

Supplemental File

Model A: Final model for proxy response status:

$$\begin{aligned}\text{Logit}(E(Y_{ijk}|b_{jk})) = & \beta_0 + \beta_1(\text{Eligibility Status})_{ijk} \\ & + \beta_2(\text{Older Age Category})_{ijk} \\ & + \beta_3(\text{Young Adult Age Category})_{ijk} \\ & + \beta_4(\text{Sex})_{ijk} \\ & + b_0(\text{PSU})_{jk} \\ & + b_1(\text{District})_k \\ & + e_{ijk}\end{aligned}$$

For i individuals in j primary sampling units of k districts, where $Y_{ijk} = 1$ if the individual had a proxy response and 0 for self-response

Model B: Final model for drug coverage:

$$\begin{aligned}\text{Logit}(E(Y_{ijk}|b_{jk})) = & \beta_0 + \beta_1(\text{Proxy Response Status})_{ijk} \\ & + \beta_2(\text{Older Age Category})_{ijk} \\ & + \beta_3(\text{Young Adult Age Category})_{ijk} \\ & + \beta_4(\text{Sex})_{ijk} \\ & + b_0(\text{PSU})_{jk} \\ & + b_1(\text{District})_k \\ & + e_{ijk}\end{aligned}$$

For i individuals in j primary sampling units of k districts, where $Y_{ijk} = 1$ if the individual is reported to have swallowed the drug, 0 if not.