

GUIDELINES for REPLICATION of the MALARIA DECISION ANALYSIS SUPPORT TOOL (MDAST)

The MDAST project initially involved three East African countries, which together serve as a pilot for the wider use of the policy tool in malaria-prone countries. These guidelines were developed to facilitate the successful dissemination and implementation of MDAST in other countries affected by malaria. The guidelines consider what would be required for the replication of MDAST, including: 1) the identification of characteristics forming an environment conducive to the success of MDAST elsewhere, 2) a proposed process for the replication of MDAST, 3) areas of anticipated variation of MDAST across countries, and 4) potential challenges to replicating MDAST (and opportunities for addressing these challenges). The process of replication in each country would be well-documented by the MDAST team throughout its stages and the lessons learned applied to subsequent replication activities. The guidelines also summarize potential challenges that may be associated with the replication of MDAST, as well as recommendations for addressing these potential challenges.

Characteristics promoting success of MDAST

Stakeholder feedback and other insights from various development, dissemination, and implementation activities in Kenya, Tanzania, and Uganda have contributed to a greater understanding of characteristics contributing to the success of MDAST. However, it is important to realize that the success and value of MDAST is not precluded in the case that all of the enabling components highlighted below are not in place. In fact, the very process of engaging with MDAST may actually strengthen many of the beneficial characteristics and thereby increase the potential value of the tool in the policymaking context.

The most essential component for realizing the value of MDAST is the involvement and commitment of in-country stakeholders, especially implementers and policy-makers involved in malaria control. Input from stakeholder engagement activities is a key element behind the iterative process of tool development and refinement. It is important to note that the process of gaining and incorporating stakeholder feedback has also been instrumental in building understanding and a sense of ownership among the stakeholders. Stakeholder involvement in countries interested in engaging with MDAST should be manifest both through a general belief in the value of decision analysis for improved malaria decision making, as well as a willingness to commit time and energy to work collaboratively with the MDAST team to adapt, disseminate, and implement the tool.

MDAST will be most valuable to in-country decision makers as a tool for considering alternative malaria control strategies under certain governance and policymaking conditions. Intersectoral collaboration (for example, between ministries) that facilitates stakeholder dialogue and collaboration will improve the ability to consider the full range of possibilities and tradeoffs related to malaria control strategies. Participatory decision-making processes will ensure that consideration is given to alternative malaria control strategies. Furthermore, the decision-making processes for malaria control policies must be open to weighing the input and recommendations of those that would use the tool.

It is also important to realize the broader context in which malaria control policymaking is made. Ultimately the tool would have to be introduced and used in a way that was consistent with the established organizational structures for policymaking and implementation in the country. Policymaking environments vary and will be an important consideration in tailoring the tool for use in different countries. Nonetheless, regardless of the policymaking environment, avenues for participatory decision-making must be open for MDAST to have an appreciable impact.

The role of MDAST as a tool to support improved evidence-based decision-making will best be achieved when appropriate forums exist for regularly reviewing and updating malaria control policies.

The tailoring, dissemination, and implementation of MDAST in new candidate countries will require the availability and commitment of certain human resources. Firstly, as has been stated before, there should be a core group of stakeholders invested in MDAST and willing to work closely with project team members. This core group should reflect key stakeholder interests across a range of relevant ministries, organizations, and sectors. Within the core group, there should be a key figure with the willingness and authority to serve as the in-country lead responsible for coordinating the roll-out of MDAST in the country. In addition to the in-country lead and additional core stakeholders, there should be an effort early on to identify and engage a number of technical staff to support the dissemination, training, and implementation activities.

Development of the tool has sought to balance user-friendliness with allowing the user to highly tailor the tool to his or her specific context, including the alteration of a range of inputs for which context-specific data may be available. The ideal situation would be for the users of MDAST to have dependable access to quality, reliable, complete and timely country-specific data for inputting into the tool, but the tool maintains functionality and value even when the user may not always be able to access perfect and complete data. Finally, it is worth noting that the regular use of MDAST in support of an evidence-based policymaking approach should in turn help to improve the availability, access, and quality of applicable data through increased demand, including through the identification of research gaps.

Process for replicating MDAST in other countries

In general, the process for replicating MDAST in a new candidate country will be similar to that of the original process, while realizing that the aim of replication is primarily to familiarize and train stakeholders in its use, and not to reinvent the tool itself. However, the replication process should consider ways in which the tool and its use could be tailored to best meet the needs in different countries and contexts. In this sense, stakeholder involvement in the iterative improvement and customization of the tool remains an important component.

