Reviewer's report

Title: Alcohol consumption, alcohol use disorders and incidence and disease course of tuberculosis (TB) - is there a causal connection?

Version: 2 Date: 24 February 2009

Reviewer: John Oeltmann

Reviewer's report:

This was a well written, easy-to-follow meta analysis examining the causal connection between alcohol and tuberculosis. The argument presented is convincing. This manuscript should be a valuable contribution to the existing body of literature. Alcohol has for years been known to be related to TB, however, a causal relationship has yet to be confirmed. This, the authors suggest is related to difficulties ruling out confounders.

Please consider the below discretionary revisions.

1. The authors provide a section dedicated to the discussion of potential confounding factors. There is in my opinion additional factors that influence the association between TB and alcohol that were not mentioned. Some of these factors revolve around break downs in routine TB control measures when applied to patients and populations that abuse any substance, including alcohol. In high-income countries, basic steps of TB control are as follows: 1) patient is diagnosed and treated, 2) contacts to this patient are evaluated for TB and infection then treated if needed, 3) patients and infected contacts complete treatment and presumably end the chain of transmission. Our current control measures are inefficient among those who abuse substances/alcohol at all three steps: substance abusers (and alcoholics) delay care seeking and therefore go undetected longer. Those who abuse alcohol are less likely to reveal the names contacts (some or many oh which also abuse substances/alcohol), and therefore a larger pool of infected contacts remain at risk. Those identified are less likely to complete treatment. Please consider including a discussion about how routine public health measures are less effective among persons who abuse alcohol (or any substance). There are recent publications discussing this matter.

2. There is growing interest in the association between TB and smoking (tobacco), and TB and illicit substance abuse. It appears that TB is related to smoking, and smoking is related to alcohol consumption. TB is related to illicit substance abuse, and illicit substance abuse is related to AUDs. Might smoking be a confounder? Illicit drug use? Could the authors include a brief mention of legal and illegal substances that might also explain some of the connection between alcohol and TB?

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

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