

## **Reviewer's report**

**Title:** Multiple imputation for estimation of an occurrence rate in cohorts with attrition: a simulation study

**Version:** 1 **Date:** 6 July 2010

**Reviewer:** Victor Kiri

### **Reviewer's report:**

It is a widely acknowledged fact that the weighted Kaplan-Meier (WKM) approach and indeed its modified version are generally superior to the ordinary Kaplan-Meier (KM) on precision of estimates (i.e. less bias) and coverage in cases of heavy censoring. Whilst readers might be encouraged by the positive study findings in favour of multiple imputation compared with KM, comparison with WKM remains outstanding. Since this is because of the unsuitability of the WKM in the discrete setting chosen by the authors which makes time interval between follow-up points irrelevant, perhaps a more suitable title for the study might be "Multiple imputation for estimation of an occurrence rate in cohorts with activity oriented discrete follow-up time points and attrition- a simulation study". The simulated scenarios are not general enough to draw conclusions about the comparative merits of multiple imputation outside the specific context and setting which the simulated data represent (i.e. point rather than time duration-based follow-up).

Multiple imputation may be unsuitable in certain situations and this reality should be acknowledged for a fairer comparison of the merits of the two methodologies. For instance, any attempt to "tamper" with the actual data may not be acceptable in certain scenarios, such as in the real-life assessment of the long-term safety of pharmaceutical products.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

### **Declaration of competing interests:**

I declare that I have no competing interests