Demand Forecast for Artemisinin-based Combination Therapies (ACTs) in 2012-2013

Q2-2012 Update

Prepared by the ACT Forecasting Consortium:

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MIT ZARAGOZA International Logistics Program

CLINTON HEALTH ACCESS INITIATIVE

The consortium operates under the leadership of a steering committee consisting of:

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MMV Medicines for Malaria Venture

UNITAID

The Global Fund To Fight AIDS, Tuberculosis and Malaria

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This report was prepared by a consortium of forecasters including The Boston Consulting Group, the Clinton Health Access Initiative, and the Fundacion Zaragoza Logistics Center. The consortium is funded by UNITAID and operates under the leadership of the Affordable Medicines Facility – malaria (AMFM), the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Medicines for Malaria Venture (MMV), the Roll Back Malaria Partnership, UNITAID and the World Health Organization. All reasonable precautions have been taken by the authors to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall UNITAID or the World Health Organization be liable for damages arising from its use.

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KEY MESSAGES

- Sales of pre-qualified Artemisinin Combination Therapies (ACTs) are expected to reach over 300M treatments in 2012, the highest since the start of the ACT scale-up in 2004.
- As per current international donor commitments, public-sector procurement of ACTs is projected to decline sharply in 2013.
- Since there is no indication that the "need" for ACTs will decrease, the potential exists for substantial shortfalls in ACT availability in endemic countries.
- Adding to the risks in 2013 is the decision regarding the Affordable Medicines Facility - malaria (AMFm); a decision to terminate the AMFm after Phase 1 would further erode global ACT demand, and may require transitional funding to enable a responsible and orderly adjustment in the market. A decision by the Global Fund Board to continue the AMFm in any form in 2013 will require additional funding from internal or external sources.
- Additional funding across sectors—including international funding for public sector procurement and the AMFm, and domestic resources in endemic countries—will have a large impact on future demand.
- Given the long lead times associated with ACT production, any additional funding for 2013 will need to be committed and communicated soon to influence the investment and production decisions of market participants. For those involved in artemisinin cultivation, it is too late to change capacity decisions for 2013; however, having greater clarity on funding for 2014 ACT procurement is crucial in influencing the upcoming planting season.
- In the future, multi-year funding commitments by donors could significantly strengthen the accuracy of demand forecasts and improve the capacity and production decisions made by market players, and therefore contribute to stabilizing the market.
- In addition, policies aimed at improving the transparency, predictability and performance of public procurement processes at the international (i.e. GFATM) and national levels could increase the efficiency of and help stabilize the market for ACTs.

I. Context

This report updates the latest demand forecasts for artemisinin-combination therapies (ACTs) and artemisinin in 2012-2013 produced by the ACT forecasting consortium. The consortium includes The Boston Consulting Group, the Clinton Health Access Initiative, and Fundacion Zaragoza Logistics Center. Funded and coordinated by UNTAID, the project brings together forecasters originally working under the Roll Back Malaria (RBM) umbrella in an effort to produce a single ACT forecast for use by the malaria community. The consortium is overseen by a Steering Committee that includes representatives from the Affordable Medicines Facility-malaria (AMFM), the Global Fund, Medicines for Malaria Venture, RBM, UNITAID, and WHO.

This is the fifth in a series of consortium forecasts that will be produced until mid-2013. Each quarter the forecasts are revised based on new information about ACT funding and market dynamics. Since this Q2

forecast update is only modestly different from the Q1 forecast, the new figures are summarized in this brief report, and we refer readers to our full Q1 report for a detailed description of the project context and methods. The Q1 2012 forecast is available on the UNITAID website: www.unitaid.eu/actforecasting.

II. Summary of Findings

Demand for pre-qualified ACT procurement is projected across three market sectors – the public channel (including all sources of funding for public-channel purchases), the subsidized private channel (in AMFm Phase 1 countries), and the premium private channel. The forecasts reported here project procurement at the manufacturer level, in the form of expected orders based on currently available and committed funding.

Between Q1 and Q2, the main change in our forecast relates to the disbursement of funds for ACTs in the public channel. Our forecasting methods utilize a regression model that applies historical international funding disbursement rates to project the rate of future ACT procurement in this channel. Disbursement rates have slowed recently, so the effect in the model is to project a slight slowing of future ACT procurement. This mechanical change effectively pushes out forecasted demand slightly: some orders previously forecasted for 2012 are now expected to fall into 2013, and a comparable amount projected for 2013 is now expected to fall into 2014. The net effect is to reduce global demand estimates in 2012 compared to the prior forecast while the 2013 estimates are basically unchanged.

Projected WHO-pre-qualified ACT procurement in 2012 is now projected to be 303M treatments. This figure is ~16M treatments lower than our Q1 forecast, but it still marks a record year for pre-qualified ACTs, and reflects significant support from international funders who directly or indirectly pay for most of these treatments. **The public channel remains the largest channel for pre-qualified ACTs with orders for 210M treatments in 2012** (down from 226 M in our Q1 report). Despite the downward revision, this public-channel figure is higher than reported orders for 2010 and estimates for 2011 (182M and 176M, respectively), due to an increase in public funding available in several countries in 2012.

