Reviewer's report

Title: A cluster randomised trial to evaluate the impact of immediate versus WHO recommendations-guided ART initiation on HIV incidence. The ANRS 12249 TasP (Treatment as Prevention) trial in Hlabisa sub-district, Kwazulu-Natal, South Africa.

Version: 2 Date: 8 May 2013

Reviewer: Sarah J Fidler

Reviewer's report:

Major comments:
The article is well written and the trial describes a very important research question that needs to be addressed in a clear randomised trial that is adequately powered and appropriately designed to answer this question.

Background:
Para 3 comment on "earlier treatment conferring likely individual benefit" - this should be referenced and expanded as this is a key element to the debate - there remains no RCT evidence for CD4 > 350 despite guidelines changing The question of when to start - is indeed controversial BUT only for people with CD4 > 350 - there is clear evidence that CD4 < 350 all people living with HIV will benefit from ART.

Objectives:
Secondary outcomes do not explore uptake of other prevention approaches which may impact on the overall HIV incidence - MMC, condom use, STI treatments,

Study design:
On what basis were the number of pilot sites chosen and how were the pilot sites chosen? are they representative of all potential sites?
What are the Stop/Go criteria for expanding the study to all sites: will results from the pilot inform the main trial design, power and intervention approach?

Site selection:
although it is stated that an assumption of sexual mixing between communities is only 10% please expand on this data - as very important given the close proximity of the communities.
Are sites chosen excluding other research trials - vaccine micorbicide, PrEP studies - are these excluded from the chosen communities Please state how available PEP is in this setting Please state the exact average distances between communities. Whilst it is important sexual mixing is taken into account, what proportion of individuals is assumed will travel to neighbouring health care facilities to access intervention if they wish to? how will this impact on power?
How are the community boundaries confirmed?

Study procedures:
What is done for IHV+ individuals who do not attend a clinic visit? How will their attendance be monitored? Will the research teams link their ID with national database clinical records to determine who is on ART has suppressed VL etc? The 20% assumed lost to follow up- is this for research follow up or loss from clinical care?

1. Will the study design adequately test the hypothesis?
Yes but only if all communities are enrolled- ie the expanded study is undertaken. The lack of clear Stop/Go criteria is an essential component prior to publication

2. Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing?
The exact details of data collection- who is considered a study participant or expanded standard care is a little uncertain, -clarification of this is needed

3. Is the planned statistical analysis appropriate?
As fars as I am aware

4. Is the writing acceptable?
The quality of the writing is acceptable