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Albert Kilian^{1,2}, Lisa Woods³, Tafadzwa Matova³, Richmond Ato Selby⁴, Kojo Lokko⁵, Miatta Zenabu Gbanya³, Ruth Allan³, Samson Baba⁶, Constantino Doggale⁷, Harriet Pasquale⁶, Richard Lako⁶
¹Malaria Consortium, UK ; ²Tropical Health LLP, Spain; ³Malaria Consortium, South Sudan, ⁴Malaria Consortium Africa, Uganda, ⁵Center for Communication Programs, Johns Hopkins University School of Public Health, USA, ⁶Ministry of Health, Republic South Sudan, ⁷Lainya County Health Department, South Sudan

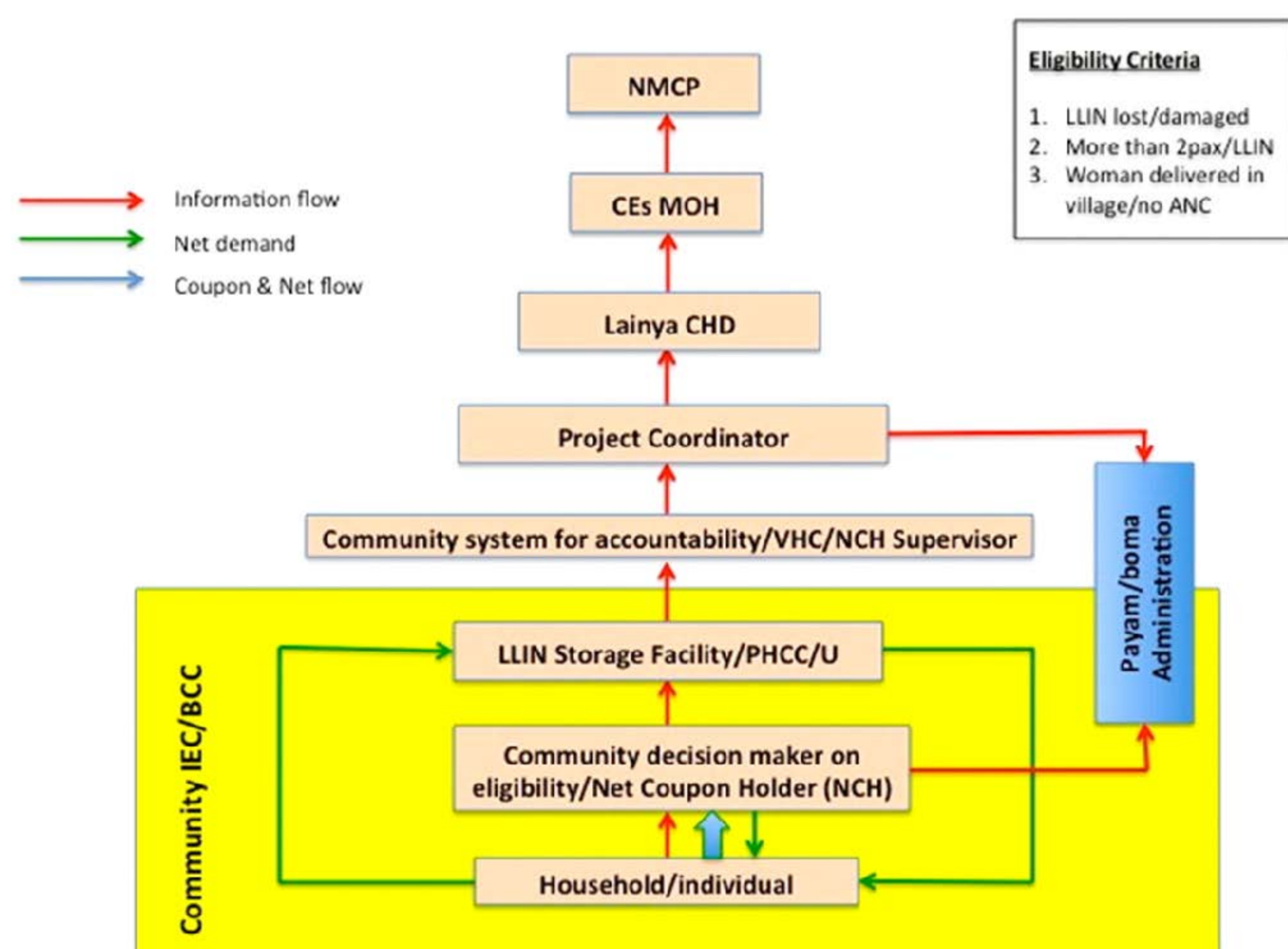
Introduction

- Filling the gaps after a mass distribution of insecticide treated nets (ITN) for malaria prevention and sustaining high coverage is a critical aspect of malaria control in Africa south of the Sahara.
- One recommended approach for continuous distribution of ITN is through health services such as ante-natal care or immunization.
- But in areas where these health services are still weak following conflict, other options need to be explored.
- Of particular interest are approaches that combine 'pull' (demand by the household) with 'push' (delivery at community level)

