

True Parameter Coverage Rate from Full Model with 1000 Simulations

	Unadjusted							Adjusted						
	Intercept	Age	Male	BSA	BAV	Visit	BAV:Visit	Intercept	Age	Male	BSA	BAV	Visit	BAV:Visit
With Drop out														
Independent	0.944	0.944	0.947	0.944	0.951	0.950	0.947	0.952	0.959	0.958	0.955	0.963	0.962	0.952
Exchangeable	0.944	0.945	0.948	0.938	0.948	0.949	0.946	0.953	0.958	0.958	0.954	0.955	0.961	0.952
AR1	0.947	0.945	0.947	0.943	0.949	0.952	0.948	0.955	0.954	0.961	0.955	0.959	0.960	0.955
Without Drop outs														
Independent	0.599	0.099	0.931	0.889	0.772	0.959	0.926	0.647	0.129	0.946	0.908	0.807	0.969	0.944
Exchangeable	0.590	0.103	0.924	0.870	0.705	0.949	0.907	0.632	0.130	0.940	0.888	0.750	0.956	0.930
AR1	0.554	0.079	0.926	0.880	0.740	0.963	0.904	0.606	0.095	0.943	0.905	0.770	0.969	0.931

Estimation Results for Full Model with 1000 Simulations

	Intercept	Age	Male	BSA	BAV	Visit	BAV:Visit
Independent							
Mean Estimate	1.661874e+13	-9.255315e+12	-1.993845e+13	-3.946146e+10	1.392732e+12	1.438866e+12	9.303414e+12
SD(Estimate)	5.382524e+14	2.997636e+14	6.457720e+14	1.278088e+12	4.510818e+13	4.660239e+13	3.013215e+14
Mean Std. Error	1.367027e+12	9.671036e+10	6.526494e+11	2.046443e+10	2.343042e+11	8.432667e+11	1.444992e+11
SD(Std. Error)	4.425453e+13	3.130788e+12	2.112811e+13	6.628075e+11	7.588709e+12	2.731195e+13	4.677849e+12
Mean Bias	-1.661874e+13	1.851063e+14	9.969227e+12	7.892291e+11	9.948087e+11	2.877733e+12	1.860683e+13
Mean MSE	2.897156e+29	8.985824e+28	4.170215e+29	1.633510e+24	2.034748e+27	2.171783e+27	9.079464e+28
Exchangeable							
Mean Estimate	1.947922e+29	-2.436700e+28	-3.537573e+40	-3.807573e+26	1.352724e+13	-8.528963e+28	3.537573e+40
SD(Estimate)	6.308982e+30	7.892051e+29	1.145759e+42	1.233207e+28	8.126998e+14	2.762383e+30	1.145759e+42
Mean Std. Error	8.155275e+12	3.243874e+12	6.647583e+12	9.924148e+10	2.589100e+12	2.847452e+12	4.369975e+12
SD(Std. Error)	1.039408e+14	3.741436e+13	7.112586e+13	1.635558e+12	4.137691e+13	4.528616e+13	4.734684e+13
Mean Bias	-1.947922e+29	4.873401e+29	1.768787e+40	7.615145e+27	9.662316e+12	-1.705793e+29	7.075147e+40
Mean MSE	3.980326e+61	6.228446e+59	1.312763e+84	1.520799e+56	6.600343e+29	7.630762e+60	1.312763e+84
AR1							
Mean Estimate	4.018620e+24	-1.263569e+24	-9.340657e+24	-9.339530e+12	1.035660e+24	-2.269425e+14	4.692850e+24
SD(Estimate)	1.301570e+26	4.092507e+25	2.179332e+26	1.819214e+14	3.354326e+25	3.887427e+15	1.253312e+26
Mean Std. Error	4.414520e+13	1.562089e+13	7.479126e+13	4.639492e+11	2.205382e+13	1.532035e+14	2.756696e+13
SD(Std. Error)	7.606311e+14	2.826795e+14	2.052803e+15	6.048726e+12	5.056532e+14	4.286301e+15	7.318152e+14
Mean Bias	-4.018620e+24	2.527139e+25	4.670328e+24	1.867906e+14	7.397575e+23	-4.538849e+14	9.385700e+24
Mean MSE	1.694085e+52	1.674861e+51	4.753686e+52	3.315106e+28	1.125150e+51	1.514919e+31	1.571496e+52

