

Monitoring & Evaluation for Effective STH and Schistosomiasis Programs

Session Date: Friday, October 26

Session Time: 1:00pm – 4:00pm

Session Location: Rex, 8th Floor

Session Description: This session aims to address how soil-transmitted helminth (STH) and schistosomiasis control programmes can use fit-for-purpose monitoring and evaluation (M&E) strategies to demonstrate programmatic success and identify remaining gaps. Common operational research themes are to present what frameworks might look like, the key criteria to be considered, how these activities should be standardised, and to start framing these as preferred practice around M&E for these diseases. Presentations will cover:

- The new STH Coalition M&E framework
- Application of learnings from multi country M&E settings to refine country strategic directions
- Monitoring at scale in India's school-based National Deworming Day (NDD), which in 2017 reached over 260 million children in a single round

Session outputs are:

1. To provide specific/concrete recommendations of M&E practices for country adoption
2. To determine the resource requirements (technical and financial) at several "tiers" of M&E, to enable decision-making relevant to different country contexts

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KEY DISCUSSION POINTS

- STH programs mature differently, requiring a customized approach for assessing progress and capacity toward achieving STH goals. The draft Monitoring & Evaluation (M&E) Framework for STH Programs, under development by the STH Coalition, will provide innovative guidance to countries by acknowledging their differing stages of program implementation, define a standardized approach to measuring key indicators by program tier, and introduce a tiered set of categories for benchmarking and assessing country progress and capacity towards achieving STH control goals. The adoption of a framework such as this one can guide countries in achieving programmatic goals.
- Similarly, effective decision-making within schistosomiasis programs requires the development of a more comprehensive M&E framework that builds on the World Health Organization (WHO) requirements (situational analysis, evaluation of prevalence and intensity, evaluation of

coverage). The Schistosomiasis Control Initiative (SCI) proposed an M&E framework for schistosomiasis that includes: baseline mapping, process and performance monitoring (coverage evaluation surveys for mass drug administration, or MDA), impact assessment (to assess reductions in prevalence and intensity of infections over time), and value for money (using principles of economy, efficiency, effectiveness, equity). After the establishment and early implementation of control programs, this expanded M&E framework provides a more comprehensive process for assisting countries with programmatic decision-making to advance the goals of control and elimination of schistosomiasis as a public health problem.

- The country program example of India was presented, demonstrating successful monitoring of STH in a large-scale program. India has almost 1/5 of the world's population, and the highest burden of STH infections in the world. With over 223 million children at risk, India started implementing a National Deworming Day (NDD) Program in 2015. By 2016, the NDD Program had successfully scaled up to all 36 states. From the outset, India established clear M&E objectives, to generate and share appropriate program data, and disseminate learnings for evidence-based decision-making to improve program quality and achieve the desired NDD impact, in a cycle of continuous quality improvement. These M&E activities include: surveys of STH prevalence and intensity (including impact assessment of reductions over time), preparatory monitoring and training quality assessment, process monitoring and coverage validation by independent monitors, government and partner stakeholders. Additional needs-based activities include data quality assessments, rapid coverage monitoring, and coverage evaluation surveys. Mobile and web-based reporting ensures that coverage reports are available within 1-2 months. The focus on clearly defined M&E activities has been an important driver both of the overall success of the NDD as well as an enabler of strategy development; data generated through M&E are being used by the Government of India to develop a Road Map for eliminating STH as a public health problem across India.
- Kenya is another example of a country that has benefited from a strong M&E framework set up at program commencement. The Kenya Medical Research Institute (KEMRI) has extensively analyzed the impact of the program on reducing STH and schistosomiasis from 2012 to 2017. Five-year findings of the M&E program in 200 schools surveyed for baseline, midterm, and endline assessments, and in 60 schools surveyed yearly from 2012 to 2017, were presented. The M&E results showed reductions in prevalence and intensity of infection from baseline to endline of almost 55% for STH and almost 60% for schistosomiasis. Georeferenced and age-specific results enable heterogeneity within counties and subgroups to be observed, and have provided evidence-based results that are contributing to fine-tuning of the STH and schistosomiasis program in Kenya.

