

Monte Carlo Simulations with Random Slopes

- Parameter values obtained via SVALUES in the real-data run based on Step 4 Model 1 with added random slopes, random variances, and random covariance (total of 9 random effects)
- $N = 250$ with the 5 cluster sizes used on the previous slide
 - Good results, except between-level variances have somewhat biased estimates (overestimated) and SEs - $N \geq 500$ is needed
- New in version 8.9 (message shown in TECH9):
351 CLUSTERS WERE REMOVED BECAUSE THEIR GENERATED RANDOM EFFECTS PRODUCED NON-STATIONARY TIME SERIES OR NON-POSITIVE DEFINITE COVARIANCE MATRICES.
- With random slopes, variances, and covariances, non-stationarity is likely for some clusters in some replications
- In the past, such replications have been deleted leading to a low percentage of reported replications - now the cluster is thrown out but the replication kept
- 351 clusters is less than 1% of the 250×500 of the generated clusters