

RESEARCH ARTICLE

OPEN ACCESS

## HOME BASED CARE PRACTICES CONTRIBUTE TO DELAYED HEALTH CARE SEEKING FOR CHILDREN UNDER FIVE YEARS WITH FEVER IN MALARIA ENDEMIC AREAS OF WESTERN KENYA

\*<sup>1</sup>Olaka William, <sup>1</sup>Ayodo George, <sup>2</sup>Ochanda Damaris and <sup>1</sup>Amimo Fred

<sup>1</sup>Department of Public and Community Health, School of Health Sciences, Jaramogi Oginga Odinga University of Science and Technology, P.O. Box 210-40601, Bondo, Kenya

<sup>2</sup>Department of Nursing Research, Education & Management, School of Nursing, Midwifery & Paramedical Sciences, Masinde Muliro University of Science & Technology, P. O. Box 190-50100, Kakamega, Kenya

### ARTICLE INFO

#### Article History:

Received 17<sup>th</sup> May, 2019  
Received in revised form  
03<sup>rd</sup> June, 2019  
Accepted 14<sup>th</sup> July, 2019  
Published online 28<sup>th</sup> August, 2019

#### Key Words:

Home Based Practices for fever,  
Malaria related fever.

### ABSTRACT

Delay in care seeking at health facilities for malaria related fever results into mortality of several children under five years. Both hospital and home-based care practices have contributed to delay in seeking care at the health facilities. However, few studies have investigated how home-based practices contribute to the delay. This study therefore employed a descriptive cross-sectional study to identify home-based practices that lead to delay in seeking care at health facilities among 199 caregivers with children under five years with malaria related fever at Mumias health centre, western Kenya. Semi-structured questionnaire and key informant interview guide were used to collect data from caregivers and health care providers respectively. Purposive sampling was used to select the study participants. The findings show that 60% (n=119) of caregivers present their children to health facility after 24 hours. However, 80% (n=159) and 82% (n=163) of them know the symptoms and causes of malaria respectively. The drugs administered by caregivers to children with fever were antimalarials, 24.1% (n=48), antipyretics, 25.6% (n=51), antibiotics, 6.5% (n=13), and combination of anti-malarial, antipyretic and anti-biotic, 5.5% (n=11). The sources of drugs were: retail shop, 10.1% (n=20), neighbours, 8.0% (n=16), chemist, 42.8% (n=84), and remnants from previous treatment, 2.0% (n=4). Interestingly, 32.0% (n=64) of decisions to seek care are made by the families and about 37.1% (n=74) do not seek care at the health facility. The study shows a delay in seeking care for malaria related fever at the health facility despite the caregivers aware of the symptoms and causes of malaria. Consequently, there is a need for health education to caregivers on health seeking care and importance of early treatment within 24 hours of developing malaria related fever. Also, shopkeepers, community health volunteers and private pharmacy proprietors should be sensitized and engaged on the seeking care for malaria related fever.

Copyright © 2019, Olaka William et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Olaka William, Ayodo George, Ochanda Damaris and Amimo Fred. 2019. "Home based care practices contribute to delayed health care seeking for children under five years with fever in malaria endemic areas of Western Kenya", *International Journal of Development Research*, 09, (08), 29004-29007.

### INTRODUCTION

The World Health Organization (WHO) recommends early diagnosis and treatment within the first 24 hours of onset of malaria symptoms in order to reduce mortality of children under 5 years (WHO, 2008).

#### \*Corresponding author: Olaka William,

Department of Public and Community Health, School of Health Sciences, Jaramogi Oginga Odinga University of Science and Technology, P.O. Box 210-40601, Bondo, Kenya

However, the mortality of children under five years in sub-Saharan Africa, is still high and of public health concern (UNICEF, 2015). Malaria attributes to 65% of child mortality (Mbonye, et al., 2007). In western Kenya, malaria is the leading cause of morbidity and mortality among infants and children under five years with mortality rates of 39 and 52 deaths/1,000 live births respectively (KDHS, 2014). However, in Mumias west sub-county, western Kenya where we carried out this study, 72 deaths per 1000 live births was reported between July 2014 and June 2015 and over 70% of

these deaths were due to malaria infection (Mumias Civil Registration report, 2015). The reason for high mortality caused by malaria infection is poorly understood in this rural setting. However, studies have shown that knowledge of malaria signs, use of drugs at home, source of drugs may contribute to delay in seeking care at the health facilities leading to increased mortality of children under five years (Awad, 2017; Vidyavati *et al*, 2016; Selvaraj, 2014; Maclean, 2014; Idowu, 2007). This study therefore investigated home-based care practices that may contribute to delay in seeking care at the health facilities for children under five years with malaria related fever in a peri-urban setting.

