Reviewer's report

Title: Clinical and Immunological outcomes according to adherence to first-line HAART in a urban and rural cohort of HIV-infected patients in Burkina Faso, West Africa: a longitudinal Cohort study

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Reviewer: Francisco I. Bastos

Reviewer's report:

Comments:

Title:

The subtitle (a longitudinal Cohort study) should be excluded! It is redundant. The word “cohort” is already part of the title and cohort studies must be longitudinal (either prospective or retrospective).

Abstract:

“Is known that in developing Countries adherence evaluation is a very challenging task.”

Adherence is a challenge everywhere, in consequence of many different reasons, many times complementary and sometimes mutually reinforcing. There is no a priori reason patients from Burkina Faso should be more or less adherent than, for instance, uninsured Americans or drug dependent people anywhere. Optimal or less than optimal adherence is a function of a complex combination of individual and contextual variables.

Developing countries is nowadays a very confusing category. “Low/Middle/High Income countries” should be used here. For instance, in the context of the current European crisis, Greece has a lower per capita GDP than most of the so-called “developing countries”.

“Literacy” is a key sociodemographic variable, which has been fully incorporated into key indicators such as HDI, and should be described as such!

I have no idea what does a “custom” questionnaire mean. Please, use instead a regular concept people could easily understand when they read the abstract.
I must confess I could not follow such system of points that seems to refer to visits instead of measuring adherence to ARVs. Please, rephrase it, clarifying what does such original (?) process of ranking points (per visit?) actually mean.

CD4 absolute counts are quite inaccurate biomarkers of disease progress. I could not understand the reason the authors used it. Of course, they have results respecting overall lymphocyte counts, so proportions would be much more useful and accurate, and would not mean to spend a single extra cent.

Please, rephrase:

“patients with higher adherence 51 (Group B p<0.001 and Group C p=0.014) and followed in a urban Center (p<0.001) were associated with lower”.

Patients (i.e. concrete individuals) are NOT associated with something. Some of their characteristics may or may not be associated with a given outcome (such as optimal versus less than optimal adherence), so they be more or less likely to adhere to something. Variables and concrete individuals should not confused. Variables are amenable to statistical analysis, whereas individuals are something much more complex than what can be summarized by a small set of variables (in this specific case, a metrics defined by a ranking process, the place where patients have been followed, and a single biomarker!).

Do the authors call absolute CD4 counts “Immunological outcomes” or do they include other data not mentioned before in their abstract?

“suggesting that our score might be a feasible 56 and suitable tool to easily and precisely monitoring HAART adherence.”

This conclusion does not make sense. Something can NOT be based on a given criterion and then back-validates itself. Of course, statistical findings must be based on something, but cannot at the same time validate findings AND basic assumptions. This would be a circular way of defining ways to measure things and doing analysis. Actually, wrong assumptions may generate consistent findings, but cannot tell anything about their validity, so consistent associations between A and B may perfectly match, despite the fact both can be right (or totally wrong). So, in case I use dark green glasses to look at a horse, I may say he or she is green, what is perfectly consistent considering my glasses, but would means I would be finding green horses in nature!

Main Text:

Background
at the end of 2011 – Please update it!

Were WHAT? Reported?

“These dramatic data suggest that HIV infection in Africa is a major public health problem whose burden is very difficult to assess and control.”

This has been repeated again and again by UNAIDS, the PEPFAR reports, the UNGASS sessions over three decades! Please, delete it or replace it with some concrete/innovative statement.

“even in resource-limited settings”

Why EVEN? Is there any intrinsic characteristic of people living in such countries that should make them “a priori” impervious to the benefits of medical science?

“adherence monitoring represents a useful marker of HAART effectiveness”

Monitoring is NOT a marker!, but rather an active process of tracking and evaluating things, providing feedback for policymakers and health professionals.

“Despite this, only few studies have been carried on to better assess adherence patterns in poor resource settings”

This is by no means true. There are hundreds of papers assessing adherence in such settings. See, for instance, PEPFAR and/or CDC reports, available at:

http://www.pepfar.gov/reports/progress/index.htm

Or some peer-reviewed papers, available at:

http://www.ncbi.nlm.nih.gov/pubmed/?term=low-income+countries+and+ARVs

“suitable methods should be implemented”

They HAVE been implemented!, See, for instance, the creative papers by W. El-Sadr and her team as follows:

http://www.ncbi.nlm.nih.gov/pubmed/?term=el-sadr+w
“non absolute adherence is actually a normal behavior among HIV-infected individuals.”

What does mean NORMAL here?

“Aims of this study are: (1) to assess HAART adherence through a custom score”

Whatever such “custom” score can mean, it is not an AIM, but rather a tool or means to achieve the actual aim, i.e. to accurately measure adherence in this concrete setting, among these concrete patients.