In the **subsidized private channel, approved private-buyer orders are forecasted to be 83M treatments in 2012**, roughly comparable to our final estimates for 2011 for that channel and identical to our Q1 forecast. **Premium private sector orders are projected to be 10M treatments in 2012**, which is also unchanged.[1]

Looking ahead to 2013, our Q2 forecasts remain largely unchanged since Q1. The mechanical adjustment to procurement in the public channel yields a decline of only 400K treatments globally compared to our Q1 predictions; the shift of orders from 2012 into 2013 is offset by a comparable volume of orders shifting from 2013 into 2014. However, there remains significant uncertainty around procurement levels for pre-qualified ACTs in 2013. Committed international funding levels for 2013 remains significantly lower than for 2012. In addition, it is unclear what form the AMFm will take after the conclusion of the Phase 1 pilot. Later this year, a decision will be taken by the Global Fund Board to continue, modify, expand, or terminate the AMFm based on pilot results and donor interest. Any

[1] Due to changes in methodology and data sources, premium private channel estimates for 2012 and 2013 are not directly comparable with forecasts in earlier periods. Prior year estimates include some non-pre-qualified ACTs; as a result figures for earlier periods should be viewed as overstating demand for PQ ACTs in the premium market.

decision the Global Fund Board takes to continue the AMFm into 2013 will require additional funding from internal or external sources.

In light of this uncertainty, two forecasts were created for 2013. Both scenarios project public-channel procurement of ACTs to fall to 162M treatments in 2013 (from 210M in 2012), based on lower levels of committed funding. New funding from international or domestic sources in 2013 could mitigate this decline, but our forecast projects public channel orders based on funding committed as of Q2, 2012.[2] Scenario 1 assumes the AMFm continues in largely its current form in the 8 Phase 1 countries.[3] This scenario would correspond to a decision by the Board to expand, continue, or slightly modify the AMFm after Phase 1. Scenario 2 assumes a decision is made to terminate or scale back the AMFm program, but that support equivalent to 6 months of funding is provided to enable an orderly transition in the private channel.

2013 private channel demand forecasts in scenarios 1 and 2 are unchanged from our Q1 estimates. In Scenario 1, which assumes the AMFm continues in largely its current form in 2013, subsidized private channel orders for pre-qualified ACTs are projected to be 85M treatments (up from 83M in 2012). The premium private market for ACTs is projected to be 10M treatments in 2013. In Scenario 2 in 2013, subsidized private channel orders for ACTs will fall to 43M treatments in 2013, while premium private market orders will increase to 14M treatments, as premium products replace subsidized products in some Phase 1 countries.

Both scenarios continue to yield a significant decline in overall procurement levels in 2013. Figure 1 summarizes our forecast of projected orders for ACTs across the channels, along with the change from our Q1 forecast. Under our new figures, global orders for ACTs are projected to fall to 257M treatments in Scenario 1 (a drop of 15%) and to 219M treatments in Scenario 2 (a decline of nearly 28%). Given that underlying consumer demand for effective antimalarial treatment is unlikely to drop in 2013, this situation creates a risk of unmet need for ACTs.[4]

[2] Procurement of funds from bilateral and multilateral agencies with annual disbursement cycles may be under-represented through this approach.

[3] It is also possible that the AMFm evaluation could lead to an expansion of the subsidy model. However, given the timing of the evaluation and the work that would be needed to secure funding, designing and implementing an expansion means that the incremental growth would likely occur after 2013.

[4] A six-month transition is not a "worst-case scenario" as it does assume funding is made available for an orderly market transition. Termination of the AMFm without transition support would cause procurement to decline even more sharply in 2013. At this point, no donors have made a binding commitment to provide funding for a transition period. Efforts are underway to determine the appropriate size of a transition program in the case of a decision to terminate the AMFm after Phase 1. Additional scenarios under consideration include funding for 9-month and 12-month transition support. Under the 9-month option, orders in 2013 would fall midway between Scenarios 1 and 2: 162M treatments in the public channel, 64M in the subsidized private channel, and 12M in the premium private channel for a global procurement total of 238M treatments. Under the 12-month option, procurement would be equivalent to Scenario 1.

