Working with community malaria action teams (CMATs) contributes to malaria control

Ingabire Marie Chantal[1,2,*], Hakizimana Emmanuel[2], Kateera Fredrick[2], Rulisa Alexis[2], Rulisa Steven[3], Mutesa Leon[4]

[1]*Department of Health Education & Promotion, Maastricht University, Maastricht, The Netherlands*

[2]*Medical Research Center, Rwanda Biomedical Center, Kigali, Rwanda*

[3]*University Teaching Hospital of Kigali, University of Rwanda, Kigali, Rwanda*

[4]*College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda*

***Corresponding author:**
Marie Chantal Ingabire, MSc, PhD
Maastricht, The Netherlands
Tel: +250-788483210,
Email: cingabire7@gmail.com

(*On behalf of other MEPR research team: Van Den Borne B., Alaii J., Muvunyi C., Ingmar N., Mens P., Kempen L., Takken W., Koenraadt S., Van Vugt M.)

Funding: NOW/WOTRO and supported by: The Knowledge Translation Network Africa (KTNET).

Received: February 1, 2019
Accepted: March 15, 2019
Published: March 31, 2019

Cite this article as: Ingabire C. et al. Working with community malaria action teams (CMATs) contributes towards achievement of malaria elimination. *Rw. Public Health Bul. 2019; 1(1): 37-39.*

INTRODUCTION

Maximization of existing malaria preventive measures through active community participation is a high priority for malaria control and elimination [1-3]. Elimination of malaria should not be the responsibility of health professionals alone. Rather health professionals should work with the community to promote their participation in malaria elimination initiatives [4, 5]. This brief shares findings from the Malaria Elimination Program for Ruhuha (MEPR). This program was funded by WOTRO (Netherlands Organization for Scientific Research/NWO Science for Global Development). It aims at showing the multifactorial conditions of malaria in a community and the role of community participation in the elimination of malaria. Specifically, the program worked with community malaria action teams (CMATs) to sensitize the community about malaria elimination and to identify and facilitate community-based solutions for malaria elimination.

KEY MESSAGES

CMATs contribute to malaria elimination by sensitizing communities about malaria control, identifying and facilitating community-based solutions and fostering a sense of community ownership.

Key Findings

» Youth involvement in CMATs allowed peer dissemination of health information to high risk groups.
» Involvement of local leaders strengthened the delivery of health messages to sector population.
» Contribution to the health system via capacity building of a large group of community.

CMATs activities contributed to

» The increase of community awareness on malaria transmission, treatment and prevention.
» The increase of community acceptance of preventive measures (100 % coverage of indoor residual spraying conducted in April 2015).
» The reduction of fever/malaria experience from 68% to 21.4% in 2013 and 2014 respectively.
» The increase in health insurance ownership from 66.31% to 91% in 2013 and 2014 respectively.

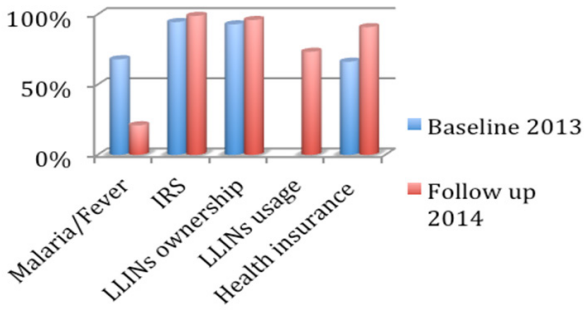

FIgure 1. *IRS: Indoor Residual Spraying; LLINs: Long-Lasting Insecticidal Nets*

How CMATs were established

Ruhuha sector is divided into five cells with a total number of 35 villages. Each village had a CMAT, which was composed of three individuals: a village local leader, youth representative and community health worker. The total number was 105.

