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ERRATUM TO: A TWO-STEP BAYESIAN APPROACH FOR PROPENSITY SCORE ANALYSIS: SIMULATIONS AND CASE STUDY

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In Equation (19) of the paper, the denominator m should be deleted. In the BPSA-1 hybrid approach, we view the treatment effect estimate $\hat{\gamma}$ as the posterior mean of γ based on the posterior distribution of propensity score model parameters rather than the frequentist-based mean of $\hat{\gamma}_j$ as shown in Equations (14) and (15). We utilize the total variance formula to estimate the variance of $\hat{\gamma}$ in BPSA-1. Then

$$Var(\hat{\gamma}) = E\big\{Var(\hat{\gamma} \mid \eta)\big\} + Var\big\{E(\hat{\gamma} \mid \eta)\big\}. \tag{16}$$

From Equation (16) to (18) with $\hat{\gamma}_1$ replaced by $\hat{\gamma}$ we obtain the corrected Equation (19)

$$Var(\hat{\gamma}) = m^{-1}\sum_{j=1}^{m}\hat{\sigma}_j^2 + (m-1)^{-1}\sum_{j=1}^{m}\left(\hat{\gamma}_j - m^{-1}\sum_{j=1}^{m}\hat{\gamma}_j\right)^2. \tag{19}$$

All the results presented in the tables are correct and based on this variance expression.

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