Feasibility and acceptability of artemisinin-based combination (ACT) therapy for the home management of malaria in four African sites.

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Background

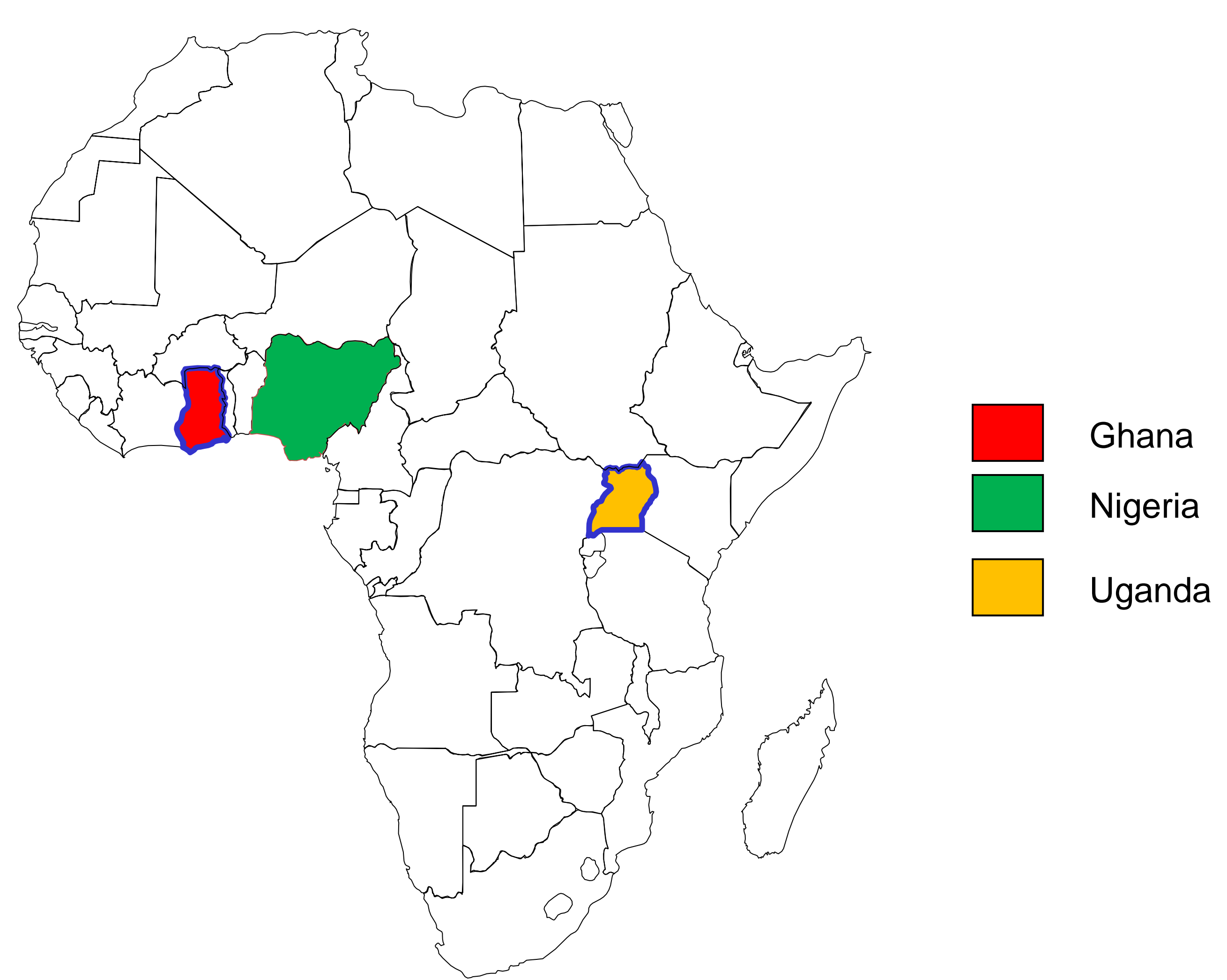
- Use of ACT at the community level has been advocated as a means to increase access to effective antimalarial medicines following the failure of chloroquine.
- Concerns with using ACT at the community level include:
  - the potential for poor adherence to the treatment schedule by both caregivers and community medicine distributors (CMDs).
  - acceptability by the community,
  - the possibility of adverse events,
  - High cost
  - ability to provide adequate storage conditions to ensure drug stability in the community

Background

- Thus, the feasibility and acceptability of incorporating ACT in HMM was deemed necessary to be evaluated.

