Background: The use of long-lasting insecticidal nets (LLINs) is associated with a reduction in malaria transmission. In 2015, a new delivery strategy (intervention) in universal coverage campaign was tested and compared with standard strategy (control). The objective is to compare two bed nets delivery models in rural districts of Mozambique.

Methods: Two districts served as intervention, and two as control. The following study design was used: i) before and after; and ii) cost-effectiveness analysis. Three core implementation strategies were tested: use of coupons during household (HH) registration, use of stickers to identify registered houses and a new LLINs allocation criterion. The main endpoints measured were: i) percentage of distributed LLINs; ii) LLINs ownership and use coverage; iii) percentage of HHs that achieved universal coverage; iv) incremental cost-effectiveness ratio (ICER); iv) incremental net benefit (INB).

Results: Approximately 88% (302,648) of LLINs were distributed in intervention districts compared to 77% (219,613) in control districts [OR: 2.14 (95% CI: 2.11-2.16)]. Six months after the 2015 campaign, of the 760 HHs surveyed in the intervention districts, 98.8% had at least one LLIN; of the 787 HHs surveyed in the control districts, 89.6% had at least one LLIN [OR: 9.7, (95% CI: 5.25 - 22.76)]. Near 95% and 87% of respondents who had at least one LLIN reported having slept under the LLIN the previous night in the intervention and control districts, respectively [OR: 3.2; (95% CI 2.12-4.69)]; 71% of the HHs surveyed achieved universal coverage in the intervention districts against 59.6% in the control districts [OR: 1.6; (95% CI: 1.33-2.03)]. ICER per distributed LLIN was US$ 0.68. INB was positive.

Conclusions: Intervention districts had greater LLINs availability, greater LLINs ownership and use coverage, and a better progression toward reaching universal coverage targets. The new strategy was more cost-effective than the previous strategy.