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Policy brief on improving access to artemisinin-based combination therapies for malaria in Burkina Faso

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THE PROBLEM

Malaria is a major public health problem in Burkina Faso. Statistics from health facilities in 2006 show that 40.1 percent of medical consultations, 53.4 percent of hospital admissions, and 45.8 percent of deaths are malaria related (2). Malaria among children under 5 years of age accounted for 46 percent of all cases in 2004, 49 percent in 2005 and 48 percent in 2006. In the same age group, malaria was the cause of 66.4 percent of deaths in 2004, 62.0 percent in 2005 and 62.7 percent in 2006.

In addition, data on the therapeutic efficacy of antimalarials at six sentinel sites in 2003 indicated treatment failure rates varying between 26.9 percent and 63.3 percent for chloroquine and 10 percent for sulfadoxine-pyrimethamine, thereby prompting Burkina Faso to adopt a new malaria treatment policy in February 2005 (3). The first-line drugs now recommended for the treatment of uncomplicated malaria are the artemisinin-based combination therapies (ACTs) artemether + lumefantrine and amodiaquine + artesunate (4–6;15;16).

A core strategy for malaria control is *early and appropriate management of malaria cases* at all levels of the health pyramid (3;5;6). The home-management strategy for treatment of uncomplicated malaria was adopted by the National Malaria Control Programme (PNLP) in 1997 and has been implemented in all health districts in partnership with community groups and associations (9;11;14). Thus, in addition to fulfilling their traditional role in the referral process, community intermediaries will also be supplied with ACTs to enhance the home management of uncomplicated malaria (3;5;6). However, it should be noted that the majority of community health workers are no longer practicing because there is little or no financial incentive for them to do so (10;13). The strength of their commitment to providing community-based services is undermined by the absence of a continuous and effective motivational strategy on the part of communities, the Ministry of Health, and other partners.

ACTs are available at subsidized rates in public health facilities only, despite the fact that private facilities are important dispensers of medication, particularly in urban areas. This leads to deficiencies in early treatment of uncomplicated malaria, given that private facilities dispense ACTs at prices in excess of CFAF 4,000 (US$9) (i.e., forty times more expensive than ACTs for children under 5 years of age and four times more expensive than ACTs intended for adults).

With the introduction of ACTs and the scaling up of their use in treating uncomplicated malaria, single-drug therapy, especially chloroquine, should be removed from the list of essential drugs. Single-drug therapy should be strictly reserved for specific pathologies.

The following key points emerge from analysis of the malaria control situation: (i) Motivating community intermediaries to ensure the long-term future of community-based interventions remains a challenge; (ii) It has been decided to subsidize ACTs dispensed by public health services but not private facilities because of concerns that the latter might not respect pricing guidelines; and (iii) Single-drug therapy

Table 1. Policy Options

Policy option	Motivate the community health workers (CHWs) responsible for home management of uncomplicated malaria	Ensure private-sector stakeholders comply with national guidelines on subsidized pricing of artemisinin-based combination therapies (ACTs)	Recall antimalarial drugs used in single-drug therapy for uncomplicated malaria
Description	• Train CHWs • Supervise and provide guidance to CHWs • Cover CHW training costs and expenses	• End pricing structure applicable to malaria treatment • Introduce subsidies for treatment of uncomplicated malaria • Contracting arrangements for provision of subsidized ACTs by private health facilities	• Draft and promulgate regulations to discontinue single-drug therapies (Ministerial order retracting the marketing authorization for single-drug therapies, inter-ministerial order to halt imports, etc.) • Organize recall of current stocks • Destroy stocks in approved manner • Reimburse owners for recalled and destroyed stocks • Inform/raise awareness among the general public
Advantages	• Involving community health workers in maternal and child health programs (compared to usual care) can reduce mortality in children under 5 years and morbidity from common childhood illnesses (10) • Training workshops, alone or combined with other activities, can improve professional practice and treatment outcomes for patients (7) • Fewer severe malaria cases in the community • By bringing treatment closer to the home, mothers will change their health-seeking behavior (1;8;9) • Reduction in health workers' workload, enabling them to devote their freed-up time to other health tasks	Evidence indicates that: • The private sector is an important health provider for the poor in low- and middle-income countries • Many measures involving the private sector can be successfully implemented in poor communities (12) • Increases in health-care costs tend to reduce the demand for treatment	• Effective treatment of uncomplicated malaria (if treatment with single-drug therapy is replaced with ACTs) • Fewer severe malaria cases • Fewer malaria-related deaths
Disadvantages	Overuse leading to possibility of rapid emergence of resistance to ACTs (6)	There is growing evidence that the private sector fails to provide high-quality care (2)	Resurgence of single-drug therapy through black market in contraband medication, corruption
Cost	CFAF 10 billion[a] (based on the malaria incidence rate, the number of uncomplicated malaria cases treated with ACTs dispensed by private facilities, the cost of ACTs and the level of subsidy according to age group)	CFAF 5 billion[b] (based on the malaria incidence rate, the number of uncomplicated malaria cases treated with ACTs dispensed by private facilities, the cost of ACTs and the level of subsidy according to age group)	CFAF 50 million[c] (based on estimated stocks of chloroquine and other artemisinin-based single-drug therapies as per import and consumption data)
Acceptability	• Decision makers at the Ministry of Health (favorable) • Technical and financial partners (mixed) • Procurement office (CAMEG) (favorable) • Pharmacy managers (unfavorable) • Associations and NGOs (very favorable) • Patients (mixed)	• Decision makers at the Ministry of Health (favorable) • Technical and financial partners (favorable) • Procurement office (CAMEG) (favorable) • Private pharmacists (mixed) • Patients (very favorable)	• Decision makers at the Ministry of Health (favorable) • Procurement office (CAMEG) (favorable) • Pharmacy managers (mixed) • Street vendors of medicines (unfavorable) • Patients (neutral)

[a]US$22.8 million.
[b]US&11.4 million.
[C]US$0.1 million.

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Table 2. Implementation of the Policy Options

Policy option	Ensure private-sector stakeholders comply with national guidelines on subsidized pricing of artemisinin-based combination therapies (ACTs)	Motivate the community health workers (CHWs) responsible for home management of uncomplicated malaria	Recall antimalarial drugs used in single-drug therapy for uncomplicated malaria
Obstacles to implementation	• No procedure for contracting with private facilities in the strategic plan for malaria control (5) • Essential Generic Medicines Procurement Office (CAMEG) stock inaccessible to private pharmacists • Lower profit margin on ACTs for private sector • Insufficient community input	• No national strategy for community-based intervention • Opposition from parents/patients if not informed of CHW role • Opposition from CHWs due to increased workload if motivation is insufficient	• Opposition from pharmacists and other vendors due to loss of profit margin • Lack of public enthusiasm, preference for tried and trusted medications
Strategies for implementation	• Lobby pharmacists, clinics and private practices to enter into a formal contract • Lobby CAMEG • Mobilize additional resources to finance ACT subsidies • Information campaign in the media targeting communities	• Fine-tune the national strategy for community-based services (6) • Introduce financial incentive scheme for community intermediaries based on profits from sale of ACTs • Tailor training of community intermediaries to their role and tasks • Referral centers for health and social welfare (CSPS) to guide and supervise community intermediaries	• Issue an interministerial order prohibiting the import and use of single-drug therapies • Public relations campaign to modify attitudes to single-drug therapy • Organize recall of single-drug therapies and document their destruction (3) • Reimburse recalled and destroyed stock • Launch information campaign in the media targeting communities

hinders scaling up the use of ACTs for treating uncomplicated malaria

POLICY OPTIONS

Universal and equitable access to ACTs for treating uncomplicated malaria is needed urgently. Three policy options that could improve access are changes in *Delivery arrangements*: motivate community health workers responsible for home management of uncomplicated malaria; *Financial arrangements*: ensure that private-sector stakeholders (pharmacies, clinics, nursing practices) comply with national guidelines on subsidized pricing of ACTs; and *Governance arrangements*: ban antimalarial drugs used in single-drug therapy for uncomplicated malaria and remove these drugs from the national list of essential drugs. These three options are described in Table 1.

