Reviewer's report

Title: Systematic review and meta-analysis: influence of smoking cessation on incidence of pneumonia in HIV

Version: 2 Date: 3 July 2012

Reviewer: Ronan Breen

Reviewer's report:

major compulsory revisions:
1) the phrase "delaying the eventual decline" implies that CD4 ultimately declines even with HAART which is not true. Please correct.
2) Although I agree that the evidence does suggest that smoking cessation will reduce bacterial pneumonia I am not sure that it is "good evidence". I think what the manuscript does well is to describe the evidence available but shows how better data would be welcome. I think there should be some mention of how better data from existing large cohorts (of which there are plenty) is needed. I also wonder whether the authors might like to comment upon cost-effectiveness of smoking cessation as an intervention and whether it is more or less so than vaccination in this patient group.

Minor essential revisions:
Although PJP is a correct abbreviation of the organism most people would still use PCP (pneumocystis pneumonia). I think this would be better.
2) I assume that page 14, first para, second last line should say "for" after pneumonia?
3) Page 15 first para, I think the term "gay smoker" is a porr one and should be changed please

Discretionary revisions:
1) the focus is on pneumonia but there is evidence of an elevated risk of TB with smoking which is relevant to HIV cohorts and also of COPD and lung cancer. I would have thought that this would be worth mentioning at some point as part of the rationale for smoking cessation in HIV.
2) The lack of association with PCP is no suprise as we known that CD4 is crucial unlike with bacterial pneumonia, PCP is never seen even in the heaviest smokers unless CD4 is low and HAART appears completely protective despite smoking or drug use judging by the data showing that prophylaxis can be safely stopped. Perhaps this could be reflected in the discussion.
3) ref 50 is from 2010. Is this now in press?

Quality of written English: Acceptable
**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests