S8 Table. Analysis of adherence to intervention (per protocol analysis): The instantaneous effect of village mosquito repellent distribution with differing levels of average usage on Plasmodium spp. infection (PCR) (n=11,833)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factors** | **AOR** | ***95% CI*** | ***p-value*** | ***RE***  |
|  |  |  |  |  |
| ***Fixed component*** |  |  |  |  |
|  |  |  |  |  |
| *Intervention* |  |  |  |  |
|  | No repellent | ref. | - | - | - |
|  | Repellent – monthly | 1.22 | 0.80,1.86 | 0.365 |  |
|  | Repellent – weekly | 0.68 | 0.41,1.15 | 0.152 | - |
|  | Repellent – daily | 0.86 | 0.60,1.21 | 0.379 | - |
|  |  |  |  |  |
| *Time (month)* | 0.97 | 0.88,1.07 | 0.587 | - |
|  |  |  |  |  |
| *Season* |  |  |  |  |
|  | Cool | ref. | - | - | - |
|  | Hot | 1.13 | 0.35,3.65 | 0.839 | - |
|  | Rainy | 1.20 | 0.45,3.20 | 0.709 | - |
|  |  |  |  |  |
| ***Random component*** |  |  |  |  |
|  |  |  |  |  |
| $ψ\_{1}$c |  |  |  | 0.54 |
| $$ψ\_{2}$$ |  |  |  | 0.13 |
| $ρ\_{11}$d |  |  |  | 0.03 |
| $ρ\_{12}$e |  |  |  | 0.17 |
| $ρ\_{2}$f |  |  |  | 0.14 |
|  |  |  |  | *-1586.8* |
|  |  |  |  |  |

Instantaneous treatment effect differing levels of average usage: adjusted odds ratio (AOR), 95% confidence interval (95% CI), probability value (p-value), random-effect variances ($ψ$), conditional intraclass correlation coefficient ($ρ$)a and model log likelihood () from generalised linear mixed modelling (GLMM)b

a *ρ* = $\frac{ψ\_{k}+ ...+ ψ\_{nk}}{ψ\_{k}+ ...+ ψ\_{nk}+ {π^{2}}/{3}}$ , where $ψ\_{k}$ through $ψ\_{nk}$ are random-effect (RE) variance estimates pertaining to each of the respective crossed-classified variance components (see table notes c-f) from the crossed random–effect generalised (logit) linear mixed models for a specific ICC estimate.

b Crossed random-effect generalised (logit) linear mixed model (logit link function and binomial distribution) with random-effects for temporal-specific (month) and village-specific heterogeneity in infection.

c$ψ\_{1}$and $ψ\_{2}$ represent variances of the random-effects for month and village respectively.

d$ρ\_{11}$ represents conditional ICC for participant tests conducted in the same village but different month in a control period.

e$ρ\_{12} $represents conditional ICC for participant tests conducted in the same village and same month in a control period.

f$ρ\_{2} $ represents conditional ICC for participant tests in the same month.