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Improving access to Integrated Community Case Management (ICCM) services for malaria in the community: Policy brief

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Key Messages

- Malaria remains the leading cause of under 5 morbidity and mortality in Uganda. In 2020, there were 3,832 deaths due to malaria among children under 5 years.
- Facilitating the Village Health Teams (VHTs) to report and restock antimalarials monthly will increase the number of malaria episodes management within 24 hours from the current 1.9 to 3.6 million at the cost of $2.11 per additional malaria episode managed.

Problem Statement

Malaria is the leading cause of morbidity and mortality affecting 90-95% of the population in Uganda [1]. About 58,000 total deaths due to malaria were reported in the District Health Information System (DHIS2) in 2020. Nearly 7 in 100 (about 3,800) of these deaths were among children under 5 years of age [2]. About 4 in 10 of the suspected malaria cases among children under 5 do not access confirmatory diagnosis and receive effective treatment on the same day due to poor access to care in the community [3].

The World Health Organization introduced integrated Community Case Management of Malaria (iCCM) as a proven strategy to improve access to timely malaria treatment at the community level. Selected community members (Village Health Teams, or VHTs) are trained and equipped to treat malaria and other childhood illnesses at community level before these cases become severe and necessitate a health facility visit [4]. The 2020 iCCM

comprehensive survey conducted by PACE indicates that since its inception in Uganda in 2010, iCCM had been rolled out to 120/135 districts. However, 62% of the VHTs had experienced stockout of Malaria commodities [artemisinin-based combination therapy (ACT) and malaria rapid diagnostic testing kits (mRDT)] in the last six months prior to the study [5].

Multiple system factors are responsible for commodity stockout at VHT level, including low motivation to collect commodities from the facility, delayed quarterly supervisions and facilitation, commodity stockout in some facilities, competing priorities and voluntary nature of VHT work [5]. However, our phone consultations with the district malaria focal persons and VHTs in 15 selected districts implementing iCCM indicated that VHTs are provided quarterly transport and lunch facilitation to attend a reporting and commodity restocking meeting at the health facility. Whereas VHTs can restock iCCM commodities at any time during the quarter, it was reported that majority wait for the quarterly facilitation even when they have stockout due to transport challenges. It was further reported that VHT with commodity stocks are seen to be active and motivated to treat children towards the period for the quarterly facilitation to generate data to report during the meeting but focus on other priorities thereafter. Additionally, quarterly facilitation affects reporting frequency and use of data for planning and forecasting malaria commodity needs. It further affects the frequency of interaction between supervisors (health workers) and VHTs to review performance and provide guidance. For these reasons quarterly facilitation is a key system factor resulting in stockout at VHT level. With frequent stock out at VHT level, the overall goal of iCCM will not be achieved.

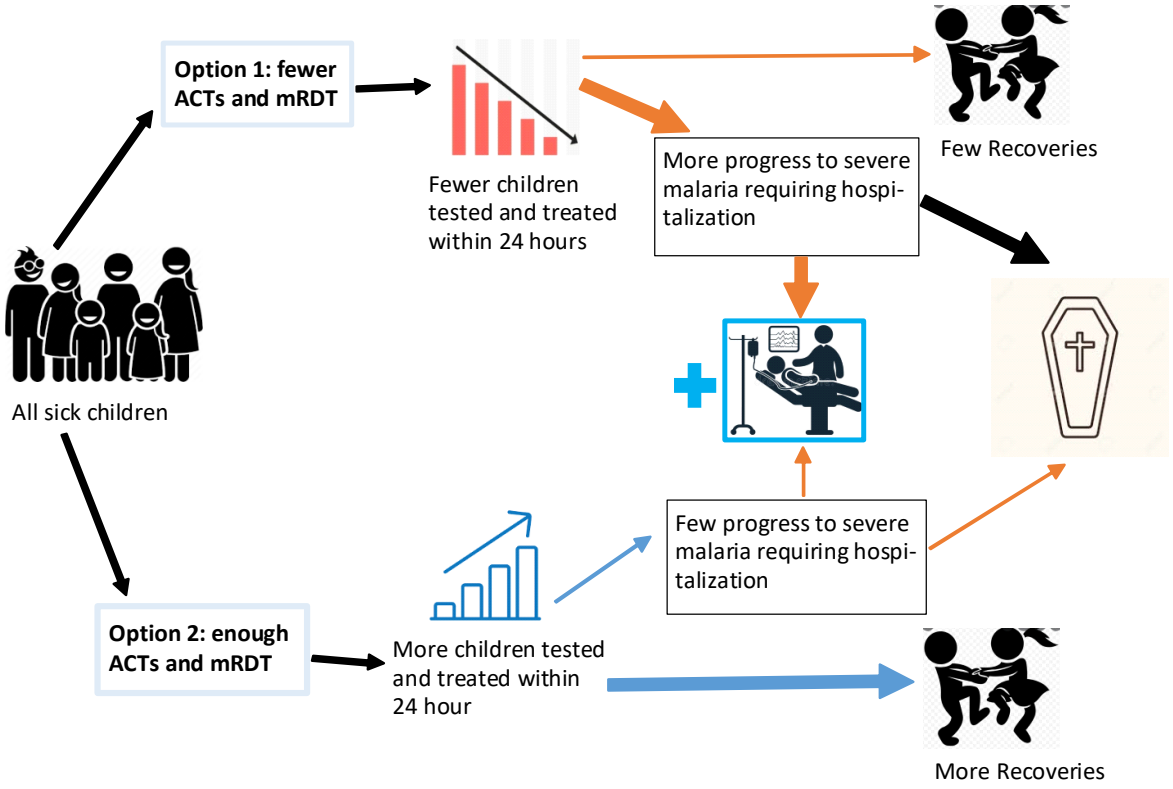
Policy Options

To reduce childhood morbidity and mortality due to malaria by providing timely access to treatment in the community, we considered the question of whether the current quarterly facilitation schedule should be changed to monthly facilitation.

POLICY OPTION 1:

Maintain status quo (maintain quarterly transport and lunch facilitation of VHT to attend a reporting, a review and a commodity restocking meeting)

Meetings are currently organized quarterly at the health facility nearest to the VHT. During the meeting, VHTs report on progress of their work, and health workers review reports and registers for correctness, completeness and accuracy. VHTs are replenished with ACTs and mRDTs and other items such as job aids. During the quarter VHTs can go to the health facility at any time to replenish their stocks, but the majority face a challenge of transport costs.



Therefore, the three months period for replenishment of stock leads to stockout of malaria commodities at VHT level resulting in missed opportunities for children under 5 years getting timely malaria treatment in the community as per the purpose of ICCM. With delayed access to malaria treatment, uncomplicated malaria cases progress to severe/complicated malaria that require health facility visits or admissions resulting in increased treatment cost and under 5 deaths.

POLICY OPTION 2

Change to monthly transport and lunch facilitation of VHT to attend a reporting, review and commodity restocking meeting

This policy would provide facilitation of VHTs with a transport refund to reach the nearest health facility to submit their reports, discuss their challenges with health workers and replenish their ACT and mRDT stocks for the management of malaria in children under 5 years monthly. With this option, the current facilitation of about $10 per quarter will be distributed monthly to create an incentive that attracts the VHTs to the health facility monthly to report and replenish commodities. This option increases the frequency of VHT accountability, improves oversight by supervisors and improves timely availability of data for forecasting iCCM commodity needs to minimize stockouts at VHT level.

With reduced commodity stock outs at VHT level, VHTs will be able to provide timely malaria testing and treatment to most of the uncomplicated cases before progression to complicated malaria. Facilities will be decongested, with fewer complicated malaria cases needing outpatient care or admission. This will eventually lead to reduction in mortality due to malaria among children under 5 years of age.

ANALYSIS OF POLICY OPTIONS

Assuming a population projection of 41 million in 2020 [6] with approximately 17.7% (7,257,000) under-5 children [7] and 3 episodes per child under 5 per year, we modelled an estimated 18.2 million cases of malaria each year.

There are about 65,000 active VHTs implementing iCCM [8]. Assuming the number of suspected malaria cases that are tested, confirmed and treated by VHTs is directly related to commodity stocks at VHT level, holding other contextual factors constant, we estimate that moving from quarterly to monthly facilitation will increase the proportion of VHTs with adequate commodity stocks from the current 38% to 58%. This will result in an estimated 1.7 million additional episodes of uncomplicated malaria managed by the VHTs at USD 2.11 per additonal uncomplicated case managed.

Table 1: Summary of effectiveness, and operational and political feasibility

Outcome indicator	Option 1: Quarterly reporting and commodity restocking	Option 2: Monthly reporting and commodity restocking
Uncomplicated episodes managed	1,960,465	3,611,383
Total VHT program costs	$4,145,226	$7,635,943
Additional uncomplicated episodes managed	-	1,650,918
Incremental Cost	-	$3,490,717
Incremental cost per uncomplicated episode managed	-	$2.11
Political feasibility	**High**	**Moderate**
Operational feasibility	**High**	**High**

Recommendations and next steps

The monthly reporting and restocking meetings' option is economically favorable relative to the quarterly reporting meetings' option. Thus, 'monthly reporting and restocking, policy option represents good value for money for community malaria management. Our analysis does not take into account the potential cost savings from treating malaria cases in the community rather than in health facilities, which would further increase the economic value of this intervention.

Politically, monthly facilitation is moderately feasible; this is because monthly facilitation is a strategy for enhancing an already acceptable iCCM model. However, this may meet resistance by some stakeholders, due to an additional effort caused by the increased frequency of funds disbursement and additional time committed to organizing reporting meetings. We plan to map the stakeholders directly implementing iCCM and share with them the incremental benefits of monthly facilitation of VHTs with minimal additional costs. Operationally, monthly facilitation is highly feasible, because there are existing structures implementing quarterly facilitation as well as dedicated resources.

Our cost-effectiveness analysis was modeled with several assumptions. There was no literature demonstrating cost effectiveness of option 2 over option 1. There is a need to conduct a monthly evaluation of this policy to monitor the performance of this model in the initial phase. Nonetheless, there is evidence of Ethiopia and Burkina Faso implementing monthly facilitation of community health workers (VHTs in Uganda) with success [9].

Next steps

A formal communication about the policy change to key stakeholders and the effective date will be circulated. The ministry of health will convene a meeting with Key ICCM implementing partners, (TASO, UNICEF, Save the Children, Malaria consortium and MoH) to discuss facilitation mechanisms and adjust VHT quarterly reporting tools to monthly and provide them in adequate quantities. Mechanisms such as utilizing monthly data to forecast commodity requirements will be developed to ensure availability of ACTs and RDTs at health facilities to handle additional malaria episodes under monthly reporting meetings. Changing from quarterly to monthly reporting and replenishment will enable us to treat an additional 1.65 million episodes of uncomplicated malaria at community level before they progress to a severe state and possible death. This will cost us additional USD 3,490,716.74 in terms of VHT program cost but will be cost-effective or potentially even cost-saving when considering the costs averted by treating cases in the community before they reach health facilities.

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