Methods

Intervention

Lainya County in Central Equatoria State, Republic of South Sudan was selected for a one year pilot programme to test the feasibility of a community-based, demand-driven, continuous distribution scheme for ITN for a population of about 250,000 following a mass distribution campaign in 2011. Families who did not have enough ITNs or had lost nets due to wear and tear could approach one of 50 'net coupon holders' (1/700 households) to request a new ITN. If the eligibility was confirmed a coupon was issued and one ITN per coupon could be obtained from one of 23 distribution points (1/2,500 households). Implementation was done jointly by the County Health Department and Malaria Consortium and accompanied by social mobilisation and behavioural change communication.



Evaluation

In addition to routine monitoring data from the coupon and ITN distributions, two representative household surveys were undertaken in April 2012 and April 2013 at the beginning of the rains. Using a two stage cluster sampling design, 600 households were randomly selected from 30 clusters in each survey. In addition, data on financial cost was collected and is currently being analysed.

Results



Figure 1: Area of study in South Sudan

Between May 2012 and March 2013 a total of 30,530 coupons were distributed and 28,696 were redeemed (94%). Output as well as redemption rate was constant over time (Figure 1) averaging 3,188 per month. Most coupons (57%) were given because the family did not have enough ITN for all household members (1 ITN per 2 people), 32% to replace worn out or destroyed ITN and 11% for pregnant women who delivered in the village and did not attend ANC. Of all nets obtained by households during the pilot 68% came from the community distribution, 15% from ANC and 10% from the market.

