

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

Pierre Ongolo-Zogo

University Yaoundé 1 and Yaoundé Central Hospital

Renée-Cécile Bonono

Catholic University of Central Africa and Yaoundé Central Hospital

Keywords: Antimalarials, Care access, Health policy, Cameroon

THE PROBLEM

Malaria is the major cause of illness in Cameroon, responsible for 40 percent of medical consultations. For this reason, the Head of State along with his African Union peers in April 2000 and 2006 undertook to achieve universal access to malaria control interventions, including effective treatment (10;12). Uneven distribution of health services, especially in rural areas, and high poverty rates make health care and drugs inaccessible or unaffordable (14;16). Therefore, the World Health Organization recommends building comprehensive mechanisms grounded on relevant social and community organizations, including the private sector, to improve access to care for vulnerable populations (22;23). Accordingly, the strategic plan to fight malaria in Cameroon, endorsed by the National Committee to Roll Back Malaria, recommends home-based management of malaria (HMM) to improve access and reduce delays in treatment (12).

The national treatment policy has established artemisinin-based combination therapies (ACTs; artesunate + amodiaquine [AS+AQ] and artemeter + lumefantrine [AL]) in 2006 as the first-line treatment for uncomplicated malaria (13;24). Because of the high poverty rate (40 percent of all Cameroonians and 55 percent in rural communities) (16), the Government decided beginning in January 2007 to partially subsidize antimalarials in public and not-for-profit NGO health facilities and in private pharmacies (12). The subsidies are financed by multiple funders.

However, supervisory and evaluation reports indicate that stocks of AS+AQ expire in National Supply Centre for

Drugs and Essential Commodities (CENAME) and Provincial Pharmaceutical Supply Centres (CAPP) bases, and AL is frequently out of stock (9;11). In several regions Community Health Workers (CHWs) known as “*agents relais communautaires*,” who are trained to provide ACTs, are still not operational because of a lack of HMM kits. The agreement signed by the Minister of Health and private pharmacists’ representatives to allow them to sell subsidized ACTs is also not adequately implemented for several reasons, including:

- AS+AQ and AL (with respective quotas for ordering of 75 percent and 25 percent) are among approximately 100 licensed antimalarials in Cameroon, including monotherapies.
- Many of those are actively marketed by the pharmaceutical industry.
- The State supply chain fails to deal with private pharmacies.
- Sales of other licensed antimalarials are often more profitable.

Given the importance of the private sector in the provision of care and medicines (40 and 60 percent respectively) and the informal sector (approximately 25 percent) (7;15), it is essential to engage all the stakeholders to achieve universal access to subsidized ACTs. This includes pharmaceutical importers, wholesalers, pharmacists, physicians, and other health workers.

Just as it is the case in many sub-Saharan African countries, self-medication is widespread in Cameroon (60 percent) for cases of easily recognized, uncomplicated malaria, which is perceived by a large majority of people to be a relatively mild disease (8;15;18;19). With the introduction of

subsidies for ACT, there were requirements for a medical consultation and prescription to access subsidized ACTs in health facilities providing those for accountability purposes. These requirements were conflicting with the HMM strategy, as well as patients' care-seeking behavior thus constituting a barrier to universal use of ACTs in the public sector. ACTs are sold without a prescription in private pharmacies. The lack of means to enforce regulation of licensed antimalarials makes it possible to prescribe and use monotherapies and other ineffective antimalarials. The diversity of antimalarials causes confusion among care providers and patients, thus further contributing to nonadherence to the national policy and failure to ensure use of drugs of proven efficacy.

In addition, studies revealed noncompliance due to discontinuation of AQ once symptoms of the disease disappear (3;5;8;25). Many prescribers and users prefer AL to AS+AQ because of widely experienced side effects of AQ, which was extensively used as the previous first line treatment regimen. Recent studies in Cameroon have found a slightly higher rate of side effects with AS+AQ compared with AL as well as slightly higher effectiveness of AL (6).

In summary, this policy brief was prepared to inform decisions by the National Malaria Control Program about how to achieve universal access to subsidized ACTs. Specific questions that it addresses are how to improve self-medication within the HMM framework so that it is safe, effective, and efficient; and how to engage the private sector in distributing subsidized ACTs.

POLICY OPTIONS

Three policy options that could help to improve HMM and engage the private sector in distributing subsidized ACTs are to:

- Promote safe, efficient, and effective home-based management of malaria (1;4;17).

