

Supplemental Table 1. Pharmacokinetic-Pharmacodynamic Model Development for Rifampin.

Effect of Covariates on Baseline Hazard

Covariates	Model	-2 Log Likelihood	P Value
Time	Reference	300.886	-
Arm	Discrete	295.742	0.076
Sex	Discrete	300.478	0.815
HIV	Discrete	297.368	0.172
Plasma AUC	Step, AUC = 70 mg*h/L	296.832	0.132
Plasma AUC	Step, AUC = 80 mg*h/L	293.191	0.021
Plasma AUC	Step, AUC = 90 mg*h/L	293.653	0.027
Plasma AUC	Linear	298.867	0.364
Plasma C _{max}	Linear	296.783	0.129
CSF AUC	Linear	299.270	0.446
CSF C _{max}	Linear	306.388	0.999
Age	Linear	300.849	0.982
Weight	Linear	303.462	0.999
Plasma AUC	E _{max}	294.467	0.040
Plasma C _{max}	E _{max}	293.196	0.021
CSF AUC	E _{max}	295.676	0.074
CSF C _{max}	E _{max}	295.731	0.076
Age	E _{max}	303.116	0.999
Weight	E _{max}	303.445	0.999
Plasma AUC	Sigmoidal E _{max}	291.596	0.010
Plasma C _{max}	Sigmoidal E _{max}	293.099	0.020
CSF AUC	Sigmoidal E _{max}	294.292	0.037

CSF C_{max}	Sigmoidal Emax	294.037	0.033
Age	Sigmoidal Emax	300.887	0.999
Weight	Sigmoidal Emax	300.887	0.999

Supplemental Table 2. Stochastic simulations assuming 30% variability in clearance and target of 92 mg*h/L

IV Dose (mg/kg)	Percent (%) of Children above Target	Oral Dose (mg/kg)	Percent (%) of Children above Target
15	49	30	49
20	82	40	82
25	95	45	91
30	99	60	99