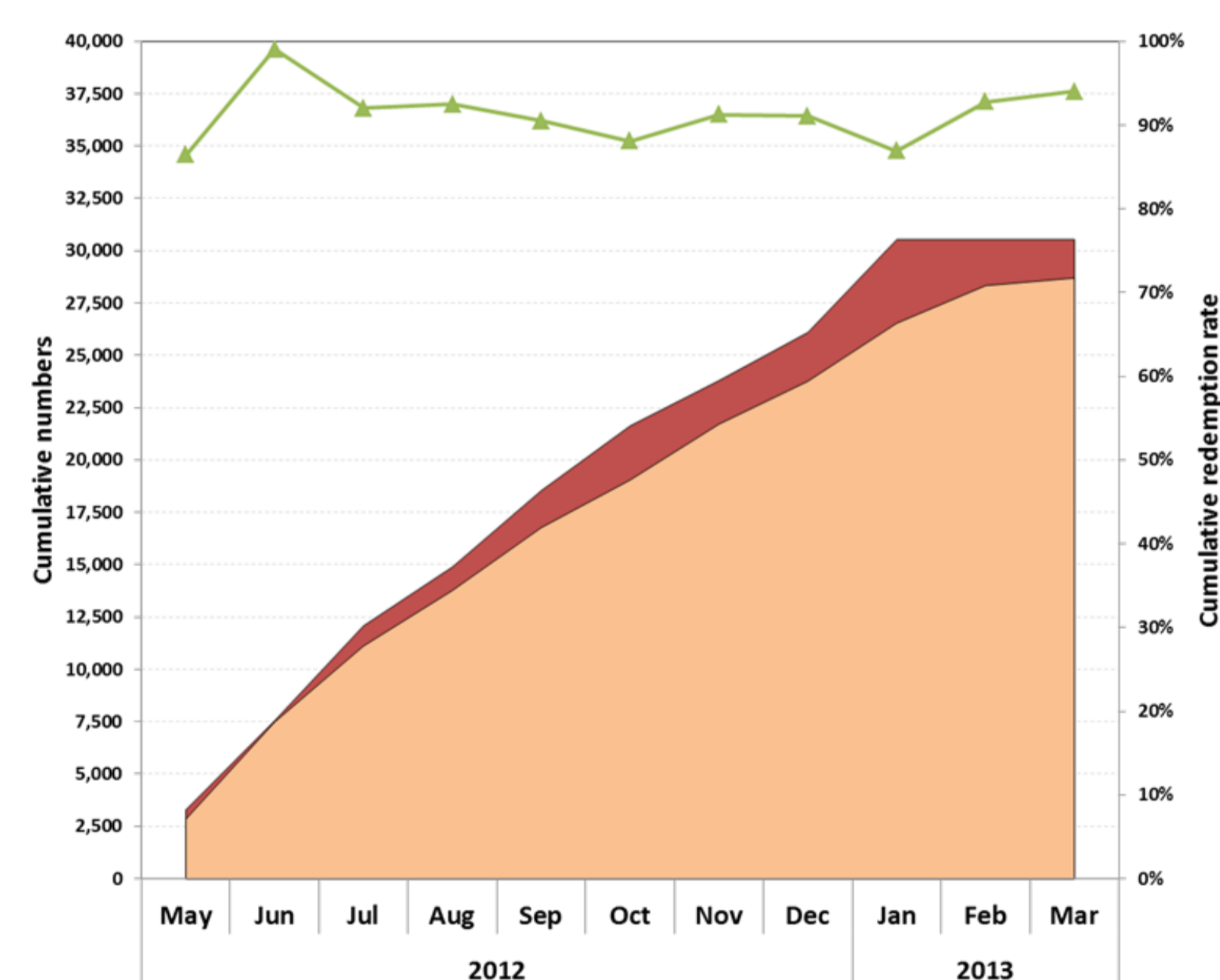


Figure 1: Output in coupons and ITN over time

Programme effectiveness was high: 74% of all households in the county requested a coupon and 69% had at least one ITN from the scheme at the endline survey, i.e. 93% of those requesting also received and retained the ITN. The proportion owning at least one ITN increased by 16%-points (Figure 3) and the proportion with enough ITN for all members more than doubled reaching 46%. At the end of the pilot, 83% of communities had at least 80% of households with any ITN (up from 40%) and 63% of communities had at least 50% of households with enough ITN for all (up from 3%).

