Reviewer's report

Title: Estimating Alcohol-Related Premature Mortality in San Francisco: Use of Population-Attributable Fractions from the Global Burden of Disease Study

Version: 1 Date: 10 September 2010

Reviewer: Robert Anderson

Reviewer's report:

This paper describes the burden of alcohol-related premature mortality in San Francisco and puts it into context with other causes of premature mortality. The paper is well written and the methodology is generally sound. However, the authors leave out a lot of very important information, including a description of the methodology used to calculate YLLs. This makes it very cumbersome for the reader to understand the results without spending an inordinate amount of time tracking down other sources.

Minor Essential Revisions

1. Description of methods is not adequate - it needs additional detail. It is not sufficient to just refer to a previously published manuscript for the complete description of the methodology.

   a. There should be at least some description in the paper as to how the YLLs are calculated, i.e., some basic information about what data goes into the calculation and how these data are combined to arrive at YLL. Some additional information about how the PAFs are applied would be helpful as well. The authors can then refer to their previous work for the details.

   b. I also think that it would be helpful to refer to a specific table in the GBD document (ref 4) for the ICD-10 groupings. That document is huge and it is not very easy to find.

2. While reading the description of Method 3 (p. 9), I wondered if the affect of culture on drinking behaviors might be different depending on whether the person was an immigrant or not. E.g., it seems logical that first generation Chinese immigrants would drink like populations in East Asia. However, would this be true for Chinese Americans born in the U.S. or for their children? I think this should be at least addressed briefly in the limitations on p. 16.

3. I do not think it is appropriate to rank YLLs for alcohol use among those for the other leading causes of premature mortality. The problem is that by doing so, the rankable categories are no longer mutually exclusive. I like very much the way the data are presented in Tables 1 and 2. This shows very clearly how much of the leading causes can be attributed to alcohol use. One can also easily see how the aggregate YLL for alcohol use compares with the other causes. But...to try to fit the alcohol use category into the existing list doesn't make sense, especially in cases where higher ranking causes include alcohol-related deaths. Thus, any
mention of the ranking of alcohol use as a leading cause should be removed. This would involve dropping Table 5 as well (see point #4). That said, it is certainly ok to compare the effect of alcohol use to other causes in the list, particularly those that do not include alcohol related deaths (e.g., ischemic heart disease, HIV/AIDS, cerebrovascular disease, cancers). For example, I would suggest for males saying something like YLL attributable to alcohol use exceeds that for ischemic heart disease, which is the leading cause of premature mortality. The implication is the same, but the statement more correct.

4. As I mentioned above, I think Table 5 ought to be dropped. It is not appropriate given the problems ranking categories that are not mutually exclusive and, in any case, not very informative. In its place, I would rather see more detail for each of the race/ethnic groups, i.e., I'd like to see how alcohol use compares with each of the leading causes individually (and not have to go to a website to do it). Perhaps 2 tables could be developed to replace table 5 - one for males and one for females - showing maybe the top 10 causes for each group, then the alcohol use YLL for each method. Like so:

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Rank</th>
<th>Cause</th>
<th>Total</th>
<th>Asian</th>
<th>African</th>
<th>American</th>
<th>Latino</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10th</td>
<td>Alcohol use</td>
<td>Method 1</td>
<td>Method 2</td>
<td>Method 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Need to harmonize the information in table 2 with the numbers presented on p. 11. P. 11 shows 7470 YLLs for females (5.1%). Table 2 shows 7918 YLLs (5.4%).

**Level of interest:** An article of importance in its field

**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