The first step for replication in a new candidate country is to assess the viability of and commitment to the MDAST approach within the institution(s) responsible for malaria control decision making in the country. In-country lead(s) should be identified and commit themselves to engaging with MDAST before replication activities can begin in full. The formal launch of MDAST in the country would be an inception workshop involving relevant stakeholders. An MDAST demonstration session during the workshop

would include showing the range of tool functionalities as well as running through interactive scenarios as guided by stakeholders' particular interests and inputs. The demonstration session would be followed by a discussion to include proposed modifications to be made to the tool in order for it to fit within the country's context. The tailored tool would be introduced to stakeholders during a second workshop, which would focus on providing additional training and engaging stakeholders in discussions about how to disseminate and implement the tool.

Anticipated variation of MDAST across countries

The following are some anticipated areas or components that could require modifications to the tool and/or strategies for its dissemination and implementation according to the country context:

- The characteristics and/or structure of interventions may need to be adapted to reflect country and programmatic context.
- Some of the default parameter values may need to be altered depending on context (e.g., malaria transmission context, vectors, etc.)
- The policymaking environment may differ depending on governance and decision-making structures. This could have an impact on which and how stakeholders are targeted and trained, as well as the contexts in which MDAST is used.

The variations and modifications of the MDAST tool and process should be well-documented. Countries should contribute their insights and experiences on what works and what doesn't, and how MDAST has influenced policymaking in the country.

Potential challenges to replicating MDAST

The following are potential challenges that may be faced in seeking to replicate MDAST, and some proposed associated opportunities for addressing these challenges. This list is not intended to be exhaustive, but rather to present potential issues that have been identified for consideration by MDAST team members.

- Some countries may not be ideal candidates for implementing MDAST (e.g., based on characteristics described within these guidelines). However, it is important to note that MDAST can still be of great value even when conditions are not ideal. As pointed out earlier, the process of engaging with and using MDAST may actually help to strengthen many of these characteristics over time and thereby increase the potential value of the tool in the policymaking context.
- Policy-makers may not immediately perceive a need for a robust evidence-based decision making / decision support tool, or may be resistant to changing the existing decision-making system (which may currently be conducted on an ad-hoc basis or based on what was done before). The level of motivation for trying a new approach may be an issue. The main consideration is that if there is

sufficient stakeholder involvement and commitment, then MDAST has the potential to support the deepening of an evidence-based decision-making agenda.

- It may be a challenge to generate buy-in and commitment among potential new country partners. Malaria control decision makers may wonder whether to use MDAST given that other malaria decision support tools exist. It is useful to draw distinctions between the various malaria support tools in existence as they serve a range of different purposes and applications. It is therefore important to demonstrate the ways in which MDAST is uniquely positioned to support in-country decision makers in making improved, evidence-based malaria control policies, including:
 - The strong partnerships it cultivates with and among key malaria control stakeholders including within the WHO and NMCP/MOH and across other sectors;
 - The iterative, stakeholder-driven tool development process that reflects a cohesive understanding and response to the situation on the ground, as well as the ability to adapt the tool for use in different contexts;
 - A user-friendly tool designed for and in collaboration with in-country malaria control decision-makers, whose use is supported by training activities and resources.
- There may be a need to build trust and confidence in MDAST among stakeholders in potential candidate countries. Firstly, MDAST should facilitate communication between stakeholders in countries interested in using MDAST and stakeholders in countries that have already participated in the dissemination and implementation of MDAST. Secondly, monitoring and evaluation reporting (including results of stakeholder surveys) and results of “field trials” of MDAST could also be used to build confidence in the value of MDAST.
- The replication of MDAST presents many opportunities for its further development. MDAST should harness expansion activities to benefit the tool and its networks? The following are steps that the MDAST project could take in this regard:
 - Encourage the exchange of experiences among stakeholders in different countries, (e.g., through forums on the project website, a newsletter, etc.);
 - Convene stakeholders to address cross-border issues;
 - Consider how to employ regional bodies in dissemination and implementation of MDAST (e.g., The East African Community);
- Funding for replication activities and to sustain support for continued implementation of MDAST will need to be secured. MDAST project partners and in-country collaborators alike should actively explore the range of funding opportunities. Raising awareness of the MDAST project generally through a basic orientation to its purpose and objectives might open up additional avenues for funding training and field trial testing.

- The involvement of donors and external funding in the formation of national malaria control research agendas is a subject that has received attention during MDAST workshops and evaluations. How can the project ensure that the role of donors / external funding with regards to MDAST continues to be positive and responsive to in-country needs and wants? There must be a careful consideration of the role of donors in terms of facilitating MDAST (e.g., funding for replication activities). The project should work to promote the role of donors in encouraging evidence-based decision making, in close collaboration with the national frameworks for malaria control decision-making. There is also a need to engage donors as stakeholders in the project, as well.

The process of replication in each country should be well-documented by the MDAST team throughout its stages and the lessons learned applied to subsequent replication activities and the overall improvement of MDAST.