## METHODS

**Study site:** This study was conducted at Mumias model Health Centre in Mumias west sub-county, Kakamega County in the Out-Patient Department (OPD) and Child Welfare Clinic (CWC). The sub-county is served with a hospital and 12 other lower level health facilities and has a catchment population of 136,629; 65,992 males, and 70,637 females (KNBS, 2009). Children under five years which is the population of reference in this study is 23,910; 17.5% of the total population (KNBS, 2009). The primary economic activity in Mumias west sub-county is sugar cane farming. Mumias model health centre serves both urban, peri-urban and rural populations.

**Study Design:** A descriptive cross-sectional research design involving both qualitative and quantitative approaches was used in this study. The data collection tools were semi-structured questionnaire for caregivers and Key informant interview guide for the health workers who were directly involved in the provision of health care services for the under-fives.

**Study Participants:** The study targeted 199 children under-five years seeking treatment at the health facility for malaria related fever. Data was collected from under-five caregivers. Other study participants were health care providers at the health facility. The tools were administered by trained research assistants in a language (English, Kiswahili or Luhya-local language) best understood by the respondents. Data was entered into excel-spreadsheet and analysed using descriptive statistics. This study was approved by Jaramogi Oginga Odinga University of Science and Technology institutional ethics review board, further, all the study participants gave a written consent to participate in the study.

## RESULTS

A total of 199 caregivers of children under 5 years with malaria related fever were interviewed. Majority of respondents 83% (n=165) were married and 55% (n=109) had attained post primary education.

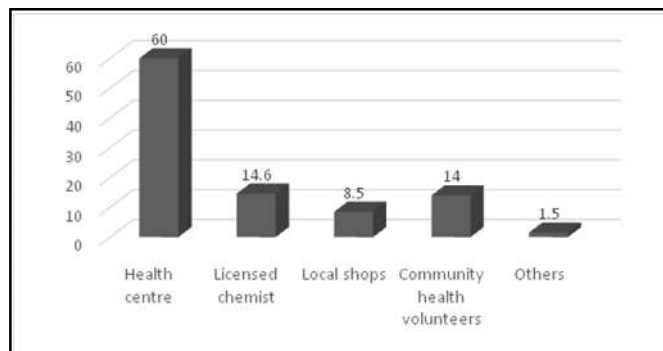
**Home based care practices for under-fives with malaria related fever:** Table 1 shows that majority of the under-fives, 35.2% (n=70) experience shivering at the beginning of illness, 28.1% (n=56) cry a lot, 18.1% (n=36) experience convulsions and 20.1% (n=40) refuse to eat. It also shows that when caregivers realize that child had fever related to malaria like symptoms, 87.9% (n=175) administered anti-malarial drugs, 8.0% (n=16) administered herbs while 4.0%

(n=8) used other means such as prayers. A health care provider (KII-1) pointed out that, "other caregivers used herbs for fever as they related it to signs of teething that usually had fever." As regards to drugs, 34.2% (n=68) administered antimalarial drugs, 36.7% (n=73) antipyretics and 9.0% (n=18) antibiotics (Table 1). However, 8.0% (n=16) administered all the three drugs (anti-malarial, antipyretic and antibiotics). The health care provider mentions that, "use of antipyretic (Panadol) and Antibiotics (Septrin) and Cough syrup (Piriton) are popular among caregivers for under-fives at home (KIII-2)". The sources of drugs used are: chemist; 59.3% (n=118), retail shop; 14.1% (n=28) neighbours; 11.6% (n=23), and 3% (n=6) cited using remains of previously used drugs. Interestingly, 51.3% (n=102) of caregivers noted that the condition of their children improved after administering the drugs.

**Table 1. Home based practices by caregivers**

	Frequency (n=199)	Percentage
• Signs of malaria fever in children		
Shivering	70	35.2
Crying a lot	56	28.1
Convulsion	36	18.1
Refusing to eat	40	20.1
• Action in case of fever		
Administered drugs	175	87.9
Used herbs	16	8.0
Other means	8	4.0
• Drugs administered		
Antimalarial	68	34.2
Anti-pyretic	73	36.7
Antibiotics	18	9.0
All of above	16	8.0
• Source of drug administered		
Retail shop	28	14.1
Neighbour	23	11.6
Chemist	118	59.3
Others	6	3.0
• Child condition after drug administration		
Improved	102	51.3
Did not improve	73	36.7

