



FEASIBILITY OF IMPLEMENTING A DIGITAL, CASE-BASED, REAL-TIME MALARIA SURVEILLANCE SYSTEM AT THE TOWNSHIP LEVEL IN TWO STATES AND TWO REGIONS OF MYANMAR

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Background

- In recent years, digital technologies have gained significant momentum in healthcare. Web-based health management information systems are being increasingly implemented to improve healthcare delivery and management.
- In support of malaria elimination efforts in Myanmar, the PMI-Eliminate Malaria (PMI-EM) Activity aims to implement a digital surveillance system to enhance case-based malaria surveillance at the community level and interrupt local malaria transmission.
- However, for this digital system to be effective, it is important to consider the mobile network, internet coverage, and digital literacy in the townships where it will be implemented.
- This study explores the feasibility of implementing a digital, case-based, real-time malaria surveillance system using the District Health Information Software 2 (DHIS2) platform in Myanmar for the following states and regions: Kayin, Rakhine, Sagaing, and Tanintharyi.

Objective

- Assess the mobile network, internet coverage, and digital literacy in the PMI-EM implementing areas to understand the readiness to uptake digital technologies for reporting and surveillance.

Methods

- A cross-sectional design using a structured questionnaire was conducted in May-June 2023 to assess telecommunications coverage, internet accessibility, and digital literacy among 137 township-level PMI-EM staff in 36 townships across two states and two regions in Myanmar.

Results

- ✓ All **36 townships** had mobile telecommunications of any service providers in the urban settings and bigger villages. All four primary telecommunication service providers (ATOM, MPT, Ooredoo, MyTel) were available in **34 townships**.
- ✓ **35 townships** had access to the Internet, but it was limited in some villages.
- ✓ All **137 township-level staff** exhibited a high level of digital literacy, with **80%** proficient in the Android operating system and **95%** adept in instant messaging.
- ✓ **55% of respondents** reported using mobile applications such as Messenger, Viber, Telegram, and Signal. Most participants had experience in online survey participation and monthly digital reporting.
- ✓ Over **70% of respondents** were skilled in web-based applications, including email usage, while approximately **60%** could use Excel reporting and pivot tables. **30%** needed more specific data management and analysis capabilities.
- ✓ There was a need to improve the technical skills for digital technology among users, and the parallel use of paper-based and digital platforms created an additional burden.

Figure 1. Usage of Mobile Operators

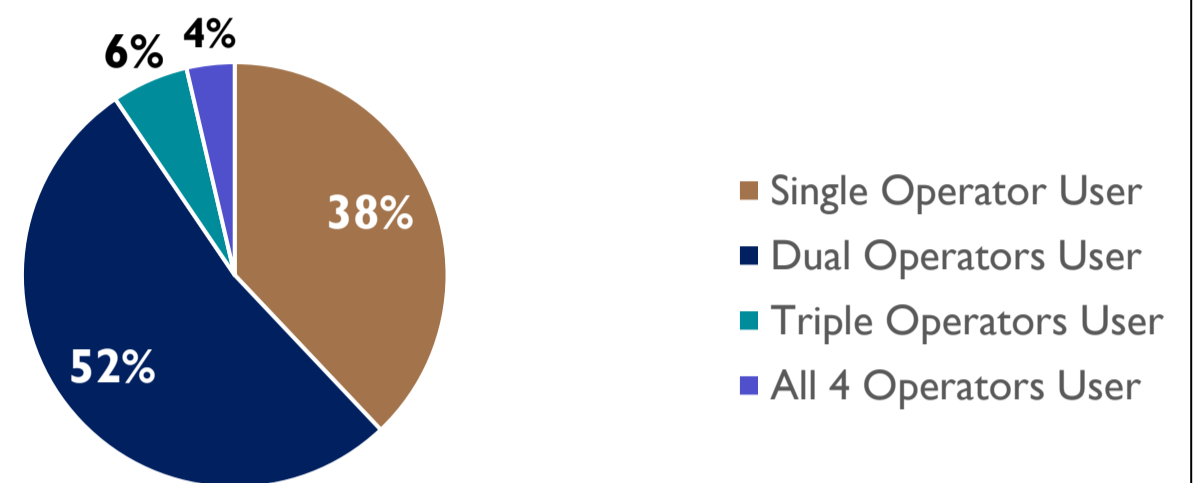
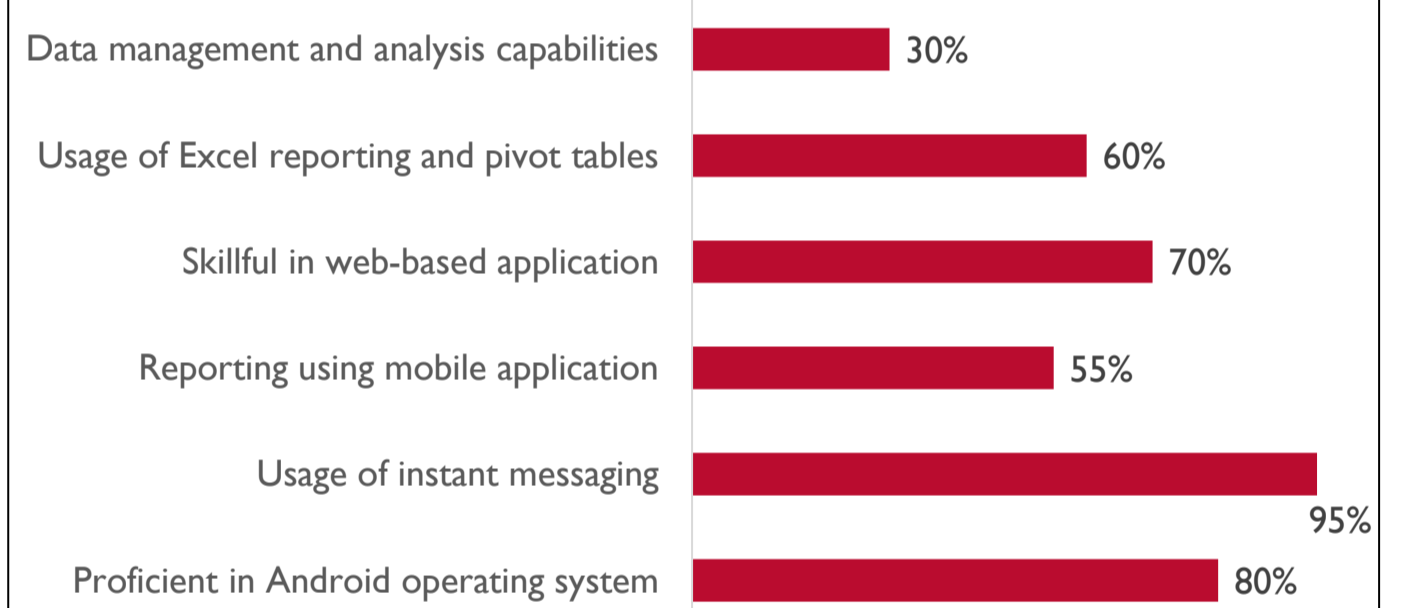


Figure 2. Percentage of Respondents Comfortable in Performing Digital Tasks (N=137)



Conclusions

- The study highlighted that Kayin, Rakhine, Sagain, and Tanintharyi had available network coverage, and the township staff had adequate digital literacy to implement a digital malaria surveillance system.
- Results also underscore the importance of specific technical and data management skills in the township-level staff's continuous troubleshooting support.
- Implementation of a digital, case-based, real-time malaria surveillance system is feasible if project staff are deployed in urban settings or bigger villages.

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Funding Agency



Partners

