali districts. PMI VectorLink will conduct an interim descriptive analysis on the impact of the **2021 IRS campaign** in the context of the universal **PBO ITN campaign**, assessing the impact on malaria burden and key entomological indicators. The evaluation will be finalized after two years of IRS implementation.



For more information regarding this work, please contact Dr. Sarah Burnett (sburnett@path.org).

May 2022