This option includes: (i) simplifying the communication messages to reduce confusion among prescribers and users and the risk of plasmodium resistance to ACTs by limiting plasmodium exposure to many ACTs; (ii) extending training and educational activities of CHW, mothers and teachers in primary schools; (iii) availing HMM kits (ACTs, resources and tools) to CHW and health professionals at the first level health facilities; (iv) implementing mass media campaign communication for behavioral change with simple messages accessible in English, French, and the main national languages; and (v) supporting local area health committees to lead the fight against malaria.

- Engage private pharmacists in the distribution of subsidized ACTs (20).

Potentially effective interventions include the following: (i) performance-based contracting for the provision of subsidi-

dized ACTs by private professionals and pharmacists comprising for instance the access to subsidized ACTs from CENAME and CAPP with reference pricing, the implementation of the national pharmacovigilance strategy, and a specific reward systems including bonuses or fiscal exemptions; (ii) revising regulations on drug distribution to enable the creation of licensed medicines sales points under the control of private pharmacists to potentially limit the illicit drug market as is the case in Kenya or Ghana; (iii) executing specific communication and educational plans aimed at revalorizing the role of and proactively engaging the private pharmacist as public health agent.

- Strengthen the stewardship and regulatory role of the Ministry of Health to ensure the proper registration, regulation, and use of antimalarials (2;21), while maintaining the availability and affordability of the preferred antimalarials

There is a need for clarity on the marketing of antimalarials and for simple messages relative to ACTs. Potentially effective interventions include the following: (i) revising the list of licensed and marketed antimalarials to restrict these to preferred antimalarials; (ii) clearing the market by enforcing regulatory measures such as banning nonpreferred antimalarials including monotherapies provided through humanitarian gifts and non subsidized ACTs, and by seizing and destroying nonpreferred antimalarials (thus limiting multiple pricing, competing profits margins, misappropriation of subsidized ACTs for the illicit drug market and marketing pressures over prescribers and users by the pharmaceutical industry); (iii) product profiling for preferred antimalarials (Quinine, SP, and ACTs) to be licensed so as to require specific identification, packaging and labeling (such as the NCMP seal, the price, IPT licensed only in a 3-tablet blister labeled "Free" and "For Pregnant Woman Only," and packaging of ACTs in fixed drug combination to facilitate their proper usage by patients); (iv) enforcing regulation combating the illicit drug market; (v) pursuing resource mobilization to secure the availability of ACTs nationwide and improving management performance of CENAME and CAPP so as to ensure the best purchasing costs on the international market, to lower stock outs of ACTs, and to appropriately implement the public-private agreement signed in 2007; (vi) extending training and educational activities to CHWs, mothers and teachers in primary schools; providing HMM kits to first line health facilities and CHWs to ensure the HMM strategy is fully implement including supervision and monitoring; (vii) strengthening capacities and mobilizing resources to implement planned pharmacovigilance activities and to effectively supervise, control or inspect health facilities and CHWs when needed; (viii) establishing resources and tools for monitoring and evaluation to ensure universal and equitable access to ACTs and proper use of antimalarials; and (ix) embedding the HMM strategy within the primary healthcare framework to ensure its sustainability.

Table 1. Policy Options

Policy option	Promote safe, efficient, and effective home-based management (HMM) of malaria (1, 4, 17)	Engage private pharmacists in the distribution of subsidized artemisinin-based combination therapies (ACTs) (20)	Strengthen the stewardship and regulatory role of the Ministry of Health to ensure the proper use of antimalarials (2, 21)
Description	<ul style="list-style-type: none"> • Educate care providers, including community health workers (CHWs) • Patient education • Drug selection, packaging and labeling • Subsidies • Incentives for community health workers • Pharmacovigilance • Sustainable drug procurement chain 	<ul style="list-style-type: none"> • Contracting • Educate pharmacists • Drug selection, packaging and labeling • Regulate drug shops • Reference pricing • Incentives for pharmacists • Access to the National Supply Centre for Drugs and Essential Commodities (CENAME) 	<ul style="list-style-type: none"> • Regulate importation of antimalarials (including de-licensure of some) • Enforce regulations to reduce sales of illicit drugs • Ban monotherapies • Restrict marketing of non preferred ACTs • Mandatory product profiling for preferred antimalarials (requirements for specific identification, packaging and labeling) • Implement the national pharmacovigilance strategy • Strengthen capacities • More appropriate use of drugs and trust among stakeholders • Improved quality of care and drug distribution
Advantages	<ul style="list-style-type: none"> • Increased drug coverage and adherence • Raised awareness and increased knowledge regarding the new treatment policy 	<ul style="list-style-type: none"> • Increased mutual trust and adherence to new policy • Increased knowledge regarding the new treatment policy 	<ul style="list-style-type: none"> • Improved quality of care and drug distribution
Disadvantages	<ul style="list-style-type: none"> • Misuse of drugs and increased resistance • Misunderstandings if educational activities are not well designed 	<ul style="list-style-type: none"> • Decrease of tax revenues from private pharmacies • Decrease of benefits for private pharmacists 	<ul style="list-style-type: none"> • Bureaucratic procedures can foster corruption
Acceptability	<ul style="list-style-type: none"> • CHWs are already part of the primary healthcare framework although not always accepted in urban areas 	<ul style="list-style-type: none"> • Profit from non subsidized ACT could be ten times the profit from subsidized ACT • Some pharmacists are against State involvement in private business 	<ul style="list-style-type: none"> • It is the role of the Ministry of Health to regulate health activities in Cameroon

