



## Surveillance Evaluation Matters

Angela Song-En Huang<sup>1D</sup>, Senior Editor

Office of Preventive Medicine, Taiwan Centers for Disease Control

Dengue fever remains an important public health challenge in Southeast Asia and the Western Pacific Region. Despite decades of experience, dengue continues to test our surveillance systems, our response capacity, and our ability to translate data into effective action.

In this issue of OSIR, *An Evaluation of the Village Health Volunteers-based Aedes Larval Indices Surveillance System in Thailand, 2022: A Mixed-methods Study*, Boonrumpai et al. remind us that establishing a surveillance system is only the first step. We must also evaluate the functionality of the system, examining whether it meets the objectives of surveillance.<sup>1,2</sup>

Surveillance systems are often built with clear intentions, but over time, they evolve. New technologies are introduced, parallel platforms emerge, and workflows adapt to local realities. Without systematic evaluation, these changes can accumulate quietly, potentially leading to the systems becoming cumbersome to use, as in the case reported from Thailand.

Another important lesson from this study concerns the role of technology in surveillance. Technology has greatly expanded what is possible, from real-time dashboards to mobile reporting applications, and these tools are welcome and often necessary. However, to be effective, technology must be easy to use for everyone involved and in every setting.<sup>3</sup> Navigating a smartphone may be easily managed by a young person, but it may be a daunting task for people who are more senior. Systems designed in urban environments, where internet connections are stable and technical support is readily available, may not always function as intended in rural areas. These factors, which can lead to frustration with technology, may result in decreased surveillance quality.

In addition, surveillance is not only about collecting data, but also about using the data to generate useful information that enables action. For surveillance data to inform control measures, resource allocation, and policy, the data must be credible, accessible, and timely. If systems are difficult to use, poorly integrated into routine work, or misaligned with users' capacities, data quality may suffer. Therefore, it is essential to understand where reporting becomes difficult, reduce unnecessary burden on those who collect the data, and streamline information generation.

Despite the challenges of the surveillance system pointed out in the evaluation, Boonrumpai et al. also showed that this community-based surveillance contributed not only to data generation, but also to engagement, education, and local action. When supported appropriately, community volunteers can play a critical role in strengthening both surveillance and response.

Beyond improving the system, evaluation findings also need to be communicated to and understood by those who depend on the data for action. Too often, evaluation results remain internal, circulated only among system managers or technical teams. But all stakeholders need to understand both the strengths and the caveats of the surveillance data they rely on, so they know what the data can reliably inform, where caution is needed, and how far the findings can be used to guide policies and interventions. Transparent reporting of evaluation findings builds trust, supports realistic interpretation, and enables more informed decisions.



Furthermore, sharing evaluation findings with public health professionals across the region creates opportunities for collective learning. When we understand how surveillance systems function in other settings, we are better able to reflect on our own structures, identify gaps, limitations, and areas for refinement, and anticipate challenges before they become critical. In this way, transparency in one country can strengthen practices in another.

Surveillance systems must be evaluated, and the results should be shared. As dengue continues to test our systems and our response capacity, it is our hope that the experiences presented in this issue will help readers strengthen their ability to translate surveillance data into effective public health action.

## References

1. World Health Organization. Communicable disease surveillance and response systems: guide to monitoring and evaluating. Geneva: World Health Organization; 2006. 81 p.
2. Centers for Disease Control and Prevention. Updated guidelines for evaluating public health surveillance systems. *MMWR Recomm Rep.* 2001;50(RR-13):1–35.
3. World Health Organization. Recommendations on digital interventions for health system strengthening. Geneva: World Health Organization; 2019 Jun 6. 206 p.