Reviewer's report

Title: Risk factors for poor tuberculosis treatment outcome in Finland: a cohort study

Version: 1 Date: 11 May 2007

Reviewer: Ibrahim Ibrahim Abubakar

Reviewer's report:

General
- This is a very well written paper that presents important data from Finland [not surprising from this group].
- The meticulous way the study has been conducted means that the findings are likely to be valid.
- There are issues around generalisability of the findings for instance, the patient population (small number of immigrants and TB-HIV coinfected patients) and the health system may not be similar to other “similar” low incidence developed countries.

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

Why was the analysis restricted to culture confirmed cases only? Justification should be given for this.

The standard outcome categories recommended by EuroTB/WHO have some shortcomings that should be discussed. For instance, a transfer-out where a case is seen by another service and treatment is subsequently completed can not be an “unfavourable” outcome. Also not all deaths in TB patients are due to TB – any analysis should acknowledge that deaths in the elderly may be due to factors unrelated to TB. Did the authors have a “cause of death” from death certificates?

Also combining various measures into one composite “unfavourable” outcome category inevitably hampers the ability to understand the risk factors for each outcome category. For example, the factors associated with loss to follow up [e.g. social risk factors] may be different from those associated “physicians discontinuing treatment” [e.g. adverse effects].

Speciality responsible for treatment:
What is the difference between internal medicine and general medicine?
Change of speciality – in what direction was this? Is this to internal medicine or from internal medicine? I suspect the implication on outcome will differ – very ill patients with other co-morbidities will be moved to specialities such as palliative care, while relatively fit patients who have uncomplicated TB will be transferred back to respiratory physicians. The relative contribution of “use of appropriate treatment regime” versus “speciality of physician ending treatment” should be discussed.

The criteria for choosing factors to include in the multivariate model are not clear.

“Pauses of treatment” is likely a proxy for treatment interruption (physician or patient) i.e. are the authors controlling for an outcome measure as a risk factor.

Other weaknesses should be acknowledged.
Sample size – due to relatively small number of deaths, the power of the study to investigate outcomes such as death is limited.

The study is retrospective. Therefore, despite the meticulous conduct, it is possible that not all factors such as co-morbid conditions were recorded in the case notes. A further limitation is the number of confounders available from clinical records

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Page 3. first paragraph
WHO – in full the first time it is mentioned

Drugs abbreviations such as INH, HRE, HRS should be defined in full.
Discretionary Revisions (which the author can choose to ignore)
Page 3. first paragraph
“succeeds” should be “succeed”
WHO has published….should read “The WHO published recommendations for assessing the outcome of
 tuberculosis treatment in 199x, revised recently.

Page 3. second paragraph
patient should read “patients”

page 4. last sentence.
“during study period” should read “during the study period”

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests