

## BACKGROUND

- Malaria remains one of the major public health problems worldwide
- Despite massive global efforts in malaria control, an estimated 3.4 billion people are at risk of malaria and most cases (80%) of all malaria deaths occur in sub-Saharan Africa (WHO, 2013), where access to health care is a challenge
- Kenya adopted World Health Organization's recommendation of community case management of malaria (CCMM) in 2012
- CCMM is strategy to improve accessibility to malaria management mainly in remote areas through community health volunteers (CHVs)
- CHVs are lay community members, trained to diagnose and treat uncomplicated malaria
- CHVs diagnose using malaria rapid diagnostics test (RDT) and treat with Artemether lumefantrine (AL) for confirmed cases
- Refer complicated malaria cases and malaria in pregnancy as well as provide health education on prevention and control of malaria
- CCMM has been implemented in Western Kenya and little or no information is available on quality of services provided by CHVs
- This study assessed determinants of CHV's quality of service in CCMM.

## METHODS

- This was a cross sectional study observing 147 randomly selected CHVs
- CHVs were observed while managing at least three clients and thereafter a questionnaire administered
- Observation was based on initial interaction with client, steps in diagnosis (including clinical and rapid diagnostic test), steps in treatment and health education
- Chi-square and logistic regression were calculated to identify factors associated with quality of service.

## RESULTS

### Socio-demographic characteristics of CHVs

- The ratio of males to females was 4 to 6 with mean age of 40 years and they had a mean of 2 years in practice. Majority of them (85.6%) had some secondary education and only 3.4% with tertiary education. CHVs were predominantly Christians (98.6%) and mostly (93.2%) married

### Level of quality of service provision by CHVs

- Majority (62%) of the CHVs were found to offer quality services at 75% cut off marks as shown in figure 1.

