Reviewer's report

Title: Highly active antiretroviral therapy and hospital readmission: Comparison of a matched cohort

Version: 1 Date: 2 June 2006

Reviewer: Ellie Schoenbaum

Reviewer's report:

General

HAART is so effective in reducing the frequency of opportunistic infections associated with HIV, it is not surprising that it reduces readmissions. The index hospitalizations to an HIV service were largely due to OIs. This is unusual for a person on HAART and suggests that the persons in the study were just recently started on HAART, which could have exacerbated an underlying infection (e.g., CMV or TB). The other possibility is lack of adherence which the study could not readily assess. One also wonders if the persons not on HAART at baseline began taking it during follow-up. This would have been relevant information to report and factor in the analysis. The analysis period (1997-2002) is broad and covers a time when uptake of HAART likely increased dramatically. Rehospitalization patterns may have changed over time, just as the kind of person not on HAART in 2002 vs 1997 likely differed. The use of propensity scores to match was appropriate but limited the analysis to HAART without much explanatory potential. This diminished interest.

The analysis was designed to rule out IDU related readmissions. However, there is substantial overlap in IDU and HIV morbidity, particularly related to bacterial infections (e.g., sepsis and bacterial pneumonia). How were these handled? Most of the readmissions were Non-IDU but the investigators did not report the nature of these Non-IDU diagnoses, except to say that they were non-IDU but included AIDS and other admissions not associated with IDU. This suggests that other medical/surgical/psychiatric admissions occurred but were not addressed in the analysis.

The cost/benefit analysis of HAART was very limited. There was no stratification by diagnosis, age or gender etc. There was no discussion of length of stay, frequency of admission, time to admissions within the year or their relation to baseline diagnosis. Finally the lack of CD4 count from a study using medical records is surprising and unfortunate.

The finding that persons leaving AMA were more likely to be readmitted made sense but this finding in isolation is less compelling.

MINOR Comments: Sum n and % in columns in table 2. page 11 last paragraph, ART is used. IS this HAART?

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

Declaration of competing interests:

I declare that I have no competing interests