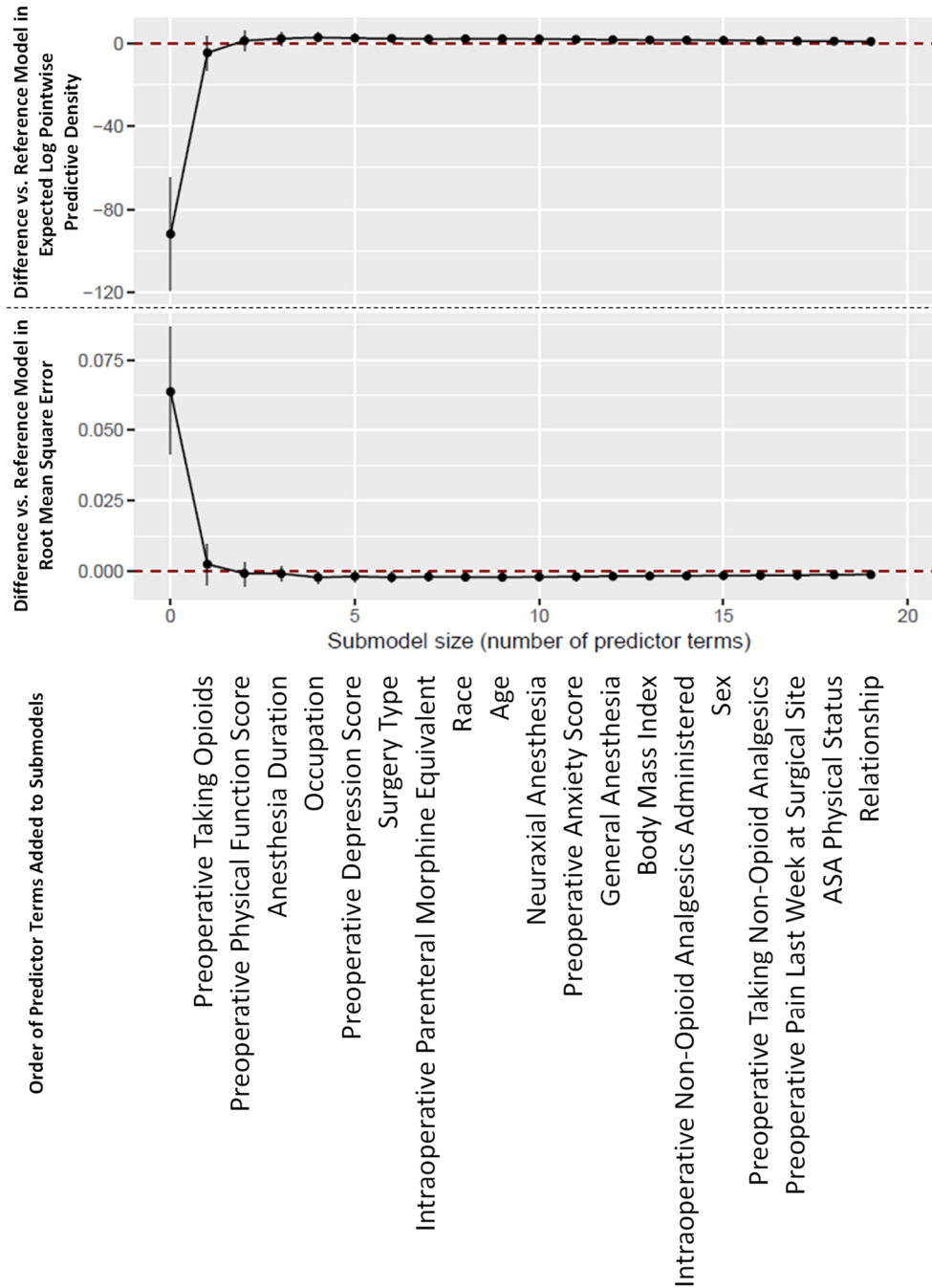**Supplement Digital Content 12: Projected Prediction Analysis for Taking Opioid at Three Months**

Submodel performance for predicting taking opioids at three months (displayed as difference to reference model) as progressively more predictor variables are included in the submodel. The order of predictor variables included is chosen to maximize the successive model performance improvement from one submodel to the next. The reference model is a model with all predictor variables included.

Including preoperative taking of opioids into the submodel yields the largest model prediction performance improvement. Additionally including preoperative physical function into the model

provides little incremental performance gain. But including any additional predictor variables beyond those two changes model performance only very little if at all.