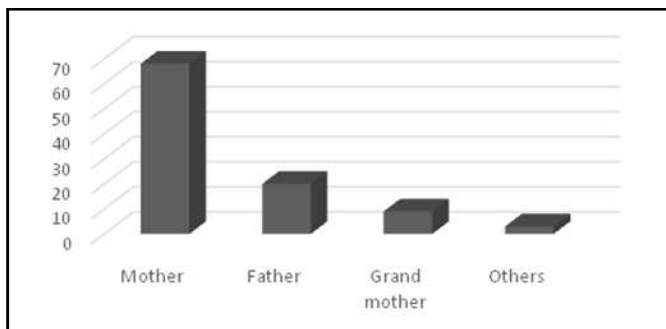
As regards to where care-givers of under-fives with fever first sought care, 60% (n=119) first went to the health facility, 14.6% (n=29) to Licensed chemist, 14% (n=28) consulted community health workers and 8.5% (n=17) went to the local shops (Figure 1). This finding shows that 37.1% (n=74) were treated for malaria infection without visiting the health facility.



**Figure 1. The place caregivers first sought care on realizing child had fever**

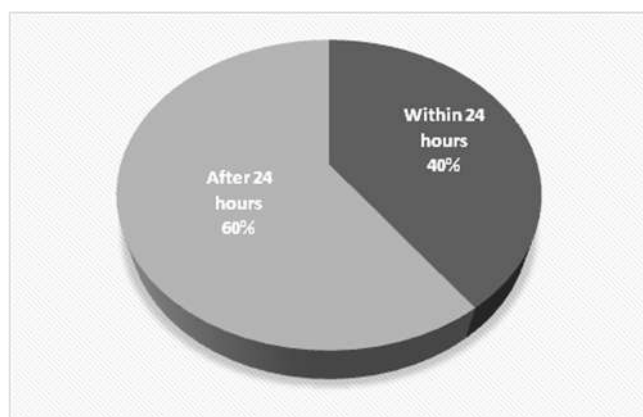
Figure 2 shows that the majority; 68% (n=135) of the decisions were made by mothers on where and when to seek care for a child with fever. However, fathers and grandmothers

constituted 20% (n=40) and 9% (n=18) respectively of decision makers. The findings show that 3% (n=6) of decisions are made by aunts and uncles. This suggests that 32% (n=64) of the decisions are made by other family members.



**Figure 2. Decision maker on where to seek care in case a child has fever**

As shown in Figure 3, majority; 60% (n=119) of the respondents took children to a health care facility after 24 hours while 40% (n=80) did take their children to a health care within 24 hours.



**Figure 3. Time taken to seek medical treatment after onset of fever**

## DISCUSSION

Regardless of the pathway of treatment that is chosen, home based care for under-fives with malaria related fever, is the first point of care, and with limited resources and long distances to the health facilities, most of the caregivers administer drugs from the chemists, retail shops or remnants from the previous treatment/s and others seek traditional treatment with herbs. Our findings from this study shows that these home-based practices contribute to the delay in seeking care at the health facilities and this may explain high mortality among under-fives. Our findings are supported by Ren *et al.* (2016) which showed that self-medication with drugs from shops, family members and neighbours is preferred as first choice of treatment. The demand for health care is demonstrated to be high, and majority of the caregivers acknowledged that they were able to identify fever in their children confirming findings by Uzochukwu *et al.* (2008) who observed that mothers were more likely to recognize danger signs and symptoms of ill-health among their children and went ahead to administer contemporary drugs. This finding agrees with findings of Malik, (2006) nearly half of the respondents in southern Sudan practice self-medication before

visiting a health facility. A section of caregiver administered herbal medicine to their children when they detected fever supporting observation by Qi & Kelley, (2014) that traditional/herbal medicine not only fills in the gap where modern medical care is nonexistent or inaccessible, it is in some cases, the only option of health care available to individuals and communities, and for many others, simply a preferred option of health care. Home based administration of drugs could be positive if it is used as first aid to mitigate fever before expertise treatment is sought, however, these practices could lead to procrastination beyond 24 hours in seeking appropriate health care and thus endanger the lives of under-fives. Consequently, the unguided use of any medications may present serious health implications for the individual such as adverse drug reactions leading to undesirable multiple economic and social effects on the larger society (Selvaraj, *et al.* 2014). Most caregivers presented their children to health facility more than 24 hours after the onset of fever ostensibly because of home based intervention, this concurs with Nuwaha (2002) and Ndyomugenyi (2007) that the caregivers who visited health facilities after 24 hours had practiced some form of self-medication. In the cases where there is delay in seeking health care after the onset of illness, there will be increased probability of mortality and complications of the illness. Children given home based treatment are vulnerable to severe morbidity and mortality as confirmed by Gao *et al.* (2005) that states; success of treatment depends on early diagnosis and prompt treatment.

