Reviewer's report

Title: Event-Level Association between Alcohol Use at Last Sex and Unprotected Sex: Evidence from National Population-Based Surveys in sub-Saharan Africa

Version: 1 Date: 11 January 2013

Reviewer: Gareth Hagger-Johnson

Reviewer's report:

This is a well-written article on an important topic, using well-characterised data sets that have useful information on event-level condom use and alcohol. I have only minor queries and comments which I would like to see addressed if a revision is offered.

In the abstract and introduction, it may not be appropriate to describe alcohol use as an epidemic, since alcohol is an exposure rather than an outcome.

Sex is implicitly treated as an effect modifier (results are separated for men and women) but in the abstract and methods, partner type and HIV test results are proposed as possible modifiers. Sex should be described as a modifier.

The OR and 95% CI are missing for Eastern African men's drinking (abstract).

On p.3, it is not clear if you mean 'heavy' episodic drinking consistently e.g. for the WHO statistic.

The switch from heavy episodic drinking to drunkenness is slightly awkward. These are slightly different things. Can you resolve this by focusing on intoxication in more detail in the introduction?

The methods section was slightly confusing as it describes oral consent but then says ethical approval was not required because existing data were used. Please make it clearer that the original study obtained consent but that your analysis involves existing data only.

In the 'Measures' section, the exact wording of the items (particularly concerning drunkeness, the key exposure) should be included.

Why repeat information that women/men's own drunkeness or both own/partner drunkeness was used - this appears to repeat the same thing.

At the start of the results section, this can be simplified by simply stating that the analytic sample comprised XXXX with available data on the exposure, outcome and covariates (rather than the current description of exclusions which is overly wordy).

The results from Table 1 and 2 are not described at all in the text.
The discussion needs to emphasize unmeasured confounders such as personality traits (see recent reports - traits could influence drinking and condom use).

**Level of interest:** An article of outstanding merit and interest in its field

**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