Each of these options entails changes in how antimalarials are delivered, financed, and governed. They are not mutually exclusive. The three options are described in Table 1.

IMPLEMENTATION OF THE POLICY OPTIONS

Strategies for implementing the three policy options are described in Table 2.

DISCUSSION

A policy dialogue attended by thirty-five stakeholders informed by the policy brief was held late January 2009 in Yaoundé, 6 months after the policy brief was prepared and shared with the NMCP manager. At that time, for financial motives, the national policy had already been changed to restrict subsidies only for AS+AQ, thus reducing its price to US\$ 0.20–0.40 per treatment, with other ACTs including AL

still available on the market. During the dialogue, participants while agreeing on the diagnosis and magnitude of the problem as well as on the need to scale up universal access to ACT were divided between the pros and cons of the strengthening of the role of the State in the private business of pharmacists and the role assigned to CHWs, particularly in urban settings. The dialogue was instrumental in identifying some of the implementation considerations such as the conditions for the successful involvement of private pharmacies, the means to persuade some healthcare practitioners on the ability and soundness of using CHWs to treat malaria and the expectations of various actors in combating the illicit drug market.

CONTACT INFORMATION

Pierre Ongolo-Zogo, MD, MSc (pc.ongolo@cdbph.org or pc.ongolo@gmail.com or cyrilloz@yahoo.fr), Senior Lecturer, Department of Medical Imaging, University Yaoundé 1, Faculty of Medicine and Biomedical Sciences,

Table 2. Implementation of the Policy Options

Policy option	Promote safe, efficient, and effective home-based management (HMM) of malaria	Engage private pharmacists in the distribution of subsidized artemisinin-based combination therapies (ACTs)	Strengthen the stewardship and regulatory role of the Ministry of Health to ensure the proper use of antimalarials
Barriers to implementation	<ul style="list-style-type: none"> • Resistance of health workers and pharmacists • Drug supply chain failure • Scarce financial resources to provide ACTs to CHWs • Some healthcare providers are against HMM as it reduces their incomes, health workers received bonuses from user fees paid by patients 	<ul style="list-style-type: none"> • Resistance of pharmacists • Larger profit margins for other antimalarials • Conflicting interests among stakeholders, • Opposition to a stronger regulation of the medicines market 	<ul style="list-style-type: none"> • Competing interests among drugs providers • Conflicting interests as the regulatory authority is also a service provider • Impediments to cross-sector policies (lack of authority to make and implement policies across sectors, lack of administrative mechanisms, and territoriality)
Implementation strategies	<ul style="list-style-type: none"> • Communication for behavior change • Training/ educating actors • Embedding HMM within the PHC framework to support and improve community participation 	<ul style="list-style-type: none"> • Advocacy, dialogue, and negotiation • Communication for behavior change • Training/ educating of actors • Monitoring and evaluation 	<ul style="list-style-type: none"> • Resource mobilization to enforce the regulation • Communication for behavior change • Supervision and inspection • Monitoring and evaluation

Melen Campus, Yaoundé, Cameroon; Head, Centre for Development of Best Practices in Health, Yaoundé Central Hospital, Avenue Henry Dunant, P.O. box 87, Yaoundé, Cameroon

