



Product Characteristics: Perspectives from Community Health Workers in Malawi

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Background

- ▶ Malawi's neonatal, infant and young child mortality rate estimated at ~330,000/yr (infant mortality rate is 65 and under 5 Mortality rate is 100 as at August 2010)
- ▶ 60% of <5 deaths occur at home/community level, in transit to health centres (HCs) most of which are in hard to reach areas
- ▶ Malawi implemented its IMCI policy in 1998 and community case management (CCM) was initiated in 2008 as a component of IMCI
- ▶ Malawi currently has around 1,800 HSAs trained to provide CCM
 - Anticipated increase to 3,058 HSAs as community case management (CCM) program expands in hard to reach areas

HSA Surveys

- ▶ GoM and SC4CCM recently completed a baseline assessment of the CCM supply chain, which provided mostly quantitative data on product availability and supply chain performance
- ▶ GoM and SC4CCM conducted surveys and discussion groups with approx 80 HSAs in 4 districts
- ▶ The interviews focused on the four medicines that HSAs in Malawi currently use for treatment of malaria, diarrhea, and pneumonia in children under 5:
 - ACTs, ORS, Cotrimoxazole, and Paracetamol

Survey Results: Formulation and Taste

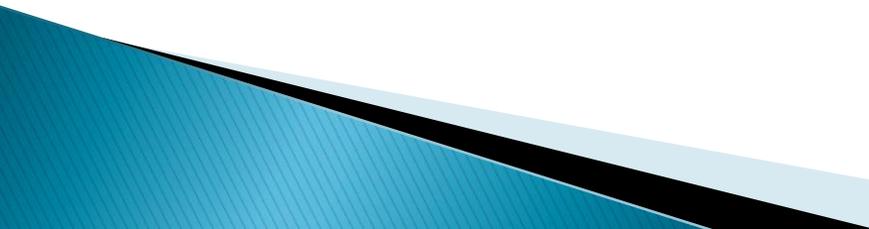
- ▶ In general, health care workers feel that under-5 children find medicines in liquid form easier to take, and caretakers/HSAs find liquids easier to administer to a sick child:
 - Liquids
 - Tablets that easily dissolve
 - Sachets
- ▶ Fruit flavored medicines, preferred to non-flavoured or sour-tasting products
- ▶ HSAs reported that children found the Coartem to be very bitter tasting and this occasionally caused vomiting



Survey Results: Challenges with Tablets

- ▶ Tablet splitting poses a significant challenge in the absence of splitters. (If splitting of tablets was necessary, HSAs preferred scored tablets)
- ▶ Challenges include:
 - Hygiene issues
 - Imprecise/ wrong dosing
 - Wastage: more likely to drop pills, incorrect splitting/crushing translate into losses
 - Accounting problems
 - Wrong dose/ineffective treatment

Survey Results: Packaging

- ▶ In general, blister packs of a full treatment course [e.g. Coartem] are preferred –
 - ▶ While blister packs do demand extra space, the benefits offered by blister packs are considered to outweigh the cost of extra space
 - ▶ Very difficult to manage large bottles of tablets (i.e. 500 or 1000 tablets per bottle)– there were challenges with:
 - Accounting
 - Sharing a bottle between HSAs because need was much lower
 - Contamination/losses
 - Repackage and labeling need extra time
 - ▶ There are frequent stock outs of pill bags.
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Survey Results: Labeling and Instructions

- Preference was given to packaging with clear labels and illustrations on how and when to take the medicines [e.g. Coartem or ORS]



Image Source: Coartem.com, the Novartis Malaria Initiatives website

BODY WEIGHT	Day 1		Day 2		Day 3	
	0hrs	8hrs after	morning	evening	morning	evening
5 to less than 15 kg	1 tablet am	1 tablet pm	1 tablet am	1 tablet pm	1 tablet am	1 tablet pm
15 to less than 25 kg	2 tablets am	2 tablets pm	2 tablets am	2 tablets pm	2 tablets am	2 tablets pm
25 to less than 35 kg	3 tablets am	3 tablets pm	3 tablets am	3 tablets pm	3 tablets am	3 tablets pm
Adults & children 35 kg & above	4 tablets am	4 tablets pm	4 tablets am	4 tablets pm	4 tablets am	4 tablets pm

Survey Results: Patient & Product Experience

- ▶ Products with packaging with child picture, and also flavours such as orange, has positive effect on children. They easily identify themselves with the '*child*', and flavours facilitate "bonding" with the products, such that the combined effect is conditioning. (which facilitates acceptability of the drug in future by same child due to learning/experience with the drug)
- ▶ The positive conditioning is significant in inducing appetite in low-appetite children, or drug averse children
- ▶ There is negative conditioning. Children remember the past experience visuals and taste eg C



Image Source: PSI.org

Recommendations – formulation and taste

- ▶ Enhance acceptability by aiming for better tasting, dispersible formulations
 - ▶ Younger age groups (less than 36 months) usually have problems taking tabs, therefore medicines that can be administered as liquids are preferable
 - ▶ Consider age and weight dosing recommendations in developing formulations to avoid the need for splitting tablets by community health workers
 - ▶ Adding flavour across all formulations targeted at children will reduce irrational use related to caregiver and patient preference (i.e. patient wanting the orange-flavored product regardless of illness)
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Recommendations – packaging

- ▶ Products should be appropriately packaged by size for the community level
- ▶ Consider packaging illustration that facilitates transfer of information in low literacy environments



Thank You