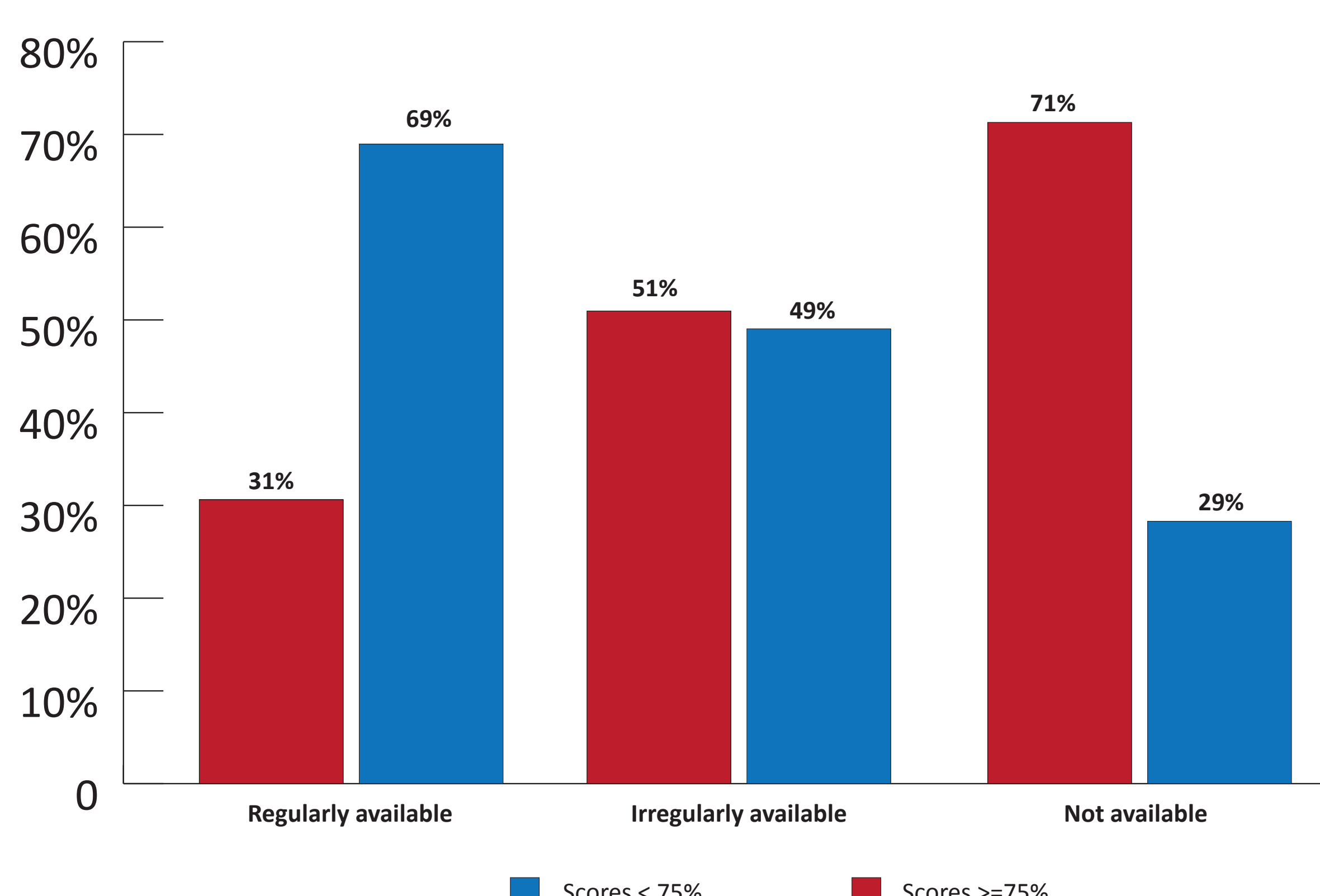


Figure 1 : Percentage of CHVs offering and not offering quality of service

### Factors associated with Quality of services

- Factors associated with quality of services provided by CHVs included: stock outs of Artemether lumefantrine (AL) , rapid diagnostic test kits (RDTs) and support supervision
- Socio-demographic characteristic (such as marital status, gender, religion, and education level), referrals, other commodities (such as salter scale, thermometer, MUAC tape, first aid kit, Back bag) had no association with quality of services.
- CHVs who had ever been supervised were 4 times likely to provide quality services and CHVs who had no stock out of ALs and RDTs were 3 times more likely to provide quality malaria services

Table 3 : Factors associated with quality of service

| Characteristics                      | Total      | Quality of service |           | P-Value | UAOR            |
|--------------------------------------|------------|--------------------|-----------|---------|-----------------|
|                                      |            | <75%               | ≥75%      |         |                 |
| <b>Total</b>                         | 147        | 56(38.1%)          | 91(61.9%) |         |                 |
| <b>Stock outs of ALs</b>             |            |                    |           |         |                 |
| Yes (Ref)                            | 125(85.0%) | 52(41.6%)          | 73(58.4%) | 0.037*  | 1               |
| No                                   | 22(15.0%)  | 4(18.2%)           | 18(81.8%) |         | 3.2(1.03-10.3)  |
| <b>Stock outs of RDTs</b>            |            |                    |           |         |                 |
| Yes (Ref)                            | 56(38.0%)  | 31(55.4%)          | 25(44.6%) | 0.001** | 1               |
| No                                   | 91(62.0%)  | 25(27.5%)          | 66(72.5%) |         | 3.3(1.63-6.59)  |
| <b>Ever had support supervision?</b> |            |                    |           |         |                 |
| No (Ref)                             | 16(11.0%)  | 11(68.8%)          | 5(31.3%)  | 0.007** | 1               |
| Yes                                  | 131(89.0%) | 45(34.4%)          | 86(65.6%) |         | 4.2(1.38-12.85) |

- Quality of service and availability of ALs and RDTs
- On further analysis, it was found that when ALs and RDTs were regularly available majority of CHVs offered quality services as compared to when ALs and RDTs were irregularly or not available.
- Quality of service diminished with stock outs of ALs and RDTs as shown in figure 2 and 3

