

S7 Table. Association between the IRS and microscopic *P. falciparum* infection prevalence at the end of the dry seasons.

| Factor | Microscopic <i>P. falciparum</i> infection ^a | | | |
|--|---|-----------------|-----------------------|-----------------|
| | Unadjusted | | Adjusted ^b | |
| | OR (95% CI) | <i>p</i> -value | aOR (95% CI) | <i>p</i> -value |
| IRS/Survey | | | | |
| Pre-IRS (Survey 2, May/June 2013) | 1.00 | - | 1.00 | - |
| Post-IRS (Survey 4, May/June 2016) | 0.41 (0.35-0.47) | < 0.001 | 0.36 (0.31-0.43) | < 0.001 |
| Age groups | | | | |
| 1-5 years | 1.00 | - | 1.00 | - |
| 6-10 years | 2.34 (1.85-2.96) | < 0.001 | 2.42 (1.91-3.08) | < 0.001 |
| 11-20 years | 1.75 (1.37-2.23) | < 0.001 | 1.86 (1.44-2.39) | < 0.001 |
| 21-39 years | 0.38 (0.27-0.54) | < 0.001 | 0.37 (0.26-0.53) | < 0.001 |
| ≥ 40 years | 0.38 (0.27-0.52) | < 0.001 | 0.38 (0.28-0.53) | < 0.001 |
| Sex | | | | |
| Female | 1.00 | - | 1.00 | - |
| Male | 1.53 (1.29-1.80) | < 0.001 | 1.32 (1.11-1.58) | 0.002 |
| Catchment area | | | | |
| Vea/Gowrie | 1.00 | - | 1.00 | - |
| Soe | 1.23 (1.04-1.45) | 0.013 | 1.33 (1.12-1.59) | 0.001 |
| LLIN usage (previous night) | | | | |
| No | 1.00 | - | 1.00 | - |
| Yes | 0.88 (0.71-1.10) | 0.264 | 1.03 (0.81-1.30) | 0.825 |
| Antimalarial treatment (previous 2 weeks) | | | | |
| No treatment | 1.00 | - | 1.00 | - |
| Treatment | 0.56 (0.40-0.79) | 0.001 | 0.53 (0.37-0.76) | < 0.001 |

OR=odds ratio; aOR=adjusted odds ratio; CI=confidence interval, to deal with the repeated measures the cluster sandwich variance estimator was used

^a Participants were excluded from the model if their antimalarial treatment in the previous two weeks was not known: Survey 4 (N = 12)

^b Age group, sex, catchment area, LLIN usage the previous night, and antimalarial treatment in the previous two weeks are adjusted for in the multivariable logistic regression model.