Reviewer’s report

Title: Drownings in Sweden with emphasis on the presence of alcohol and drugs - a retrospective study, 1992-2009

Version: 3 Date: 25 November 2012

Reviewer: Keshia M. Pollack

Reviewer’s report:

Thank you for the opportunity to review the manuscript by Ahlm and colleagues, “Drownings in Sweden with emphasis on the presence of alcohol and drugs – a retrospective study, 1992-2009”. The paper is interesting and with some modifications, it would be publishable.

Major Compulsory Revisions

Overall: The Results section was a little hard to follow. There were different denominators, especially when the authors looked only at alcohol, drugs, and then both. Consider adding denominators when appropriate to let the reader know what proportion of the total is being referred to by the data. Also, consider if there is a more logical order to present the results, which would help it flow better. The challenge in reading it is that the focus shifts from deciding the cause of death (i.e., type of drowning), to the mechanism, with subcategories of type of drowning. I wonder if it is possible to organize the paper the other way, by cause of death with subcategories of alcohol, suicide, etc. I ask the authors to consider reorganizing the text. But I do strongly believe that the denominators should be clearer. This may not seem Major, however, the lack of clarity of this section is an issue for me, that can easily be fixed.

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 2 Abstract: it would be helpful if you clarified the sentence in the Results that mentions the findings about suicide and women. The sentence would be clearer if it read “…females in the study…committed suicide by drowning, which…”

- Page 3 Introduction, 1st paragraph: the authors mention the decrease in the number of drowning deaths, from my knowledge of this issue, wasn’t that decline among children (in part due to Sweden’s Vision Zero)? If so, please add.

- Page 3 Introduction, 2nd paragraph: The sentence that begins with “Alcohol and drugs…” – there are 8 references listed. What do we know from these studies? All of them only support that “alcohol and drugs often contribute to drowning”? I suspect that some of other findings may be relevant to this study. Or, I suggest removing some of them.
- Page 3 Introduction, 2nd paragraph: Consider adding a citation to the sentence that begins with “Only a few studies…”

- Page 3, Materials and methods: typo is sentence that begins with “The autopsy rates…” I believe the sentence should read “…as the law recommends autopsies be performed…”

- Page 4, Materials and methods, 2nd full paragraph: the authors note that “In each case, the forensic pathologist decides whether a sample should be obtained for such analysis.” How is this decision made? And this could introduce some bias.

- Page 5, Results: The authors note in the 2nd full paragraph the seasonal variation in drowning. I suspect the mechanisms also varied. Consider adding a sentence here.

- Page 5, Results: The authors note in the final paragraph that there were drowning associated with cars. It would be helpful to the reader if you can say more about that in parenthesis.

- Discussion: I was looking for a little more of the “so what”. For example, the authors described the problem of suicide in bathtubs, especially for women. So what are the implications of this finding? What could be done about it? Or in discussing the finding on alcohol and boating, legislation was mentioned. So there is no current legislation in Sweden that restricts alcohol during boating? Or maybe there is a law and it should be better enforced? I encourage the authors to look at the entire Discussion section and determine how they are addressing the “so what” of these findings. Finally, while I appreciated a separation section on Prevention (page 11), I think this can be better integrated into the discussion of the findings.

- Page 12, Discussion: I thought that another limitation was the discretion of the pathologist in determining who went for drug testing. It does not seem that this decision was systematic, and thus, bias could be introduced.

Discretionary Revisions

- Page 5, Results: last sentence, paragraph that finishes at the top of the page: the authors state “The decrease affected all age groups”. I was wondering if the rate of decline was the same for all groups. Could be interesting to add this.

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.