Reviewer's report

Title: Alcohol use disorders are associated with decreased adherence and quality of life outcomes of antiretroviral treatment in injection-driven HIV epidemics

Version: 3 Date: 30 September 2013

Reviewer: Anh Ngo

Reviewer's report:

The paper is significantly improved. However, there are some outstanding issues that need to be addressed as below:

1. Justification for the analysis stratified according to drug use status is not appropriate, as confounders can be controlled for in multiple regression analysis as it is used in the paper. In this analysis, drug use appeared to be an effect modifier for the relationships between AUD and adherence and quality of life. The authors need to discuss whether differential effects of AUD on drug use and non-drug use participants are plausible (as opposed to counterintuitive) and provide possible explanations; otherwise it is difficult to accept such findings because chance can be an explanation. Furthermore, implications for interventions should also be discussed (e.g., non-drug users could be more amendable to interventions preventing alcohol use disorders).

2. On page 7, in the method section: the subheading: “Logistic and multivariate regression models” is confusing. Did the authors mean that: “Propensity score adjusted linear and logistic regression analysis”? Further, the authors should mention the parameter estimate derived from logistic regression models (i.e., odds ratio).

3. In discussion, authors need to clarify what should be study designs and methods that can be used in future studies to investigate the underlying mechanisms for the observed associations (paragraph 1, page 11).

4. The title does not flow well and thus texts reversion will be required. I would suggest a new title as below:

“Associations between alcohol use disorders and adherence to antiretroviral treatment and quality of life amongst people living with HIV/AIDS in a drug-driven HIV epidemic”.

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.