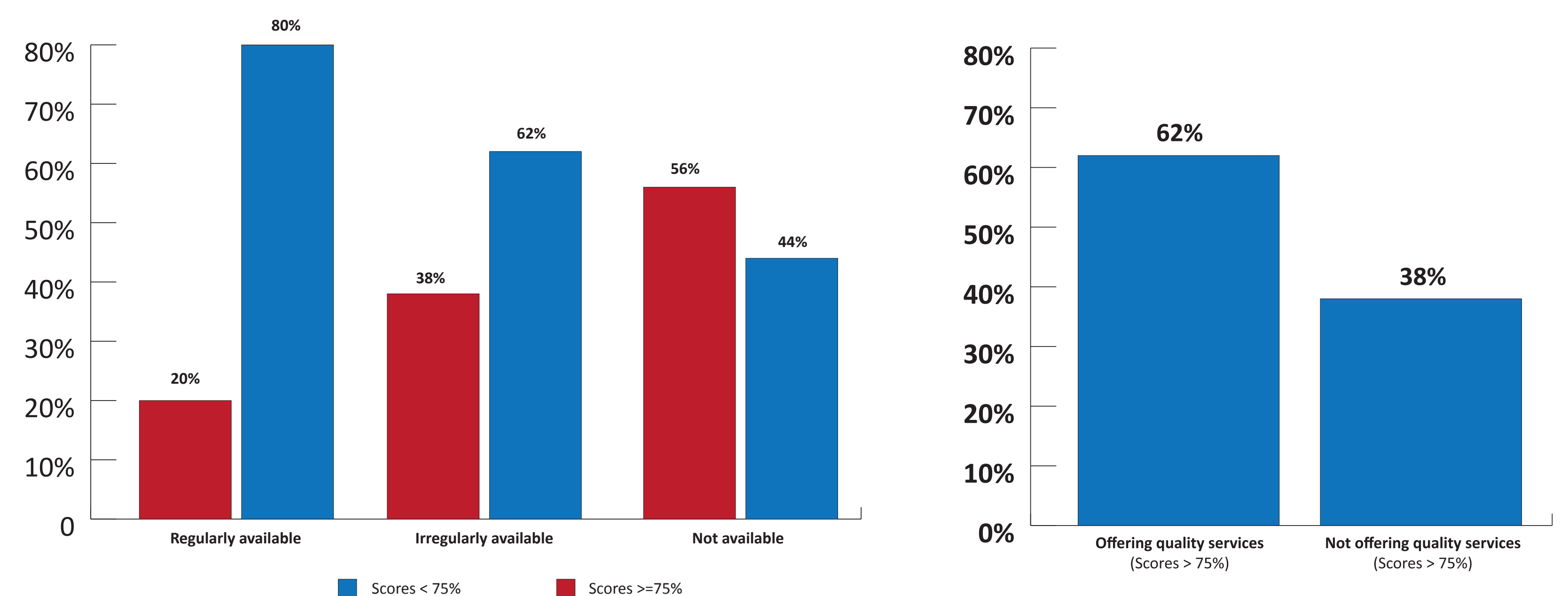


Figure 2 (Right): Quality of service and availability of ALs (p=0.032)

Figure 3 (Left): Quality of service and availability of RDTs (p=0.016)

## CONCLUSION

- Majority of CHVs offered quality services in CCMM.
- Uninterrupted supply of RDTs, ALs and provision of supervision are essential in the performance of CHVs in CCMM.

## RECOMMENDATIONS

- With provision of necessary requirements, community health volunteers can reliably improve and continue offering CCMM
- Advocate for uninterrupted provision of commodities and support supervision by the link health facility in-charges and County supervisors.

## ACKNOWLEDGEMENT

Global Fund to Fight HIV/AIDS, TB and Malaria, Amref Health Africa, Bungoma County, Community Health Volunteers and all the enumerators.