**FIGURE S2** Comparisons of root mean square error (RMSE), and median absolute error (MAE) of the ATE Estimates by Different Methods Across Different Sample Sizes under the Simulation Setting 2:  $\{\gamma_0, \gamma_1, \gamma_2, \gamma_3\} = \{1, 0.15, 0, 0\}$ 



<sup>1</sup> Propensity score estimated using logistic regression on *logitA* ~ *X*. <sup>2</sup> Propensity score estimated using logistic regression on *logitA* ~ *X*<sup>1/3</sup>. GPMatch: Bayesian structural model with Gaussian process prior. QNT\_PS: Propensity score sub-classification by quintiles. AIPTW: augmented inversed probability of treatment weighting; LM: linear regression modeling *Y* ~ *X*; LM\_PS: linear regression modeling with propensity score adjustment. LM\_sp(PS): linear regression modeling with spline fit propensity score adjustment. BART: Bayesian additive regression tree.