Reviewer's report

Title: Factors associated with suboptimal adherence to antiretroviral therapy in Viet Nam: a cross-sectional study using audio computer assisted self-interview (ACASI)

Version: 4 Date: 9 December 2012

Reviewer: Jessica Merlin

Reviewer's report:

Major compulsory revisions

Background:
- Sixteen studies of ART adherence seems like a lot to this reviewer. While you do explain that face to face interviewing is a shortcoming of the Vietnamese studies, I might add a sentence to explain what the shortcomings of those 16 studies are. Is it still ACASI, or small sample size?

- In rereading the intro a few times, I think it is much better but still a little unclear. It seems like 1. There are 16 studies in Asia overall, and a few in Vietnam, of adherence. 2. The problems with these studies is that they rely on face to face interviewing, and 3. that they did not examine possible reasons for non-adherence. The authors present this information, but do it in a way that flips back and forth between talking about Asia as a whole, Vietnam specifically, and shortcomings. I would revise this section to make it tighter/clearer, but I think all of the info is in there and is good.

Data collection:
- It sounds like patients were given a very specific battery of ACASI questionnaires. Is this standard of care in these sites or only for this study? Has this specific ACASI battery been used elsewhere? Also, I’d imagine these questionnaires have quite a large body of validity data behind them when not delivered in ACASI format; I think this should be acknowledged.

- I am still unclear as to why the specific instruments used were selected. Why is this the best way to measure adherence in this setting? Please be very specific about answering this; just because there is a citation that uses the instrument is not sufficient. For example, one could say that the AACTG is a widely used tool that has demonstrated validity in a variety of clinical settings, and has been used extensively in Asia-something along those lines for each instrument.

Measurement of predictor variables:
- “Three categories of variables potentially associated with ART adherence were selected based on literature review and findings from the qualitative study.” What qualitative study? Is this a qualitative study of ACASI that is going to be published
separately? If so this needs to be explicitly stated.

-You say these variables were based on literature review, but no citations in this paragraph are given. Please carefully explain how these categories and the items in the categories were selected (there are so many-almost seems like a fishing expedition-perhaps not all of them need to be listed). In the intro, you say that none of the 16 studies about adherence have successfully identified factors related to adherence-but then you say based on literature review, you are evaluating all of these factors. Where did you get all of these factors and why did you choose to include them? There are so many of them-perhaps the variables re locus of control and social connectedness, which are not adequately described in this manuscript, could be written up in a separate manuscript, and this manuscript could focus on substance abuse, alcohol, and depression.

-“We applied standard instruments to measure the predictor variables. All measurements were validated in a pilot study [16].” This statement is unclear to me. A pilot study does not “validate” instruments. You go on to talk about the CES-D, for example, which has a large body of literature behind it. I would probably delete this sentence and just go on to talk about the instruments you used.

-“extracted from patient records”-using chart review?

-“chance health locus of control” what is that?

-It might be simpler to state all of the predictor variables as you have, and then say “x, y, and z were measured using ACASI, and the remaining variables were obtained through x method.” This would be clearer.

-importantly, you don’t say how you measure substance abuse/alcohol, or whether these are current or prior use, and how you treated the variable (continuous, dichotomous). This needs to be clarified.

Discussion:

“This study extends previous analyses of the determinants of ART suboptimal adherence and has clear implications for care for PLHIV in low resource environments.” In the intro you argued that the reason this study was needed is that there have not been previous studies of determinants of ART adherence in Asia or Vietnam…please clarify.

-“and strengthens calls in developing countries for health care services to recognize and treat depressive symptoms, and thereby increase adherence and improve clinical outcomes” This study does not address whether treating depression would help. Therefore, I’d modify to state, “strengthens the argument for mental health services which may improve adherence outcomes,” or something to that effect.

-“However, good models of care for depression have been developed in low resource environments[34].” I would just delete this sentence. I don’t think it adds anything and seems out of place.

-for the sentence beginning “A meta-analysis reported that alcohol…” I would
clarify whether that study was in HIV.
-can you add a sentence about what services for drug and alcohol abuse exist in Vietnam?

Minor essential revisions

Abstract:
-Beginning here, I would pick a terminology re “people living with HIV/AIDS (PLWHA)” or “HIV-infected” or “HIV positive” and stick with it throughout the manuscript

Background:
- “The second study followed a cohort of 248 PLHIV at two out-patient clinics in Ho Chi Minh City and estimated high adherence at both pre and post intervention (98% and 100% respectively).” Pre and post-what intervention?

Methods:
-“Patients were eligible for the study if THEY WERE aged 18 years or older and they had received ART for at least three months.”
- Patients were excluded if they had any serious health problem preventing them FROM answering the questionnaire by themselves, WERE UNABLE TO come to the CLINIC, or refused to participate.

Characteristics of study population:
-no need for so many numbers in the first paragraph-just summarize and refer to the table.

Discretionary revisions:

Background:
- Would change the second sentence to read: “Our review of the literature from 2002-2011 identified only 16 published articles on ART adherence in Asian countries.”
- Next sentence, after “in general”, insert a comma
- Next sentence fragment should read: “and somewhat higher than IS reported from Africa.”
- Instances of “virological” should be changed to “virologic”
- “abandoned treatment” – would change to say “were not retained or engaged in HIV primary care”

Conclusions:
- Would change the first two sentences to read: “In summary, this is the largest study of ART adherence among HIV-infected patients in East and South Asia.”
- “Suboptimal adherence was strongly influenced by untreated depression, ongoing substance use, medication side-effects and poor social connectedness.”

A few issues with this: the authors do not know if the depression is untreated, just
that its symptoms were still present; the authors did not specify whether substance abuse was ongoing or prior. Please clarify.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.