Key Findings from a Global Landscape Analysis on Entomological Surveillance Best Practices

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Landscape analysis objective and methods

Objective:

To **identify, understand, and document** global best practices for entomological surveillance including variability and overlap across respondent types and countries.

Methods and limitations

- 29 KIIs conducted in March-August 2020

- All transmission settings represented

- Funding and policy body representatives accounted for ~50% of respondents

- 60% of national program respondents from Malaysia or Sri Lanka

Best practices: Governance, prioritization, and funding

- Prioritization and level of funding for entomological surveillance tied to perceived value – key to have capable advocate at highest level (MoH) possible

- Internal and external advocacy for entomological surveillance is important; donor investments and WHO guidance is priority (and driver)

- Dedicated meetings keep entomological surveillance updated and on the national agenda with stakeholders active and engaged

'The most successful program is when the importance of entomological monitoring starts at the top – when there is at least some understanding of entomology – this makes a huge difference first and foremost.'

Best practices: Entomological surveillance strategies, activities, methodologies, and indicators

- Question-based entomological surveillance framework

- Consensus that baseline understanding of entomological drivers is important

- Sentinel site selection varied - best practices include use of defined selection criteria and temporal evaluation triggers for changing sites

- HLCs still considered gold standard while acknowledging ethical issues

'We now encourage countries who have limited resources and mosquitoes to focus on which questions to prioritize to ask. We are in shifting process now – and it's a messy area right now…'

'So much can be accomplished in collecting just the basic indicators – let's start by doing that correctly and then move on.'

Best practices: Data collection, storage, analysis, and use in program decision-making

- Use what works for the country: Paper-based tools and Excel or Microsoft Access are the norm, raising questions around need for digital solutions

- Donor versus country: Donors recognize value of digital tools (standardization, efficiency, data visualization, storage, QA)

    - Yet concerns expressed on country capacity, training, funds, sustainability, standardization, relatability, etc.

'A lot of focus on digital platforms. Doesn't matter what you do as long as it is standardized and collected well. Digital platforms have capacity and budgetary issues. Just collect good data with low tech means and you will be better than most'

'The actual integration of entomological data into DHIS2 provides the much-needed linkages with other epidemiological aspects of data and the analysis that is supposed to be done'

Best practices: Human resources and technical and operational capacities

- Insufficient human resources
  - Severe HR constraints in most countries owing to lack of funding, awareness, and prioritization

- Training and refresher trainings. External partners are important here

- Retiring workforce and limited career opportunities/paths

'[Country name] has benefitted greatly from international partners and educations…'

'I work with a lot of young people who want to stay in entomology but what are their chances of getting a job with the MOH when finish studies?'

'Again, they want capacity building efforts and they're trying to do, but funding is the main issue.'

Best practices: Partnerships with local research or academic institutes

- In-country partnerships highly valuable to NMCP - need clearly defined roles and responsibilities

- Primary challenges included: different priorities and interests, local capacity, development of trust, and lack of funding

- Local institutes may provide infrastructure and capacity support – lab, insectary, students

'I think as much as can bring in local academic or research institutions, the better – and ideally even have them be your implementers.

' A common and mutually beneficial research agenda, which includes capacity building and training needs to be developed by both entities.'