



Improving malaria surveillance and health system interoperability in Thailand

Background

Thailand has made significant progress in addressing malaria over the past decade, thanks in part to investments made by the Ministry of Public Health's (MOPH) Division of Vector-Borne Diseases (DVBD) to develop a malaria information system (MIS). The MIS supports malaria diagnosis and treatment services, allowing national-level DVBD staff to closely monitor malaria patients and potential outbreaks in near real-time for responsive decision making—helping achieve a 91 percent decrease in malaria incidence.¹

Despite this progress, Thailand still does not have a complete picture of malaria surveillance. That is because malaria data is spread across multiple, independent surveillance platforms. In addition to the MIS, malaria officers in Thailand must also pull critical patient-level surveillance data from two parallel health information systems: the health management information system that collates information on all health areas, including malaria, and another that collates case notification and patient-level clinical and demographic data for all notifiable diseases, including malaria.

“The disparate malaria data sources make it challenging to conduct malaria care,” said Worawut Chanti, Chief of Mukdahan Vector Borne Disease Center (VBDC). “We spent a lot of time merging and verifying those data sources.”

USAID's Country Health Information Systems and Data Use (CHISU) program supports the DVBD to improve MIS operability and to ensure integration of the MIS with other

¹ PMI Digital Community Health—Key Informant Interview, 2021.

national health information systems. This will not only improve malaria surveillance but will also contribute to Thailand's national goal of integrating vertical disease programs into a single, centralized platform.

Steps Taken

To strengthen the interoperability of the MIS with the country's other health information systems, CHISU and the DVBD convened key stakeholders to outline the scope, overlap, and data collection procedures for the various health information systems. This helped identify current interoperability challenges and other barriers to seamless data sharing. Stakeholders identified several potential long-term sustainable solutions for integrating data from these systems and landed on a data mart, a data storage system that contains information specific to an organization's business unit. A data mart will allow the MOPH's DVBD team access to relevant data from the three information systems, allow data integration, and provide quick insights from the consolidated data.



Health workers in Thailand check names and gather information during bednet distribution as part of malaria control efforts. Photo credit: PMI

Results + Next Steps

CHISU is supporting DVBD to implement the data mart solution through technical assistance and training. The project is also providing the information technology (IT) infrastructure (including a server and the supporting networking equipment) to enable the data mart to function. While the data mart will help address the integration challenges, the capacity to consistently access and use the data collected by the MIS is limited to national-level staff. Provincial staff also need this capacity to enable nimble, subnational responses to malaria. This is particularly critical as Thailand is facing a resurgence of malaria cases along its western border with Myanmar. CHISU is supporting DVBD and other national and provincial stakeholders with training for provincial staff and developing user-friendly tools that automate data extraction, analysis, and visualization processes for subnational datasets. These efforts will provide a clearer picture of Thailand's malaria situation to help target interventions to maintain the country's progress in the fight against malaria.



This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of #7200AA20CA00009. Views expressed are not necessarily those of USAID or the United States government.

