

Figure S1. Log-likelihood profiles for final model

The black line represents the Objective Function Value (OFV) of our final model. The dotted black line represents a significant increase in OFV compared to our final model ($p=0.05$, $\Delta OFV=3.84$). The blue line represents the changes in OFVs when fixing the respective PK parameters to different values.

CL: clearance, RRT: renal replacement therapy, TM50: age at which clearance reaches 50% of adult values, V: volume of distribution

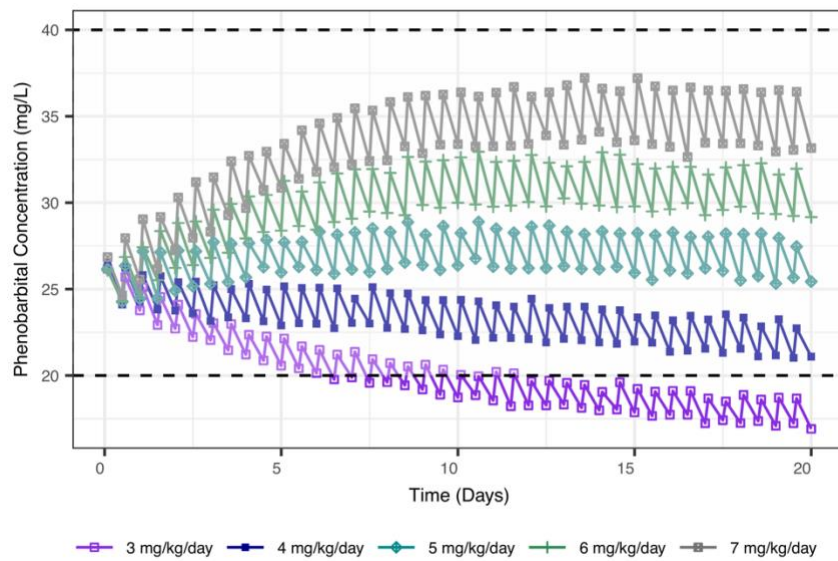


Figure S2. Simulated median peak and trough phenobarbital concentrations vs. time using different maintenance dosing regimens. Simulations included a loading dose of 30 mg/kg and were conducted in a typical 3.4kg infant (14 days old at first dose). The dotted lines represent goal concentrations between 20-40 mg/dL.