TAS Strengthening: Data Review and Analysis

Session Date: Friday, November 3

Session Time: 1:00pm – 4:00pm

Session Location: Severn II

Session Description: The goal of this session is to review study data from four LF-endemic countries representing different epidemiological settings to confirm the rigor of the current TAS design for making programmatic decisions or suggesting modifications to the TAS design (e.g., changing the target population or indicators measured) so that it becomes a more rigorous tool for identifying areas with evidence of recent transmission.

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Overview:

This session reviewed data from the "TAS Strengthening Study" in four LF-endemic countries, representing diverse epidemiological settings: American Samoa, Haiti, Philippines and Tanzania. The selected study sites were chosen because there was concern that there may be on-going transmission, despite having passed at least one Transmission Assessment Survey (TAS). The purpose of the study was to evaluate the rigor and decision-making guidance of the current TAS design, and to identify the most sensitive indicator(s) for detecting evidence of recent transmission that could be *added* to the current TAS platform to strengthen confidence in TAS-based decisions.

KEY DISCUSSION POINTS

- The group agreed that additional examination of TAS data, at the time of TAS completion, is important and should include consideration of the location and frequency of positive children.
- Following up positive TAS results is important but not often done by countries. Countries need clear guidance as to *how* and on *which individuals* to conduct follow-up. But consideration needs to be paid to the time and resource implications for teams in the field, as following up patients may require teams to spend additional time in the field. Also, programs need to ascertain whether or not medicines will be available for treatment if a signal is found during follow-up.
- At present, most countries are only treating the positive cases found during TAS, and it is unclear whether the programs would be willing to conduct a broader MDA (or consider restarting EU-wide MDA) if only one 'hotspot' was identified, without clear guidance from WHO.
- The entomological data from the TAS Strengthening study sites will be informative to understand if the FTS clusters identified are indicative of ongoing transmission and whether

that transmission is focal or wide-spread. It is anticipated that this information will help to refine the definition of a 'hotspot'.

- The group generally agreed that observing ≥ 2 positive children in one cluster should trigger a follow-up action by programs
- Once a positive child is identified in a TAS, the program should consider revisiting this area, either in future TAS surveys or through independent monitoring activities.
- Antibody data will be informative because it is a sensitive marker and may be the earliest signal of transmission. Furthermore, lab-based antibody tests provide a quantitative signal, which may be helpful for tracking change over time.
- The TAS framework may need to be tailored, based on epidemiological characteristics including vector species, baseline prevalence and migration of humans. For example, a more conservative cutoff could be applied to areas that had a higher baseline prevalence.
- Do we need to be more rigorous with our pre-TAS criteria? Should we stratify coverage data by urban vs. non-urban and ensure that coverage is sufficient in both settings before proceeding to TAS?
- Some models suggest that the TAS sampling strategy and age group may not be sufficient to rule out the possibility of ongoing transmission.
- The Philippines is keeping a database of all TAS positive results, which they plan to use to guide surveillance and follow-up decisions.

KNOWLEDGE GAPS AND RECOMMENDED NEXT STEPS

- Once the TAS Strengthening data collection is complete, it should be shared with the NTD Modelling Consortium so it can inform the transmission models.
- Should programs be advised to conduct focal MDA based on the finding of clustered cases (e.g., ≥2) or IU/EU-wide MDA? The trouble with only conducting focal MDA is that additional hotspots may have been missed by the TAS cluster-sampling methodology and will remain untreated unless treatment is delivered at a broader scale.
- As a global community, we should be careful not to let ourselves get locked into the TAS strategy just because it is the current platform; we should be open to changing the TAS components if necessary.
- More research on filarial antibodies is needed, including the development of a sensitive Wb123 RDT.
- Understanding antibody responses will be crucial to developing antibody thresholds for surveillance.