Reviewer's report

Title: Number of substances used related to increased risk for unnatural death. A Combined Medico-Legal and Case-Record Study.

Version: 1 Date: 30 March 2009

Reviewer: Glen B Baker

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This is a potentially interesting manuscript, but I found several portions of it very difficult to follow.

Major Compulsory Revisions:

1. Page 5, lines 5-8: These two sentences were included in the Introduction, but are more appropriate for the Results and/or Discussion sections.

2. Page 6, the last two paragraphs: I had difficulty comprehending the explanations of the design described here. In the first paragraph, what does “the investigation was made close to death” mean; on the second line, should “unaware” be “aware”? Why is the person evaluating the records called an interviewer and who are the “staff interviewed”? Is this a team who is helping evaluate the records? I also do not understand what is meant by the following sentence in the second of these two paragraphs: “Thus the ratings were the same as they would have been the day before death…”

3. Page 7, second paragraph: The authors divided the drugs into legal and illegal drugs here, but then do not mention legal vs. illegal drugs in their tables or figures or anywhere else in the manuscript subsequently. Legal drugs included benzodiazepines and other tranquillizers and analgesic drugs; where none of the drugs antidepressants or antipsychotics (or were the latter classified as major tranquillizers)?

4. Page 8, lines 5 and 6: I would have thought it would be useful to evaluate previous abuse of heroin. Line 7: It might be useful for the authors to explain in more detail what they mean by “Death by trauma”. In the last paragraph, under RESULTS: The first two sentences are worded awkwardly. I think they meant to say something like: “In Table 1 are presented data comparing cause of death among subjects with contact with the Addiction Centre to the total subjects autopsied at the Forensic Department. The percentages of those who died by undetermined suicide and heroin overdose and had previous contact with the Addictions Centre were each higher than for suicide and contact with the Centre.” In this same section, presumably the “>” symbols were meant to be “<”.

5. Page 9, lines 13 and 14: The phrase “at least heroin” seems redundant here (unless I am misinterpreting what the authors are trying to say).

6. Page 10, lines 10 and 11: Presumably “p < 0.52” was meant to be “p > 0.52” in both cases. Was the number 0.52 in both cases?
7. Page 11, lines 3 and 4: This sentence is worded awkwardly, and I think the authors meant to say: “First, a relatively large number of those who died by undetermined suicide and fatal heroin overdose had been in previous contact with…” Lines 6 and 7: Should this sentence be reworded as follows? “Thus, it appears that substance abuse is related primarily to unnatural death by…” Lines 12-14: These two sentences on “severity of misuse” should be expanded to explain this concept more clearly. What does “Severity of misuse” mean, and how did the authors in reference 42 calculate their “severity index”? 

8. Page 12, under The Sample: It is not clear what is meant by “the staff who were interviewed”. Were these staff members physicians or other medical staff who were familiar with the cases involved? The manuscript and Figure 1 require a more detailed description of the evaluation team and their duties.

9. Page 13, line 1: In this sentence, I think the authors meant to say something like: “In summary, unnatural death by undetermined suicide and fatal heroin overdoses were more highly correlated to previous contact with the Addictions Centre than were natural death, suicide or violent death.”

10. The Results section of the ABSTRACT should be expanded.

11. Part of the problem with the manuscript is that some sections are not worded in a grammatically correct way and the points being made are not coming across clearly. I recommended that the authors ask a colleague whose first language is English to read the revised manuscript if the authors decide to resubmit.

Minor Revisions:

a. Page 3, line 6: Replace “on account of the manner” with “according to the manner, i.e.” Line 18: Insert “at” after “common”.

b. Page 4, line 5: Insert a comma after “intoxicant” Line 8: Reword the final sentence as something like: “On average 3 - 8 drugs were found at autopsy in deceased drug addicts in Sweden.” Line 12: Insert “in” in front of “victims” and replace the semicolon after “mortality” by a comma. Line 15: Insert a reference after “causes”. Line 17: “co morbid” should be one word. Line 20: “knowledge on” should be “Knowledge of”. Line 21: Insert a comma after “suicide”.


d. Page 6, line 15: “follow up” should be one word.

e. Page 7, line 1: Replace “, which” with “and”. Line 9: Insert “of” after “independent”. Lines 12 and 13: This sentence is unclear and should be reworded. Line 15: Replace “such” by “as”. Line 17: “differ” should be “differentiate”.

f. Page 9, line 1: Replace “In all” by “In total,” Line 7: Delete the comma after “users”.

g. Page 10, line 3: Insert “by” after “unnatural death”. Second line from the bottom of the page: Insert a comma after “As expected”.

h. Page 11, line 16: Delete “of” in front of “non-fatal”.

i. In Table 1, the N=4387 should be mentioned in the legend at the bottom of the table rather than being at the top of the “Contact with Addiction Centre” column since I assume it represents the total number of contacts with the Addiction Centre in the time period being considered. In the current legend to the table, insert a comma after “(46%)”.

j. Page 21, figure legends: In the last line of the legend to Figure 4: “added” should probably be replaced by something like “included together”.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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.