As demonstrated in the India and Kenya presentations, the adoption of rigorous M&E plans, extending beyond initial program implementation to track program progress and impact, are vital for STH and schistosomiasis control programs to reduce morbidity and use data towards decision-making and program refinement. The Monitoring & Evaluation Framework for STH Programs will be available as a resource document for countries to build their M&E plans.

The following questions regarding key challenges for M&E were asked of 3 breakout groups:

- (i) Issues of data quality, consistency of definitions, cost relative to implementation, and insufficient trend analysis affect performance monitoring of STH and schistosomiasis programs over time. As programs evolve, cost-effectiveness evidence will be required for

all areas of expansion and refinement, and their associated M&E methodologies. **What do countries need to measure progress over time, using low-cost, innovative technology, during programs at scale?**

- (ii) It is recommended that countries conduct impact assessments when they have a scaled-up, consistent high coverage program to assess treatment and programmatic refinements. However, there are evidence shortfalls regarding coverage, prevalence and intensity of infection metrics to inform treatment changes, further complicated by unclear timelines and a desire to expand into other age cohorts. **What methodology is needed for evidence-based decision-making after successive years of high-coverage MDA? Furthermore, what metrics are needed to help define when the “endpoint” has been reached?**
- (iii) Concurrent to disease reduction goals, countries need to develop plans for sustainable control programs, integrated within the health system. This raises questions regarding how countries align two parallel goals. **What tools (and M&E resources) should be used to understand the gaps?**

The following knowledge gaps were highlighted in the group discussions.

KNOWLEDGE GAPS IDENTIFIED

- Standard methods for completing statistical epidemiological trend analyses are missing in the current WHO Guidelines. How can the WHO Guidelines be updated to include these critical processes? As a side note, statistical rigor in epidemiology should be used at all times, but it must be balanced with the resources available.
- Current STH and schistosomiasis targets and indicators lack evidence. Research is needed to generate evidence to identify whether and how intensity should be part of the decision-making process. WHO says high-intensity infections are the drivers for morbidity, however counting eggs takes substantially more time than marking a slide as positive or negative and it adds a layer of cost and complexity to a survey. If more intensive mapping is needed, we may want to switch to a prevalence determination instead of an intensity determination.
- Counting of eggs is necessary as a proxy for clinical morbidity. However, the current gold-standard diagnostic test for stool analysis is acknowledged to have reduced sensitivity and specificity in low-intensity infections. New generation diagnostics are therefore required but as the cost of new technologies can be outside of the budget of most of countries, any new test must be affordable and field-friendly to support M&E activities.
- How can the positive impact of reducing morbidity be factored into calculations of program cost effectiveness? When calculating cost-effectiveness, researchers must also calculate the value for money in terms of the positive impact on people’s lives by reducing morbidity.
- Endemic countries are in urgent need of capacity building in M&E. Resources need to be devoted and mobilized towards addressing sustainability. Having local staff trained in M&E techniques is vital for countries to grow their capacity. To meet this need, field epidemiology training programs may be engaged by the NTD programs to allow countries to train and certify local M&E experts for NTD control programs.

- M&E frameworks should be adapted to take into consideration the characteristics of the different parasites as not all worms are created equal. Response to drugs, epidemiology, reinfection rates, etc., are different across worm species.
- Clear-cut endpoint definitions need to be agreed upon by the STH and schistosomiasis communities to assist with target setting by programs.

RECOMMENDED NEXT STEPS

- It is recommended that STH and schistosomiasis programs develop robust M&E frameworks to guide their activities and decisions towards eliminating these diseases as a public health problem.
- Concentrated effort is required to operationalize shared tools that have been developed such as the STH Monitoring & Evaluation Framework, schistosomiasis mapping tools, and other rigorously tested tools and methods for country use, such as those used by India and Kenya.
- It is recommended that evidence is generated to support the setting of clear endpoints for programs for STH and schistosomiasis both for the control of morbidity and transition to elimination as a public health problem.
- New generation diagnostic tests are urgently needed to support the verification of endpoints for elimination, particularly when prevalence and intensity have been significantly reduced through program interventions.