
ERRATUM

Correction: Sensitivity Analysis and the Expected Value of Perfect Information

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It has come to our attention that inadvertent errors in an earlier article of ours have contributed to a small controversy¹ on the proper procedure for estimating the expected value of perfect information using Monte Carlo simulation. The errors occur in our procedure MC1^{2(p101)} for forming a Monte Carlo simulation estimate of the information value EVPI (ξ_j) of the parameter set ξ_j . The correct version of our procedure MC1 should be as follows.

MC1: General Monte Carlo Simulation Procedure

1. Repeatedly generate random parameter values $\xi = (\xi_j, \xi_j^c)$.
2. For each generated $\xi = (\xi_j, \xi_j^c)$,
 - i. Determine $A^*(\xi_j)$ as the A maximizing $E[V|\xi_j, A]$.
 - ii. Calculate the improvement achieved by using $A^*(\xi_j)$.

Improvement =

$$E[V|\xi_j, \xi_j^c, A^*(\xi_j)] - E[V|\xi_j, \xi_j^c, A^*].$$

End For

3. Estimate EVPI (ξ_j) as the average of the calculated improvement values.

Here it is assumed in Step 2i of the procedure that there is an algebraic expression for the quantity $E[V|\xi_j, A] = E_{\xi_j^c}[E[V|\xi_j, \xi_j^c, A]|\xi_j]$ as a function of ξ_j . These corrections do not affect the results of numeric examples we present in the article. We apologize to all concerned for these errors.

REFERENCES

1. Brennan A, Chilcott J, Kharroubi S, O'Hagan A. A two level monte carlo approach to calculating expected value of perfect information: resolution of the uncertainty in methods. [abstract] Med Decis Making. 2002;22(6):552.
2. Felli JC, Hazen GB. Sensitivity analysis and the expected value of perfect information. Med Decis Making. 1998;18(1):95–109.