A meeting was held with CMATs to discuss their terms of reference, communication strategies, their initial plan of

Potential Conflicts of Interest: No potential conflicts of interest disclosed by all author. **Academic Integrity:** All authors confirm their substantial academic contributions to development of this manuscript as defined by the International Committee of Medical Journal Editors. **Originality:** All authors confirm this manuscript as original piece of work, and has not been published elsewhere. **Review:** All authors allow this manuscript to be peer-reviewed by independent reviewers in a double-blind review process.
Publisher: Rwanda Health Communication Center, KG 302st., Kigali, Rwanda. Print ISSN: 2663 - 4651; Online ISSN: 2663 - 4653. **Website:** www.rwandapublichealthbulletin.org

actions as well as the monitoring and evaluation strategy.

This section summarizes the key activities that were implemented as part of the community malaria elimination activities.

Selection and Training of CMATs

CMATs were selected in collaboration with MEPR team, Ruhuha health centre and Ruhuha sector and trained on malaria treatment and prevention including bed net use, Indoor Residual Spraying (IRS), elimination of mosquito breeding sites (rice fields and peri-domestic), larval and adults mosquito monitoring.

What CMATs did?

» Identified local malaria related issues
» Worked with the community to suggest solutions to the issues identified during community meetings
» Organized home visits to promote the use of nets, acceptance of indoor residual spraying, clearance of breeding sites and ownership of a health insurance.
» Participated in spraying against mosquito larvaes in marshlands and across households.
» Participated in mosquito monitoring
» Tracked monthly activities and provided feedback to communities, health centers, health sector and research team.

Persistent barriers towards malaria elimination with community engagement

» The perception that bed nets in households increased the risk of bedbug infestation
» Specific groups (low socio economic status, males and children 6-15 years) less likely to use malaria preventive measures such as bed nets.
» Malaria symptoms recognition and health insurance as strong predictors of prompt care seeking
» CMATs required continued incentives to facilitate their work.

Image 1. *CMATs, KTNeT and MEPR Teams after MEPR research findings dissemination. Ready to share with respective communities.*

"I learnt from them the benefits of sleeping under bed nets always; before I was not minding about using bed nets, and as a result my children were often having malaria; but when CMAT explained to me and emphasized proper use of bed nets, my children are no longer suffering from malaria" community member, Ruhuha

Policy recommendations

» Scale up malaria related activities using open-wide community participation through engagement of village leaders and youth in addition to community health workers, to foster the sense of ownership and empowerment through collaborative efforts.
» Adopt locally meaningful solutions in relation to the use of malaria preventive measures, e.g. targeting specific high-risk groups with specific messages such as recreational activities among youth in which malaria messages will be embedded.
» Provide trainings and basic materials to enable the platforms to perform.
» Implement a monitoring and evaluation strategy to inform effective implementation.
» Adopt multiple strategies towards malaria elimination including community based larval source management among others.

REFERENCES

[1] President's Malaria Initiative: Rwanda Malaria Operational Plan FY2014. 2014.c

[2] Atkinson J-A, Vallely A, Fitzgerald L, Whittaker M, Tanner M: The architecture and effect of participation: a systematic review of community participation for communicable disease control and elimination. Implications for malaria elimination. Malaria Journal 2011, 10:225.

[3] Rwanda National Malaria Control Program: Rwanda Malaria Control Strategic Plan July 2013- June 2018.

[4] Ingabire C, Alaii J, Hakizimana E, Kateera F, Muhimuzi D, Nieuwold I, Bezooijen K, Rulisa S, Kaligirwa N, Muvunyi C, et al: Community mobilization for malaria elimination: application of an open space methodology in Ruhuha sector, Rwanda. Malaria Journal 2014, 13:167.

[5] Ingabire C, Rulisa A, Van Kempen L, Muvunyi C, Koenraadt C, Van Vugt M, Mutesa L, Van Den Borne B, Alaii J: Factors impeding the acceptability and use of malaria preventive measures: implications for malaria elimination in eastern Rwanda. Malaria Journal 2015, 14:136.

THIS POLICY BRIEF WAS SUPPORTED BY:

RWANDA BIOMEDICAL CENTER
A Healthy People. A Wealthy Nation

UNIVERSITY OF RWANDA

NWO
Netherlands Organisation for Scientific Research
WOTRO Science for Global Development

Maastricht University

WAGENINGEN UR
For quality of life

amc
Academic Medical Center
University of Amsterdam

UMC St Radboud

Knowledge Translation Network Africa