IMPLEMENTATION OF THE POLICY OPTIONS

Obstacles to implementing the three policy options and strategies for addressing these are described in Table 2.

DISCUSSION

The policy brief summarized here was discussed in a 2-day policy dialogue in May 2008. A consensus was reached in support of all three policy options. The three policy options were subsequently incorporated in the proposal to the 7th round of the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM). The implementation process for lay health worker activities has been started as a pilot in three districts. Because of the short time span between the policy dialogue and submission of the 7th GFATM proposal, it was decided to propose a large scale implementation of lay health worker activities in the 8th GFATM proposal. The other two options are currently being implemented.

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REFERENCES

1. Ajayi IO, Browne EN, Garshong B, et al. Feasibility and acceptability of artemisinin-based combination therapy for the home management of malaria in four African sites. *Malaria J*. 2008;7:6.
2. Burkina Faso, Ministry of Health. *Health statistics yearbook 2006*. Ouagadougou: Research and Planning (Health) Office; 2007.

https://doi.org/10.1017/S0266462310000243 Published online by Cambridge University Press

3. Burkina Faso, Ministry of Health. *Report of the committee monitoring the introduction of ACTs*. Ouagadougou: Ministry of Health; 2008.
4. Burkina Faso, National Malaria Control Programme. *National guidelines for the management of malaria*. Ouagadougou: Ministry of Health; 2005.
5. Burkina Faso, National Malaria Control Programme. *Proposal under the malaria component of Round 7 of the Global Fund to Fight AIDS, Tuberculosis and Malaria*. Ouagadougou: Ministry of Health; 2007.
6. Burkina Faso, National Malaria Control Programme. *Strategic plan for malaria control, 2006–2010*. Ouagadougou: Ministry of Health; 2006.
7. Forsetlund L, Bjørndal A, Rashidian A, et al. Continuing education meetings and workshops: Effects on professional practice and health care outcomes. *Cochrane Database Syst Rev*. 2009;2:CD003030.
8. Hopkins H, Talisuna A, Whitty CJ, Staedke SG. Impact of home-based management of malaria on health outcomes in Africa: A systematic review of the evidence. *Malaria J*. 2007;6:134.
9. Kouyaté B, Somé F, Jahn A, et al. Process and effects of a community intervention on malaria in rural Burkina Faso: Randomized controlled trial. *Malaria J*. 2008;7:50.
10. Lewin SA, Dick J, Pond P, et al. Lay health workers in primary and community health care. *Cochrane Database Syst Rev.* 2007;1:CD004015.
11. Pagnoni F, Convelbo N, Tiendrebeogo J, Cousens S, Esposito F. A community-based programme to provide prompt and adequate treatment of presumptive malaria in children. *Trans R Soc Trop Med Hyg*. 1997;91:512-517.
12. Patouillard E, Goodman CA, Hanson KG, Mills AJ. Can working with the private for-profit sector improve utilization of quality health services by the poor? A systematic review of the literature. *Int J Equity Health*. 2007;6:17.
13. Sauerborn R, Nougtara A, Diesfeld HJ. Low utilization of community health workers: Results from a household interview survey in Burkina Faso. *Soc Sci Med*. 1989;29:1163-1174.
14. Sirima SB, Cotte AH, Konaté A, et al. Malaria prevention during pregnancy: Assessing the disease burden one year after implementing a program of intermittent preventive treatment in Koupéla district, Burkina Faso. *Am J Trop Med Hyg*. 2006;75:205-211.
15. World Health Organization. *Guidelines for the treatment of malaria*. Geneva: World Health Organization; 2006.
16. Zongo I, Dorsey G, Rouamba N, et al. Artemether-lumefantrine versus amodiaquine plus sulfadoxine-pyrimethamine for uncomplicated falciparum malaria in Burkina Faso: A randomised non-inferiority trial. *Lancet*. 2007;369:491-498. Erratum in: *Lancet*. 2007;369:826.