Estimation Results for Full Model without dropout from 1000 Simulations

	Intercept	Age	Male	BSA	BAV	Visit	BAV:Visit
Independent							
Mean Estimate	-1.023	-0.049	-1.990	-0.050	1.419	0.496	0.500
SD(Estimate)	0.749	0.105	0.441	0.009	0.225	0.284	0.123
Mean Std. Error	0.756	0.104	0.429	0.009	0.220	0.281	0.120
SD(Std. Error)	0.062	0.011	0.030	0.001	0.019	0.023	0.010
Mean Bias	0.023	-0.021	-0.005	0.003	0.014	-0.009	-0.001
Mean MSE	0.561	0.011	0.194	0.000	0.051	0.080	0.015
Exchangeable							
Mean Estimate	-1.018	-0.049	-1.991	-0.050	1.418	0.495	0.500
SD(Estimate)	0.753	0.105	0.441	0.009	0.227	0.284	0.123
Mean Std. Error	0.757	0.104	0.429	0.009	0.221	0.281	0.120
SD(Std. Error)	0.061	0.011	0.030	0.001	0.019	0.023	0.010
Mean Bias	0.018	-0.019	-0.005	0.004	0.013	-0.010	0.000
Mean MSE	0.566	0.011	0.194	0.000	0.052	0.081	0.015
AR1							
Mean Estimate	-1.023	-0.049	-1.993	-0.050	1.419	0.496	0.500
SD(Estimate)	0.743	0.104	0.436	0.009	0.224	0.280	0.121
Mean Std. Error	0.749	0.103	0.425	0.009	0.218	0.278	0.119
SD(Std. Error)	0.060	0.011	0.028	0.001	0.019	0.022	0.010
Mean Bias	0.023	-0.010	-0.004	0.003	0.014	-0.008	0.001
Mean MSE	0.552	0.011	0.190	0.000	0.050	0.079	0.015

True Parameter Coverage Rate from Reduced Model with 1000 Simulations

	Unadjusted				Adjusted			
	Intercept	BAV	Visit	BAV:Visit	Intercept	BAV	Visit	BAV:Visit
With Drop out								
Independent	0.137	0.202	0.000	0.939	0.150	0.211	0.000	0.946
Exchangeable	0.137	0.202	0.000	0.939	0.151	0.210	0.000	0.946
AR1	0.137	0.194	0.000	0.940	0.144	0.207	0.000	0.946
Without Drop outs								
Independent	0.024	0.303	0.052	0.937	0.029	0.329	0.053	0.946
Exchangeable	0.028	0.323	0.058	0.925	0.031	0.343	0.060	0.938
AR1	0.014	0.280	0.067	0.912	0.016	0.301	0.070	0.922

Estimate Results for Reduced Model with dropout from 1000 Simulations

	Intercept	BAV	Visit	BAV:Visit
Independent				
Mean Estimate	1.298000e+00	-1.849000e+00	-8.690000e-01	7.140000e-01
SD(Estimate)	2.766000e+00	2.799000e+00	1.650000e+00	1.654000e+00
Mean Std. Error	5.810000e-01	4.440740e+03	7.040379e+03	2.740000e-01
SD(Std. Error)	1.300000e-01	1.437366e+05	1.718490e+05	7.400000e-02
Mean Bias	-2.298000e+00	3.597500e+01	-5.660000e-01	4.290000e-01
Mean MSE	1.292600e+01	1.106200e+01	3.998000e+00	2.779000e+00
Exchangeable				
Mean Estimate	3.703604e+03	1.633102e+04	-6.004843e+03	-1.403047e+04
SD(Estimate)	2.362586e+05	4.434484e+05	2.169224e+05	4.335618e+05
Mean Std. Error	5.880000e-01	7.040000e-01	2.470000e-01	2.760000e-01
SD(Std. Error)	1.450000e-01	1.330000e-01	8.900000e-02	8.400000e-02
Mean Bias	-3.704604e+03	-3.266213e+05	3.001422e+03	-2.806193e+04
Mean MSE	5.577863e+10	1.967257e+11	4.704652e+10	1.879935e+11
AR1				
Mean Estimate	-2.364629e+23	-3.804164e+23	6.454733e+22	9.256536e+22
SD(Estimate)	6.614488e+24	1.731849e+25	1.827145e+24	4.344789e+24
Mean Std. Error	2.567983e+13	2.867566e+13	9.265962e+12	1.057333e+13
SD(Std. Error)	4.453128e+14	4.633233e+14	1.486309e+14	1.563454e+14
Mean Bias	2.364629e+23	7.608328e+24	-3.227367e+22	1.851307e+23
Mean MSE	4.376565e+49	2.997887e+50	3.339443e+48	1.886776e+49

Estimate Results for Reduced Model without dropouts from 1000 Simulations

	Intercept	BAV	Visit	BAV:Visit
Independent				
Mean Estimate	-1.948	-1.177	-0.094	0.472
SD(Estimate)	0.321	0.404	0.099	0.116
Mean Std. Error	0.326	0.398	0.098	0.114
SD(Std. Error)	0.035	0.029	0.011	0.010
Mean Bias	0.948	22.540	-0.953	-0.055
Mean MSE	1.001	1.433	3.644	0.014
Exchangeable				
Mean Estimate	-1.947	-1.177	-0.094	0.472
SD(Estimate)	0.321	0.404	0.099	0.116
Mean Std. Error	0.326	0.398	0.098	0.114
SD(Std. Error)	0.035	0.029	0.011	0.010
Mean Bias	0.947	22.535	-0.953	-0.055
Mean MSE	1.000	1.433	3.643	0.014
AR1				
Mean Estimate	-1.947	-1.179	-0.094	0.473
SD(Estimate)	0.319	0.399	0.098	0.114
Mean Std. Error	0.323	0.395	0.097	0.112
SD(Std. Error)	0.033	0.028	0.011	0.009
Mean Bias	0.947	22.580	-0.953	-0.054
Mean MSE	0.999	1.434	3.641	0.014