Author's response to reviews

Title: Demographic, risk behaviour and personal network variables associated with prevalent hepatitis C, hepatitis B, and HIV infection in injection drug users in Winnipeg, Canada.

Authors:

John L Wylie (JWylie@gov.mb.ca)
Lena Shah (Lena.Shah@moh.gov.on.ca)
Ann M Jolly (ann_m_jolly@phac-aspc.gc.ca)

Version: 2 Date: 11 July 2006

Author's response to reviews:

July 11, 2006

Re: Manuscript #1336622042105383

Dear Dr. Saltman,

Enclosed please find a revised manuscript #1336622042105383 now entitled, as suggested by one of the reviewers "Demographic, risk behaviour and personal network variables associated with prevalent hepatitis C, hepatitis B, and HIV infection in injection drug users in Winnipeg, Canada".

We would like to thank both reviewers for their comments and have addressed their concerns as follows:

Reviewer #1

1. As suggested we have retitled the manuscript and changed the text by changing "prevalence" to "prevalent". We have also replaced, where appropriate, the term "social network" with "personal network". We still use the term social network at some points in the introduction when work on social networks in other areas is being cited.

2. In the results section we now include a section on mean, median, etc. of the network data and also refer to this data in the limitations section of the manuscript (in general, to meet both reviewer's comments, the limitations section has been rewritten and additional changes will also be referred to below). The new text from the results section regarding the personal networks is copied below (page 12, line 20):

For the remaining 369 respondents, summary statistics for the egocentric network are as follows: mean number of members, 8.8; median, 8; range, 1-20; lower quartile, 5; upper quartile, 11; SD, 4.6. Given that the IDU risk network was truncated at 5 IDU, we also report these summary statistics for the total number of people within the egocentric network identified as IDU: mean number of IDU in the egocentric network, 3.5; median, 3; range, 0-20; lower quartile, 1; upper quartile, 5. In total, 17% of respondents (66/369) reported more than 5 IDU in their egocentric network. The lack of data on these individuals is discussed further in the limitations section of this paper.

The following text has been added to the limitations paragraphs (page 20, line 11):

Fourth, the egocentric and IDU risk networks were truncated at 20 and 5 people, respectively. The implications of this data truncation are greatest for the IDU risk network variables as they formed a large part of the analysis. Overall, 17% of respondents reported more than 5 IDU in their egocentric network. We felt that full data collection on all IDU in the egocentric network was impractical in terms of time, complexity of data collection and accurate recall by respondents, however, it should be noted that this additional data could have revealed additional patterns not apparent in our results.

3. The specific drug-preparation equipment has been added (page 8, line 21) - "other related drug-preparation equipment (last 6 months; prompts included cooker, rinse water, or cotton)". A line has been added to the limitations section noting the lack of analysis regarding injecting someone as a favor (page 21, line 4) - "Third, only "injecting someone else as a service" was analyzed; "injecting someone else as a favor" can be considered a distinct trait and could also be related to the common use of syringes and pathogen transmission". Finally, the OR associated with the sharing of drug-preparation equipment and
drug transfers for one of the pathogens has been added as part of the text to illustrate the relationship between the two; the other pathogens were similar and we didn't think it necessary to include all 6 OR (page 9, line 2) - Univariate analysis showed that only ever-use of previously used syringes was significant and is the only one of the above variables presented in this paper (e.g. the univariate OR relating HBV serostatus and use of other's equipment was 0.98 [0.62, 1.55] while the univariate OR for HBV serostatus and engaging in drug transfer behaviours was 0.94 [0.53, 1.67]).

4. Specific data on anal sex was not collected. The questionnaire was very lengthy and we had made a decision to focus on drug-injection behaviours. This lack of information has been added to the limitations section (page 21, line 1) - Second, only a limited number of sexual behaviour questions were included in the study and no specific questions on type of sex were asked. Collection of data on anal sex, in particular, could have revealed other correlations not evident with the dataset available.

5. We do now report the correlation between the three serostatus variables for the pathogens under analysis (which we agree was a very useful item to include). Some of us wondered whether this information, or whether information on co-infection status, was being requested. We chose to go with the correlation values and included them in the results section and also refer to them in the discussion section. If this is not what the reviewer is requesting, please let us know (page 13, line 8).- Correlation between HCV, HBV, and HIV: To assist in data interpretation the correlation between HCV, HBV, and HIV were determined. Pairwise correlation values were HCV/HBV serostatus was 0.0009; HCV/HIV, -0.0106; and HBV/HIV, -0.0111. No apparent correlation between the three pathogens was evident. In the discussion, the following line was added (page 21, line 22) - The lack of any apparent correlation between the prevalent infections for the three pathogens, noted in the results section, reinforces the need to identify the different social and temporal patterns associated with the various pathogens that may be circulating within a population.