- A multi-country study funded by UNICEF-UNDP-WORLD BANK-WHO/TDR was carried in four study sites in Ghana, Nigeria and Uganda, representing different health system and epidemiological settings.

Map of Africa



Objectives

General

- To produce evidence on the feasibility, acceptability and safety of ACT in the context of home management of malaria (HMM).

Specific

- To measure the degree of compliance by mothers/caregivers and community medicine distributors (CMDs) that can be achieved by the HMM strategy using ACT.
- To determine the acceptability of ACT for the HMM in children by the community
- To determine the level of safety that can be achieved using ACT in the context of HMM.

What did we do?

Used Harmonised Protocol.

Steps in implementing the study

Pre-Intervention

➢Establishing a core working group
» **Setting objectives**
» **Community entry and** stakeholder consultation
» **Situation analysis**
» **Selection of drug** distributors

Intervention

➢Procurement and supply of drugs
» **Preparation of training** manuals and training of key implementers
» **Developing and** executing IEC strategies
» **Dispensing and use** of drugs at community level

Monitoring & evaluation

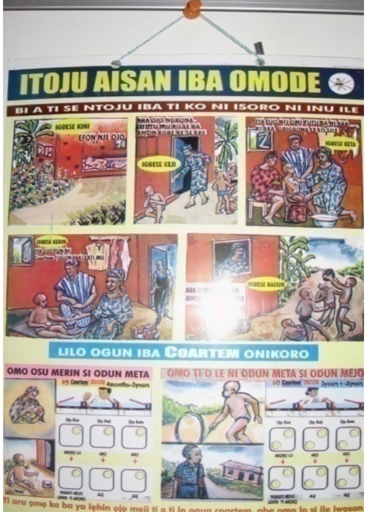
➢Distributor performance
» **Recognition of early** signs of malaria and prompt treatment by caregivers
» **Adherence to treatment** regimen by drug distributors and caregivers
» **Recognition of danger** signs and prompt referral
» **Availability of drugs/** distributors at community level
» **Adequacy/effectiveness** of IEC messages

Pre –intervention activities

Advocacy - Nigeria

Community sensitization - Uganda

IEC Materials



HOME MANAGEMENT OF FEVERS IN CHILDREN
Aged 6 months-5 years
WHEN A CHILD AGED BETWEEN 6 MONTHS AND 5 YEARS HAS HOT BODY, SEE THE DRUG DISTRIBUTOR

AGE	TREAT AS MALARIA	GIVE PRE-PACK ACCORDING TO AGE OF CHILD.
UNDER ONE YEAR (6 months to 11 months)	Give one yellow and one white tablets together	
1 YEAR TO 5 YEARS	Give one yellow and one white tablets together a day for 3 days	

TREAT ONLY CHILDREN BETWEEN 6 MONTHS TO 5 YEARS.
REFER CHILDREN BELOW 6 MONTHS TO THE NEAREST HEALTH FACILITY
COMPLETE THE DOSE
FINISH THE PACK IN THREE DAYS

Selection of CMDs - Ghana

Selection of CMDs

Criteria:

- A permanent resident (at least one year), trusted and respected by the community, able to keep simple records, and a willingness to serve.
- chosen by the community from a range of backgrounds:
  - In Ghana and Nigeria nurses and community health officers at first-level formal health facilities were counted as CMDs.
- Uganda had a functioning pre-existing cadre of CMDs who were co-opted into the study.
- 'Mother trainers' were lay mothers who were selected from within the communities and trained to distribute drugs.
- The number of CMDs per community depended on the community's population size.
  - An average of two CMDs per community was used across the four sites (one CMD per 600 population).