ACTs (M of treatments)	Prior estimates 2010	2011	2012	Δ	Scenario 1 2013	Δ	Scenario 2 2013	Δ
Public sector	182	176	210	(16)	162	(0.4)	162	(0.4)
Private-Subsidized sector	12	88	83		85		43	
Private-Premium sector[1]	20-25 (est.)	23	10		10		14	
Total	214–219	287	303	(16)	257	(0.4)	219	(0.4)

Figure 1: Global Demand for Pre-qualified ACTs across Channels

The revised forecast also projects a slightly different distribution of demand across countries. Counting all sources of funding, the eight AMFm Phase 1 countries are still expected to comprise roughly 2/3 of global orders for pre-qualified ACTs in 2012. However, based on the projected timing of their ACT disbursements in the public channel, orders in these countries are now projected to be slightly lower than our Q1 forecast: ~5M fewer treatments in 2012 and ~13M fewer treatments in 2013 (across both scenarios). This revision amplifies the projected decline in orders in these countries in 2013 under the 2 scenarios. In the non-AMFm countries, our new forecast is lower in 2012 and higher in 2013 than our Q1 projection (reflecting the shift of approximately 12M treatments across the two years).

The breakdown across these country segments is summarized in Figures 2 and 3.

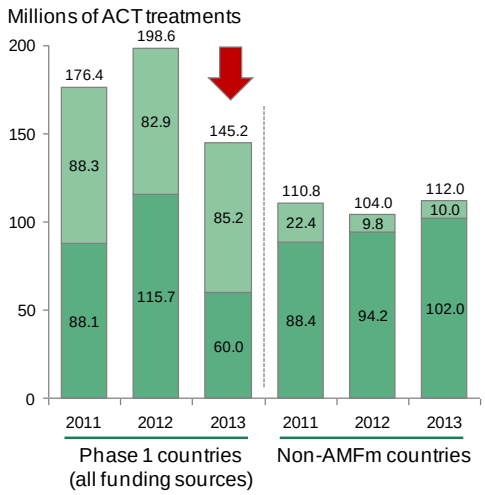

Figure 2: Global ACT demand in AMFm and non-AMFm countries (2011-13): Scenario 1

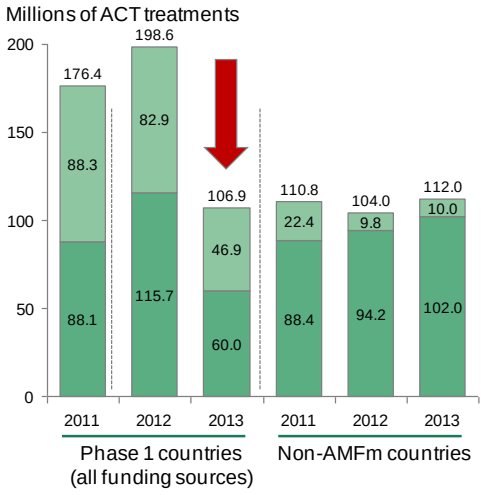

Figure 3: Global ACT demand in AMFm and non-AMFm countries (2011-13): Scenario 2

Private channel ACTs Public channel ACTs

We have also converted these updated forecasts of pre-qualified ACT demand into requirements for artemisinin. Figure 4 lays out the artemisinin required to meet the need under these scenarios, using a conversation ratio of 2.16 M ACT treatments per metric tonne of artemsinin. Artemisinin requirements for pre-qualified ACTs in 2012 decline to 140 MTs (8 MTs less than our Q1 forecast), while the projected need for 2013 is unchanged under both scenarios.

				Scenario 1	Scenario 2
	2010	2011	2012	2013	2013
ACTs (millions of treatments)	214–219	287	303	257	219
Artemisinin (metric tonnes)	~100	133	140	119	101

Figure 4: Global Demand for Pre-qualified ACTs and Artemisinin

It is worth noting that this demand is for pre-qualified ACTs only; additional artemisinin supply would be needed to produce non-pre-qualified ACTs, oral artemisinin monotherapies, IV artesunate for severe malaria, and to replenish manufacturer stocks that were depleted in 2011 and 2012. While these additional sources of demand for artemisinin are smaller than the demand for pre-qualified ACTs, they matter for farmers and extractors. Currently, work is underway by other groups to forecast the artemisinin demand from these other sources, and future reports will strive to incorporate this information.

There are several implications in this update for policymakers and market participants. The decline in committed funding for 2013 procurement poses significant risks to the ACT market and raises the spectre of product shortages. Although funding beyond what is currently committed for ACT procurement could mitigate this projected decline, new funding would need to be secured quickly to have a material impact on the production and investment decisions of market participants. Moreover, the timing and outcome of the decision about the AMFm will have a major impact on demand for ACTs. A clear decision process and timely decisions are critical in allowing market participants to prepare effectively and to promote market stability. Additional funding to secure an orderly market transition will be crucial in the case of a decision to terminate or significantly scale back the subsidy program. Finally, the up-and-down patterns of funding and demand described here underscore the importance of effective policy and market coordination at the global and endemic country level; a rich understanding of market dynamics, patient need, and supply will become increasingly important to ensure these critical products are deployed most effectively, efficiently, and equitably. Longer-term commitments by donors and policies designed to improve the performance and predictability of public procurement processes at the international (i.e. GFATM) and national level can also increase efficiency, help stabilize the market and allow market participants to prepare effectively.

As additional information about funding commitments and other market dynamics become clear, we will incorporate them into our future forecasts and reports.