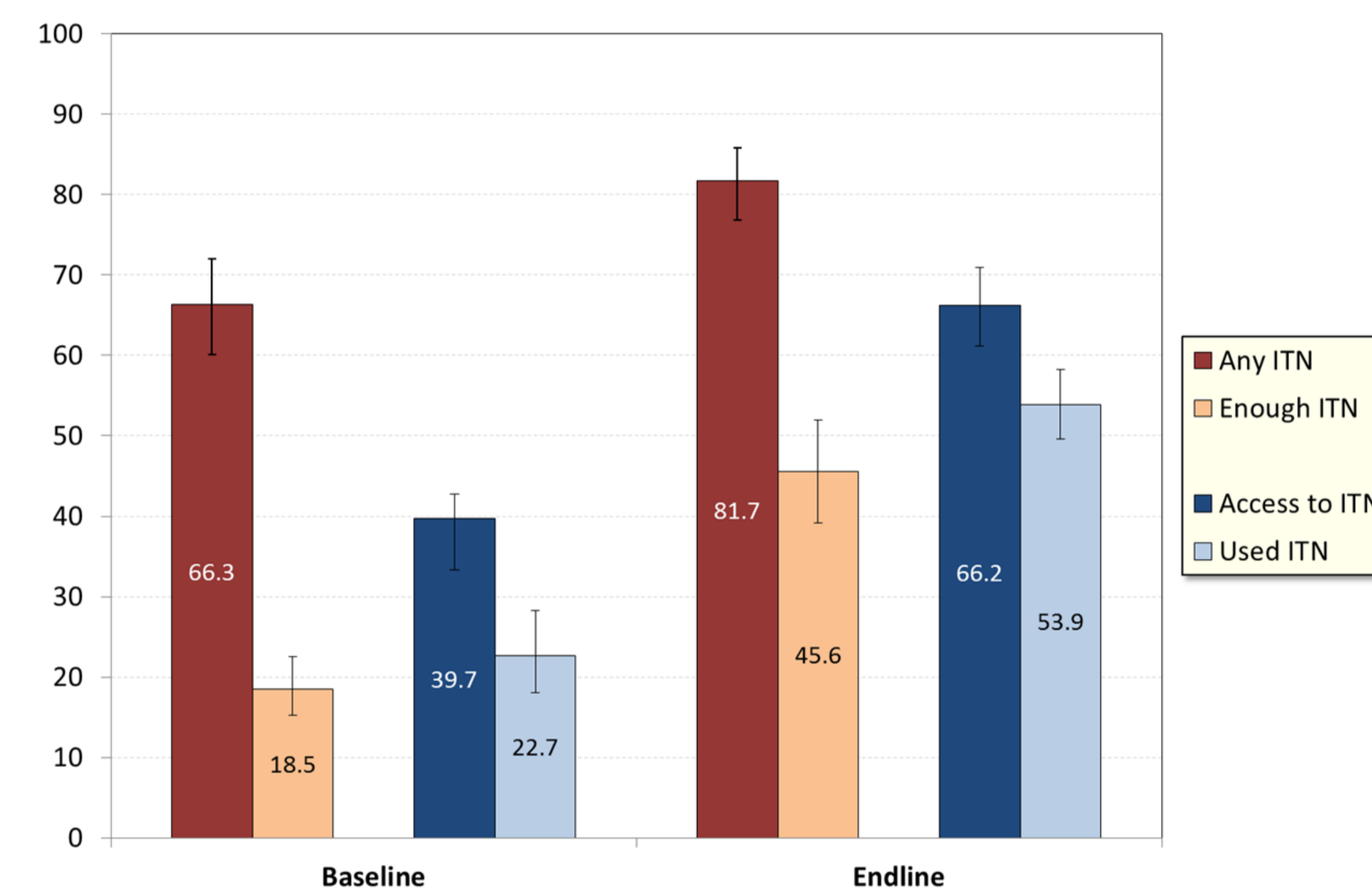


Figure 3: Ownership and use coverage

The proportion of the population with access to an ITN within the household increased 1.7-fold (Figure 3) and population ITN use 2.4-fold, significantly reducing the use gap: at baseline 57% of those with access used an ITN and at the endline survey 81%. In households that did have enough ITNs for all, use was 85-90% in under-fives and adults and increases were seen especially among older children and adolescents (Figure 4).

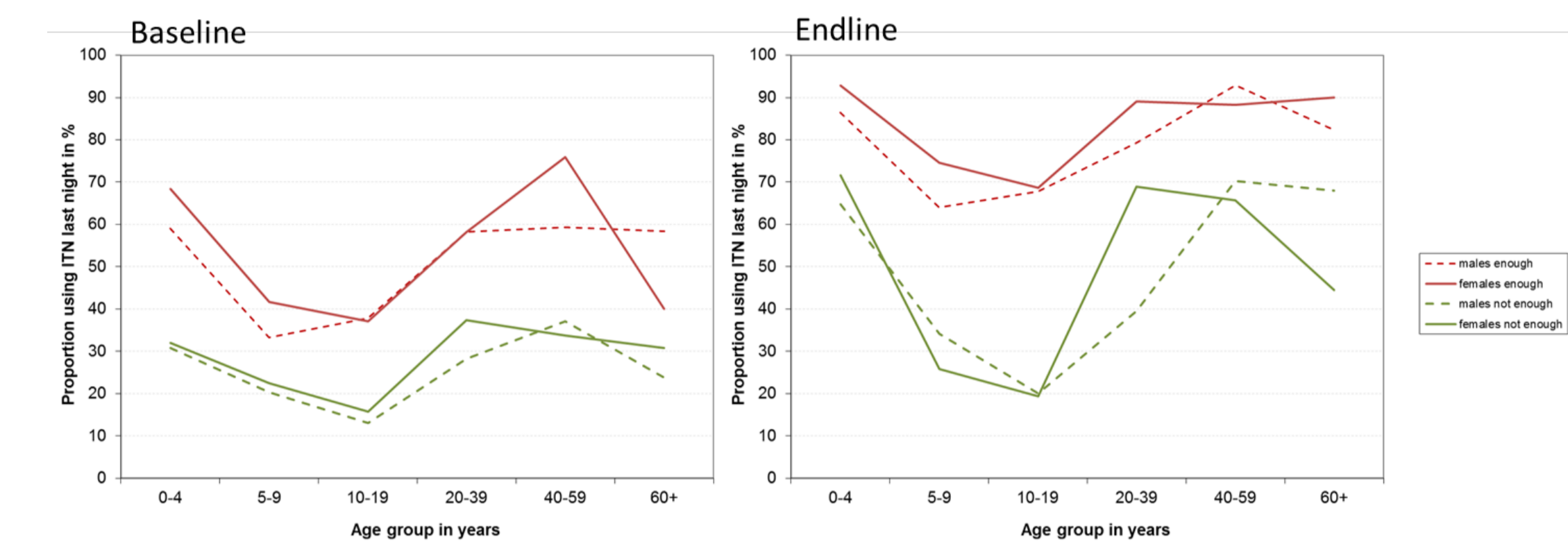


Figure 4: ITN use by age, gender and household supply with ITN

Access to ITN for those requesting a coupon was very equitable (equity ratio 0.95, concentration index 0.010) but requesting a coupon was slightly biased towards the wealthier households (equity ratio of 0.69, concentration index 0.065) indicating that more needs to be done to encourage the poorest to participate. The vast majority of households (86%) felt that the criteria for giving the ITN were fair and 63% thought that the distance to the "coupon holder" was acceptable. However, 51% of respondents were of the opinion that the distribution centre for the ITN was too far.



Conclusions

- The community-based LLIN distribution pilot was well received and achieved high levels of program effectiveness
- ITN ownership could not only be sustained from the previous campaign but significantly increased towards "universal coverage"
- ITN use improved significantly to 81% of those with access to ITN also using them
- This study provides evidence that a community-based, demand-driven approach to continuous distribution works
- Cost analysis is under way to provide evidence of the cost-effectiveness of this approach

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