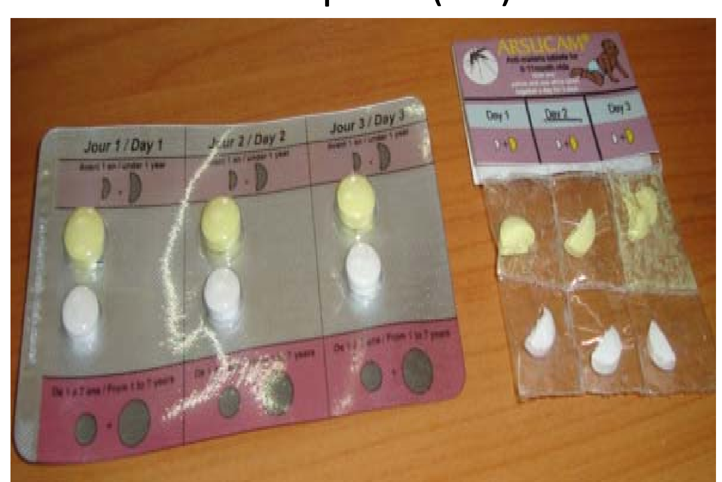
Intervention

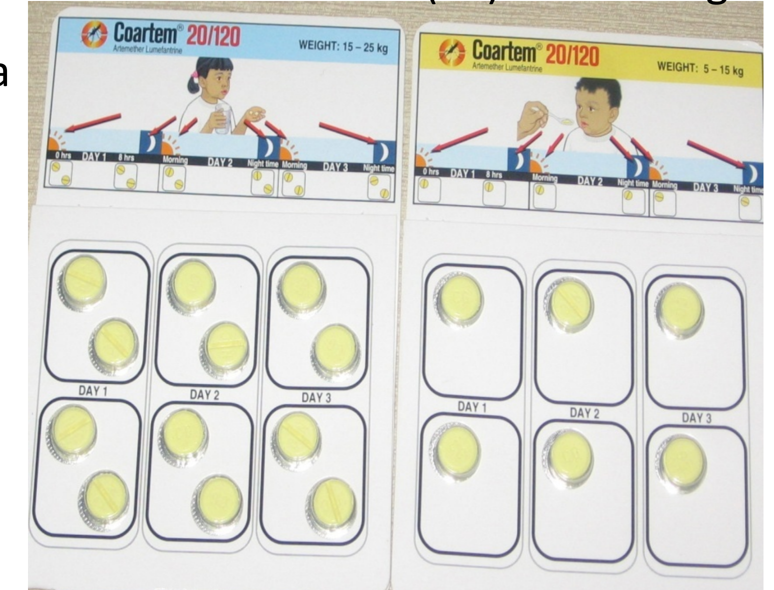
Training of CMDs [2-5days]

Distribution of supplies to CMDs

Artemeter lumefantrine (AL) used in Nigeria & Uganda

Artesunate-Amodiaquine (AA) used in Ghana





Drugs

	Ejisu – Juaben District, Ghana	Ho District, Ghana	Badeku and Ojoku/Ajia Districts, Nigeria	Bugiri and Iganga Districts, Uganda
Type of ACT used	AA once daily for 3 days 2 types of blister pack: - children < 1 yr - children ≥1 yr		AL twice daily for 3 days 2 types of blister pack: -children < 3 yrs and -children ≥3 yrs	
Fee charged for drugs	10 US cents - <1 yr 20 US cents - ≥1 yr		20 US cents - < 3 yrs 30 US cents - ≥ 3 yrs For 1st 6 mths thereafter free	Free

Intervention

Training the community

Field Supervisor at work

CMD dispensing ACT to caregiver and providing information

Intervention

	Ejisu – Juaben District, Ghana	Ho District, Ghana	Badeku and Ojoku/Ajia Districts, Nigeria	Bugiri and Iganga Districts, Uganda
No of CMDs	54	76	60	118
Additional provisions to CMDS	-Bicycles, boots $3.50 monthly	-T-shirts -watches -Raincoats - torches -$8 quarterly	-T-shirts -certificates. -Transport reimbursement Commission of 20–30 US cents per pack	-T-shirts -Baseball caps -Certificates Transport refund of USD 1.16 per meeting.
Follow-up	CMDs were not obliged to follow up caregivers.		No active follow-up	As with existing HMM system. Active follow up

Monitoring

Six key areas were *monitored:*

- distributor performance
- recognition of early signs and prompt treatment by caregivers
- adherence to treatment regimen by caregivers
- recognition of danger signs and prompt referral
- availability of drugs/distributors at community level
- effectiveness/adequacy of IEC messages.