## Conclusion

As regards home based practice, majority of caregivers administer drugs to their children who have fever. The drugs given are anti-malarials, antipyretic and antibiotics and most of these drugs are bought from the local chemists and shops. Of those who administered drugs, most of them claim that the health condition of the children improved making them seek care after 24 hours of fever onset. This implies that home based practices contribute to delay in seeking health care at the facilities. There is evidence of misuse and multi-drug use which may contribute to drug resistance as some respondents alluded to using remnants of drugs from previous treatment and from neighbours.

## REFERENCES

- Awad, A., Eltayeb, I., Thalib, L. and Matowe, L. 2017. Self-medication with antibiotics and in the community of Khartoum State, Sudan
- Civil Registra. 2015. Civil registration report, Mumias West, Kakamega County, Kenya
- Giao, P.T., Peter J. de Vries, Binh, T.Q., Nguyen, V. N. and Kager. P. A. 2005. Early diagnosis and treatment of uncomplicated malaria and patterns of health seeking in Vietnam. *Tropical Medicine and International Health*, 10 (9):919-925.
- Idowu, O.A., Mafiana, C.F., Luwoye, I.J., Adehanloye, O. 2007. Perceptions and home management practices of malaria in some rural communities in Abeokuta, Nigeria: Department of Biological Sciences, University of Agriculture, Abeokuta, Nigeria.
- Kamat V.R. 2006. "I thought it was only ordinary fever!" cultural knowledge and micropolitics of therapy seeking for childhood febrile illness in Tanzania. *Social Science and Medicine*, 62 2945-2959.

- KNBS 2014. Kenya Demographic and Health Survey. Nairobi, Kenya
- MacLean, L., Hassmiller, S., Shaffer, F., Rohrbaugh, K., Collier, T., & Fairman, J. 2014. Scale, causes, and implications of the primary care nursing shortage. *Annual Review of Public Health*, 35, 443-457
- Malik, E.M., Kamal, H., Salah, H.A., Eddirdieri S.A., Khalid A.M. 2006. Treatment seeking behaviour for malaria in children under five years of age: implication for home management in rural area with high seasonal transmission in Sudan. *Malaria Journal*, 5:1186/1475
- Mbonye, A.K. 2003. Prevalence of childhood illnesses and care taking practices in rural Uganda. *Scientific World Journal*. 3: 721 – 730.
- Ndyomugenyi, R., Magnussen, P., Clarke, S. 2007. Malaria treatment-seeking behaviour and drug prescription practices in an area of low transmission in Uganda: Implication for prevention and control. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 101:209-215.
- Nuwaha, F. 2002. People's perception of Malaria in Mbarara Uganda. *Tropical Medicine and International Health*, 7(5):462-470.
- Oladele B.A. and Kauna K.J. 2005. Illness related practices for the management of childhood malaria among the Bwatiye people of north-eastern Nigeria. *Malaria Journal*, 4:13
- Qi, Z., & Kelley, E. 2014. The WHO traditional medicine strategy 2014–2023: a perspective. *Science*, 346(6216), S5-S6
- Ren, J., Kan, H., Duan, G. 2016 Present situation, problems, countermeasures and suggestions of self-medication. *China Pharm.*, 27, 4888–4890.
- Selvaraj, K., Kumar, S. G. Ramalingam, A. 2014. Prevalence of self-medication practices and its associated factors in Urban Puducherry, India. *Perspectives in clinical research*, 5(1), 3
- Sharma, VR. 2008. When to seek health care: a duration analysis for malaria patients in Nepal. *Soc Sci Med*. 66:2486–94
- Tanner, M. and Vlassof, C. 1998. Treatment seeking behaviour for malaria: A typology based on endemicity and gender. *Social Science and Medicine*. 46 (4-5):523-532.
- UNICEF, Organization WH. 2015. United Nations Levels and Trends in child mortality. New York, USA
- Uzochukwu, B.S.C. and Obinna, O.E. 2008. Socio-economic differences and health seeking behaviour for the diagnosis and treatment of malaria: A case study of four Local government area operating the Bamako initiative programme in South East Nigeria. *International Journal for Equity in Health*. 3:6. [www.pubmedcentral.nih.gov/articlerender](http://www.pubmedcentral.nih.gov/articlerender)
- Vidyavati SD, Sneha A, Kamarudin J & Katti SM. 2016. Self-Medication - Reasons, Risks and Benefits. *International J. of Healthcare and Biomedical Research*, Volume: 04, Issue: 04, July 2016, 21-24

\*\*\*\*\*