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: Richard Franklin

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Dear Authors

I commend you on undertaking this study exploring drowning in Sweden, the following comments are provided to strengthen the paper.

The word drownings should be avoided where possible, you should talk about drowning deaths or drowning incidents if they do not die or drowning morbidity if they are left with a permanent disability following a drowning incident. You should also try not to use the word accident as this implies act of god and that it is not preventable, incident would be a better word to use. As you study talks about drowning deaths I would use drowning deaths at the beginning and then you can decide how to address it after this but do not use ‘drownings’. The paper also need to be read for grammar, I will try and address those instances where I find them however.

Title – change drowning to either drowning deaths or drowning

Abstract – remove the word ‘although’ from the start of the background. Unnatural deaths should be clarified. Material and methods section change ‘were drowned and autopsied during’ to ‘died from drowning and an autopsy was undertaken’. Results change ‘individuals and decreased on average by about 2% each year (p<0.001)’ to ‘people by an average of 2% per annum (p<0.001)’. Need to add into the methods what proportion of deaths were tested. In the sentence about drugs and suicide the high proportion should be moved to the beginning as this is a significant issue. Conclusion should not start with ‘although’ please remove. I am not sure what you mean by ‘markedly elevated incidence risk’?, The last 2 sentences need to be tightened, e.g. Alcohol and drugs are a significant contributor in drowning deaths in Sweden and should be considered as part of a comprehensive prevention program.

Introduction – Update the reference to the latest reference for figure on drowning deaths, reference 1. Explain what you mean by unnatural deaths. The sentence starting with ‘Although there has been a decrease ...’ is unclear. Need more detail about why the drowning death figures may be an underestimation. 2nd paragraph, how many deaths are related to psychiatric illness.

Material and methods – What is an N-code? What is the actual number of cases which are autopsied? How are you defining death accident? Please define a ‘not
permanent resident’. Any reason why age was missing in 7 cases. How many cases were tox screening undertaken? If testing for drugs is not routine then how is the decision made to test? A flow chart for the inclusion of the information would also be useful. Was ethical approval provided for this study?

Results – 1st Paragraph, change ‘The decrease affected all age groups’. Was the rates by region standardised? If not this may explain some of the differences in rates. 2nd paragraph – Sentence being with ‘Unintentional drowning ...’ needs to be made clearer, also change ‘this’ before northern to ‘the’. I am also surprised that there were so few people under the age of 18 years (5%) who drowned, this goes against the international trends, this is worth a mention in the discussion. 3rd paragraph what does a less pronounced seasonal variation mean was it statistically significant?

Unintentional drowning – 1st paragraph what does ‘this is was cited as an issue’ mean? Please add ‘were’ into the sentence starting with ‘boating incidents association’ before ‘association’. Also a deaths and remove ‘s’ from ‘drownings’ at the end of the sentence, same with the next sentence,. Intentional drowning – I would change in the 1st sentence ‘were caused by suicide’ to ‘as a result of a suicide attempt’ 2nd sentence starting with ‘Of all the drowned ...’ needs to be rewritten. Is there any more information which could be provided about the homicides, particularly who was the perpetrator.

Undetermined drowning – 1st sentence need to be rewritten, I would suggest ‘Intent was unable to be established in 909 cases (18%).’

Alcohol – what proportion does 4,377 represent of all cases where alcohol testing was undertaken? The 3rd paragraph does not read well and needs to be rewritten. It is interesting to note how much alcohol was involved in people jumping from bridges. Was there any statistical difference in the different proportions by location for the presence of alcohol?

Pharmaceutical and illicit drugs – How many people had multiple drugs in their system? In the combination of the alcohol and drugs you cannot use 4492 as the denominator as only 4181 people were tested for drugs, therefore the denominator needs to be less than 4181 or 4181 if all of them were tested for alcohol as well. I would also be interested to know how many were prescribed drugs and how many were not.

Discussion – 1st paragraph change ‘each year’ to ‘per annum’. In the last sentence of the 1st paragraph you talk about exposure but do not link it to your study. In the 2nd paragraph you speculate about the difference in the rates for drowning being due to geographical difference but provide no evidence to back this up. You also need to clarify why difference is collection methods may lead to difference in numbers of drowning deaths. In the 3rd paragraph you need to talk about difference in rates of drowning deaths for children and some critical thought about why this might be the case would be appreciated. In the 4th paragraph what does ‘striking male predominance’; mean? Do you have any
evidence for male participation in more aquatic activities? In the 5th paragraph remove the word ‘relatively’ unless you are comparing it to something else. Need a reference for why this is an important public health problem. In the 6th paragraph change ‘unusual’ to ‘uncommon’. In the 7th paragraph please add a reference for your explanation of why regional differences may be seen.

Alcohol – deleted ‘i.e. 44% of the unintentional drownings’. An examination of the statistical difference of the proportion of alcohol in different circumstance would be valuable. 2nd paragraph change the 1st sentence particularly the ‘one may speculate ..’ statement.

Prevention – change ‘dangerous’ to ‘danger’. What does ‘should be spread’ mean? What do you mean by a ‘safety systems’?

Limitations – how might the system miss cases? Change ‘judged’ to ‘used’. Could you also provide a definition of ‘decomposed bodies’ as all bodies start to decompose upon death.

References – please ensure you have a date accessed after any web references.

Regards

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I have no competing interests