Post intervention evaluation

- CMD performance
- Caregiver adherence
- Treatment coverage of febrile children using ACT collected from CMDs
- Acceptability and perceived effectiveness

Data collection Methods

- Survey – two-week fever recall survey
- Qualitative studies – FGDs and KIIs
- Analysis of CBDs' record

Key Findings

Utilization of CMDs and CMDs performance in delivering ACTs in the 4 sites (source: CMD registers)

	Ejisu – Juaben District, Ghana	Ho District, Ghana	Badeku and Ojoku/Ajia Districts, Nigeria	Bugiri and Iganga Districts, Uganda	Totals
Number of CMDs	54	76	60	118	308
No. febrile episodes Treated with ACTs	4522	3958	1044	11039	20563
% presenting promptly to CMDs (≤ 24 hrs)	100%	87%	73%	49%	69%
Children correctly dosed	99%	98%	98%	97%	98%
Number (%) of occasions on which CMD explained (from survey):					
Treatment schedule	97%	100%	92%	92%	94%
Danger signs	18%	89%	83%	75%	65%
Adverse events	15%	93%	84%	N/A	55%

Measures of CMD performance in delivering ACTs in 4 sites (Source: HH)

	Ejisu – Juaben District, Ghana	Ho District, Ghana	Badeku and Ojoku/Ajia Districts, Nigeria	Bugiri and Iganga Districts, Uganda	Totals
Availability of CMDs (from survey)					
CMD not at home the 1st attempt	36 (12%)	5 (5%)	36 (12.5%)	86 (14%)	163 (12.5%)
Storage of drug					
Appropriate storage of drugs	523 (99%)	720 (100%)	960 (100%)	420 100%)	2623 (99.8%)
Attrition of CMDs	0 (0%)	3 (4%)	6 (10%)	0 (0%)	9 (3%)

Treatment coverage of febrile children aged 6–59 months with ACTs obtained from CMDs (Source: HH survey)

	Ejisu – Juaben District, Ghana	Ho District, Ghana	Badeku and Ojoku/Ajia Districts, Nigeria	Bugiri and Iganga Districts, Uganda	Totals
Febrile children Identified	428	124	551	1087	2190
Treated with ACTs	68%	75%	52%	57%	59%
Children reporting an adverse event	8%	8%	4%	6%	6%
Caregivers who perceived treatment to be effective	99%	93%	97%	NA	98%

Adherence of caregivers to treatment schedule (Source: HH)

	Ejisu – Juaben District, Ghana	Ho District, Ghana	Badeku and Ojoku/Ajia Districts, Nigeria	Bugiri and Iganga Districts, Uganda	Totals
No. of episodes treated with ACTs	289	93	288	619	1289
Children correctly treated (dose and duration)	97%	74%	89%	79%	85%
Children treated promptly	90%	96%	97%	86%	90%
Children treated promptly AND correctly	87%	74%	80%	71%	77%

Lessons learned

- High coverage of prompt and adequate treatment of febrile episodes in children using ACT can be achieved at community level

- Trained CMDs are potential effective channel for the distribution of ACT in a sensitized community

Challenges to sustainability

- Sustainability of correct practices
- Supervision and monitoring
- Provision of incentives
  - Can this be sustained?
  - Who will be responsible for the provision?
- Effectiveness of support of the health system
- Maintaining regular supply of drug and affordability

Conclusion

- The findings of the study:
  - Suggest that ACT use can be successfully integrated in the HMM strategy
  - Provide evidence to support scaling up implementation of HMM with ACTs

- To scale up HMM using ACTs these challenges need to be addressed in order to achieve successful implementation.

Thank you

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