6. All the remaining grammatical corrections suggested by the reviewer have been corrected. Their locations in the revised manuscript are listed below:
Page 4, line 3
Page 6, line 4
Page 6, line 21
Page 7, line 16 and elsewhere - Variable name changed to "years of ID use"
Page 8, line 4
Page 8, line 12
Page 10, line 5
Page 10, line 15
Page 10, line 21
Page 11, line 7
Page 11, line 20
Page 13, line 16
Page 14, line 1
Page 15, line 18
Page 17, line 16
Page 19, line 10
We apologize for the small font of the tables. We had forgotten to enlarge it before submission, but this has now been taken care of. A "1.0" has now been added to the tables to indicate the reference category. We have also double-checked the CIs in the tables and found no other errors. Regarding removal of the p values, we will accept whatever is typical journal style for BMC Public Health. We prefer that the p values remain, as we find they are still a quick and easy way of looking at the data. For other manuscripts other reviewers have noted that we should include p values when we did not, and now with this latest review, we have come full circle and been criticized for including p values. Based on these differing opinions, there seems to be no hard and fast rule, and as mentioned above, we have no problem with abiding with journal style.

7. Regarding inclusion of prospective studies of HIV and HCV. We tend to prefer to focus the literature cited as much as possible on the contents and analytic approach of the manuscript. If this is acceptable to the reviewer, we would prefer to leave the literature cited as is.

8. Regarding the categorization of the data: We agree that as much as possible, data should be preserved, however, prior to analysis, it had also been suggested to us that since the data was truncated at 5 IDU, a continuous variable was somewhat artificial. The other side of the scale would be to pick one arbitrary value and use it for all variables as the reviewer suggests. We felt this approach was throwing away even more data, and we felt that maximizing the number of categories, where possible, was a good compromise.
Comments regarding reviewer number 2:

1. Regarding the reviewer’s comments on including a short description of the HIV and hepatitis risk of the transgender and “other” ethnic groups. We would ask either that the reviewer reconsider this request or provide more direction on the specific pieces of information she would like to see. We are hesitant to start including descriptive summaries as we felt the sample size of 5 and 10 really prevented any meaningful understanding of the infection status or behaviours of these two groups. Additionally, the “other” ethnic groups could include anyone from Carribean blacks to southeast Asians and a summary of that group really doesn't provide any meaningful information at all since the people are so disparate. We were also unsure as to whether the reviewer wanted us to focus on their demographics, infection status, or behaviours (and for the latter in particular, which behaviours). In general, we felt that trying to add additional information for these groups was distracting from the overall flow and direction of the paper. If the reviewer does feel this information is absolutely critical we would ask for some guidance on the behaviours or other pieces of information that the reviewer feels needs to be included.

2. We have included a line in the text to summarize talwin/ritalin preparation (page 17, line 23) - Like cocaine, talwin/ritalin is typically prepared at room temperature and frequently involves communal use of the prepared drug and filters, which may account for the high prevalence of HCV regardless of syringe sharing practices (typically pills are crushed in room temperature water; IDU then use a common filter to draw drug into their own respective syringes).

3. Regarding the relationship between HBV and sex partners, we were thinking specifically in terms of safer sex activities. We have changed this text to (page 19, line 4) - However, while a positive correlation for HIV occurred with same-sex client partners, the directionality for HBV and opposite-sex casual partners was opposite. Although the direction of this relationship appears counter-intuitive, it may reflect a greater likelihood to engage in safer sex harm reduction activities with sex partners of this type.

4. We are unaware of a suitable document that would adequately serve as a reference for this statement. It is possible however to search the internet and, through the information available in various reports, etc., find differences in the vaccination strategy for HBV in the different provinces of Canada. For example, it is easy to find information stating that British Columbia began vaccinating for HBV in 1992, while Manitoba did not begin until 1998. If acceptable to the reviewer we will use this concrete example to illustrate our case and have changed the text as follows (page 19, line 18) - This pattern may reflect a lower prevalence of HBV and/or earlier or more extensive deployment of vaccination programs in the provinces from which these IDU originated (e.g. the province of British Columbia began vaccinating approximately 6 years prior to Manitoba).

5. Regarding the lack of inclusion of the limitation on the different time frames for the variables, we have now added this statement to limitation section as follows (page 20, line 5) - Third, network members were elicited based on contact in the previous 30 days, but questions regarding individual behaviours and interactions with network members were typically collected for the previous 6 months (or longer periods for some variables such as “ever-use of someone else’s syringe”). Time frames are relevant, given the noted lack of correlation between some known risk behaviours and serostatus in our analysis (see paragraph below). Any comparisons of our results with those from other areas would need to take note of the time frames used.

6. Regarding the different sexual behaviours that may occur in hotels, as opposed to other venues, we have added the following to the discussion (page 17, line 8) - Alternatively, there may be specific behaviours associated with this group of IDU that favour specific transmission of this pathogen (e.g. hotel rooms, as opposed to shooting galleries, may offer more privacy and a greater likelihood of engaging in sexual activities, thus favouring HBV transmission over HCV).

7. The various subtables for table 5 have now been combined.

We hope the reviewers find these changes acceptable. If you have questions, please contact us. Thank you for considering the manuscript and we look forward to hearing from you.

Sincerely yours,

John Wylie, PhD
Scientist, Cadham Provincial Laboratory