Renée-Cécile Bonono, MSc (bonono2003@yahoo.fr or rcbonono@cdbph.org), Assistant Researcher, Department of Sociology and Anthropology, Catholic University of Central Africa, Nkolbisson Campus, Yaoundé, Cameroon; Research Fellow, Centre for Development of Best Practices in Health, Yaoundé Central Hospital, Avenue Henry Dunant, P.O. box 87, Yaoundé, Cameroon

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 4 African sites. *Malaria J.* 2008;7:6.
2. Bosman A, Mendis KN. A major transition in malaria treatment: The adoption and deployment of artemisinin-based combination therapies. *Am J Trop Med Hyg.* 2007;77(Suppl 6):193-197.
3. Goodman C, Brieger W, Unwin A, et al. Medicine sellers and malaria treatment in Sub-Saharan Africa: What do they do and how can their practice be improved? *Am J Trop Med Hyg.* 2007;77(Suppl 6):203-218.
4. Hopkins H, Talisuna A, Whitty CJM, Staedke SG. Impact of home-based management of malaria on health outcomes in Africa: A systematic review of evidence. *Malaria J.* 2007;6:134.
5. Kouokam ME. A lasting disease: Perceptions of the malaria risk and care seeking during febrile episodes among children in Maroua, Far North Province, Cameroon. Master of Science Dissertation, EHES, Marseille, France; 2005.
6. Mbacham FM, Moyou SR, Basco L. *ACT effectiveness studies in Cameroon.* Yaoundé, Cameroon: National Malaria Control Programme; 2007.
7. Mballa JE. Illicit medicines market in Yaoundé. Master Thesis, Catholic University of Central Africa Yaoundé; 2003.
8. Ministry of Public Health – Directorate of Pharmacy and Medicines. *Report on access and determinants of healthcare seeking and medicines.* Yaoundé, Cameroon: Ministry of Public Health; 2004.
9. Ministry of Public Health, General Inspectorate for Pharmaceutical Services. *Supervision and Evaluation of the implementation of the national policy for access to ACT, report.* Yaoundé, Cameroon: Ministry of Public Health; 2008.
10. National Malaria Control Programme. *Baseline survey for the global fund grant.* Yaoundé, Cameroon: National Malaria Control Programme; 2004.
11. National Malaria Control Programme. *Annual reports.* Yaoundé, Cameroon: National Malaria Control Programme; 2005, 2006, 2007.
12. National Malaria Control Programme. *National strategic plan 2007-2010.* Yaoundé, Cameroon: National Malaria Control Programme; 2007.
13. National Malaria Control Programme. *National guidelines for the treatment of malaria.* Yaoundé, Cameroon: National Malaria Control Programme; 2007.
14. National Statistics Institute. *MICS III. Multiple indicators cluster survey, report.* Yaoundé, Cameroon: National Statistics Institute; 2006.
15. National Statistics Institute. *Public health sector users' satisfaction survey, report.* Yaoundé, Cameroon: National Statistics Institute; 2006.

16. National Statistics Institute. *ECAM III. Household's consumption survey, report*. Yaoundé, Cameroon: National Statistics Institute; 2008.
17. Sievers AC, Lewey J, Musafiri P, et al. Reduced paediatric hospitalization for malaria and febrile illness patterns following implementation of community-based malaria control programme in rural Rwanda. *Malaria J*. 2008;7:167.
18. Special Programme TDR. *Socio behavioural aspects of malaria control*. Geneva, Switzerland: World Health Organization; 2003.
19. Special Programme TDR. *Community directed interventions, report of a multi country study*. Geneva, Switzerland: World Health Organization; 2008.
20. Waters H, Hatt L, Peters D. Working with the private sector for child health. *Health Policy Plan*. 2003;18:127-137.
21. Williams HA, Durrheim D, Shretta R. The process of changing national malaria treatment policy: Lessons from country-level studies. *Health Policy Plan*. 2004;19:356-370.
22. World Health Organization. *Malaria world report*. Geneva, Switzerland: WHO; 2008.
23. World Health Organization. *Community involvement in rolling back malaria*. Geneva, Switzerland: WHO; 2002.
24. World Health Organization. *Guidelines for the treatment of malaria*. Geneva, Switzerland: WHO; 2006.
25. Yomi G, Koumga O. *Report on knowledge, attitudes and practices of Cameroonian populations with regard to malaria prevention and treatment*. Yaoundé: Cameroon Association for Social Marketing; 2001.