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Evidence Assessment: Summary of a Systematic Review

Who is this summary for?
For Doctors and Health Personal, Administrators and managers of health facilities, Community Health Workers and the partners involved in the reduction of maternal, newborn and child mortality.

Home- or community-based programmes for treating malaria

Key findings

- Home- or community-based strategies increase the number of people with fever that receive an effective antimalarial drug within 24 hours.
- They reduce the number of deaths in areas where malaria is common and there is poor access to health services.
- The use of rapid diagnostic tests instead of clinical diagnosis in home- or community-based programmes for treating malaria reduces the overuse of antimalarials drugs.

Background

Malaria is an important cause of death especially in children and pregnant women living in sub-Saharan Africa. In many rural areas, children are unable to access effective malaria treatment because health services are either too far away or antimalarial drugs are too expensive. Home- or community-based programmes for managing malaria have been proposed as a key strategy to overcome these problems. In these programmes people living in rural settings, such as mothers, volunteers, or community health workers, are trained to recognise fever and provide antimalarial medicines at a low cost or for free.

Question

What is the effectiveness of home-based and community-based management strategies for treating malaria or fever?

Home- or community-based programmes for treating malaria in Cameroon: Malaria is responsible for 40% of hospitalizations and 18% of all deaths in Cameroon according to demographic and health survey 2011. In 2013 the Ministry of Public Health launched a community care programme to help reduce maternal, neonatal and child mortality in the 10 regions.

Table 1: Summary of the systematic review		
	What the review authors searched for	**What the review authors found**
Studies	1. Randomized controlled trials (RCT) 2. Non-randomized controlled trials (NRCT) 3. Controlled before-and-after studies (CBAS) 4. Interrupted-time-series studies (ITS)	Ten studies met the inclusion criteria. Six studies were parallel cluster-RCTs. One was a cross-over cluster-randomized trial, and three were controlled before-and-after studies
Participants	People living in malaria endemic areas.	The trials included children aged between 12 and 23 months. Participants in three studies were adults: primary healthcare workers, and pregnant women.
Interventions	Any programme which trains mothers or caregivers, community based volunteers, community-based health workers, or drug sellers to recognise and treat fevers with antimalarials presumptively or after a positive malaria rapid diagnostic test.	In all 10 studies the antimalarial was provided free or at a highly subsidized cost. In eight studies the health workers or mothers treated all episodes of fever presumptively with an antimalarial and this was compared to standard (facility-based) care. Two studies compared home- or community-based programmes using rapid diagnostic tests to confirm malaria with programmes using presumptive treatment.
Controls	Health facility-based care; or an alternative home- or community based programme for recognizing and treating malaria or fevers.	No controls specified
Outcomes	**Primary outcomes** All-cause mortality **Secondary outcomes** • Malaria-specific mortality • Hospitalizations • Severe malaria • Treatment with the recommended antimalarial within 24 hours • Treatment with any antimalarial • Parasitaemia • Anaemia • Adverse events (any adverse event as reported in the included studies).	**1. Home- or community-based interventions versus facility-based care** • Treatment with the recommended antimalarial within 24 hours • All-cause mortality • Malaria-specific mortality • Hospitalization **2. Home- or community-based programmes using RDTs versus using clinical algorithms** • Treatment with an appropriate antimalarial • All-cause mortality • Hospitalization • Treatment failure
Date of the most recent search: 16 February 2013.		
Limitations: This is a moderate quality systematic review with limitations related to the included studies, AMSTAR =9/11.		
Citation: Okwundu CI, Nagpal S, Musekiwa A, Sinclair D. Home- or community-based programmes for treating malaria. Cochrane Database of Systematic Reviews 2013, Issue 5. Art. No.: CD009527. DOI: 10.1002/14651858.CD009527.pub2.		

Table 2: Summary of findings

Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
Prompt treatment with an effective antimalarial	4.69 [1.00-22.07]	3099 (2)	**Moderate**	Both studies found large statistically significant benefits
All-cause mortality	0.58	13677 (1)	**Moderate**	

	[0.44-0.77]			
Hospitalizations	0.63 [0.35-1.17]	437 (1)	**very low**	This single study was conducted in an urban setting
Prevalence of parasitaemia	Not pooled	1443 (2)	**very low**	Trials had mixed results.
Prevalence of anaemia	1.33 [0.70-2.51]	3612 (3)	**Low**	No statistically significant differences were seen

Applicability

Nine of the 10 studies were conducted in rural areas of sub Saharan Africa countries (Tanzania, Kenya, Zaire, Ethiopia, Burkina Faso, Zambia and Uganda) where these programmes are currently promoted. These intervention may be applicable in Cameroon in accordance with the implementation of the ongoing reforms of Community Health Workers program.

Conclusions

Home- or community-based interventions which provide antimalarial drugs free of charge probably improve prompt access to antimalarials. Incorporating rapid diagnostic tests into home- or community-based programmes for malaria may help to reduce this overuse of antimalarials, and has been shown to be safe under trial conditions.

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