

## Affordable Medicines Facility-Malaria (AMFm)

### Background

Malaria affects 300 million to 500 million people annually and kills an estimated 1.2 million, most of them children in Africa. Effective strategies for reducing this burden must include both prevention (indoor residual spraying of insecticides, use of insecticide-treated bed nets, and vector control) and treatment. Treatment of malaria requires effective drugs that are readily accessible to the population at risk, who must be well informed about the symptoms and treatment. Knowledge and innovation are also needed to improve treatment effectiveness and reduce costs. The Affordable Medicines Facility-malaria (AMFm) program is an artemisinin-based combination therapy (ACT) subsidy that will address the treatment element by providing access to effective and affordable drugs.

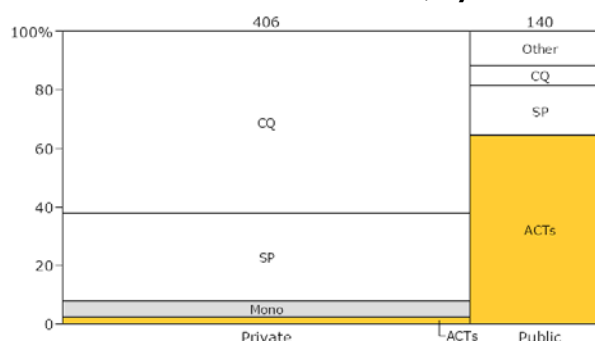
This snapshot reviews the issue of a subsidy for combination therapy for malaria and offers views on some potential risks.

### The problem

Worldwide, an estimated 546 million antimalarial treatments are consumed each year, with governments delivering 27 percent and private sources accounting for 73 percent of the supply. Figure 1 describes the market, showing the relative size of the private market (left) and public distribution (right). The mix of drugs is shown vertically. Seventy-one percent of all treatments are based on the inexpensive but decreasingly effective drugs chloroquine (CQ) and sulfadoxine-pyrimethamine (SP), which dominate private sales. Treatments based on artemisinin, a relatively new, powerful, and expensive antimalarial drug, have entered this mix, both alone (monotherapy) and in ACT form (combination therapy). The World Health Organization has recommended the use of ACT as the new standard in an effort to delay the emergence of resistant parasites, which have rendered previously successful drugs ineffective.

Subsidies for purchase of ACTs have been available to governments in developing countries since 2004, with a positive impact on the number of treatments, as shown in Figure 1. ACTs are sold to the public sector at a manufacturer's price of US\$1 per treatment, which is about 20 times the wholesale price of CQ. Manufacturers' prices of ACTs to private wholesalers are \$4 to \$5. Retail prices range from \$6 to \$10, compared with \$0.40 or less for CQ and SP. The ACT subsidy would reduce the private market prices to crowd out monotherapies and to deliver an effective treatment for poor malaria victims.

**Figure 1. Drugs Used in 546 Million Antimalarial Treatments Worldwide in 2006, By Source**



## History of and rationale for an ACT subsidy

The idea of a global subsidy originated in 2004 with a report by the U.S. Institute of Medicine titled *Saving Lives, Buying Time: Economics of Malaria Drugs in an Age of Resistance*. If the ACT subsidy can be implemented globally, it will help to eliminate monotherapies, thus contributing to a longer period of effectiveness for artemisinin. As part of a comprehensive malaria program, successful treatment can reduce transmission.

Beyond the ACT subsidy, there are other potential ways to reduce transmission and improve effectiveness of treatments, including: Banning monotherapies, expanding public sector treatment, requiring malaria patients to use public clinics, distributing vouchers for ACTs, or imposing price controls. However, all of these alternatives (issues of practicality and ideology aside) require local action and thus fail the test of a global intervention to address the problem everywhere at the same time, preferably with minimal transaction costs.

## How would it work?

The goal of the subsidy is to reduce the retail price of ACTs to \$0.40. Wholesalers that buy directly from manufacturers would be prequalified to participate by the ACT Facility (ACTF). The ACTF would tender and/or negotiate with manufacturers of ACTs, seeking to obtain the same \$1 price charged to public buyers. Once a qualified wholesaler enters into an agreement with a qualified manufacturer and the order is delivered, the ACTF would pay the subsidy necessary to reduce the price to \$0.05. For example, if today's ACT price to wholesalers is \$4, competitive bidding would generate savings of \$3, then a cash subsidy for the final \$0.95 would generate a price of \$0.05 for the wholesaler (equivalent to the price of CQ). Proponents suggest that, in practice, the required subsidy may range from \$0.95 to \$1.95. The price tag for an estimated 250 million treatments, including the administrative, program evaluation, and subsidy costs, would be about \$300 million per year. The expected result would be that two-thirds of all treatments would be ACTs.

## Risks

While there is almost no risk of failure in crowding out monotherapy artemisinin from the market (a small subsidy would likely accomplish this) the real risks of an ACT subsidy have to do with success in improving treatment, for example:

- Will the supply chain pass the savings on to the consumer? The result will differ in every market. An analysis based on prices in Uganda suggests that in a competitive market, the ACT price could be brought down to about \$0.60 from the current price of \$9. In less competitive markets, the estimate is \$1.50 to \$2.50, but alternatives are also priced higher in those markets. ACT actually works, so at a higher price it still might crowd out CQ and SP. In either price scenario, over time there is little question it would crowd out more expensive artemisinin monotherapy, assuming little difference in manufacturing costs.
- Will rogue sellers stop shaving pills, selling duds, prescribing the wrong drugs, and otherwise stop acting to harm the effectiveness of treatment? Will patients become more effective in seeking appropriate treatment? Nothing about the price subsidy affects these behaviors. However, attention to packaging, public information, and agreement by manufacturers and wholesalers to advertise good practices aggressively could build incentives to reduce this risk in the program. Inescapably, even a global subsidy needs local complementary actions to meet its

goals fully. An important test of the AMFm will be the degree to which it handles these complements to the subsidy.

### **Present status and expected future directions**

The board of the Roll Back Malaria Partnership endorsed further development of Affordable Medicines Facility-malaria on November 29, 2007. The program will cost \$1.4 billion-1.9 billion over five years to subsidize the price of ACTs to a level equivalent to CQ. Estimates indicate that the subsidy could increase the affordability of ACTs from 1% of the target population currently to 44% with the full subsidy, and potentially save 300,000 lives a year.