Reviewer's report

Title: Factors and costs associated with injection site infections: findings from a national multi-site survey of injecting drug users in England.

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Reviewer: Edward L. L. Murphy

Reviewer's report:

This is a cross-sectional study using a survey methodology to determine the incidence of (during the year before the survey) and risk factors for soft tissue infection among injecting drug users in the United Kingdom. It is an interesting study whose results will be of interest to those working in infectious diseases or the care of injection drug users. The data on incidence of and risk factors for soft tissue infection are likely to be valid, with the qualification that they rely upon self-report rather than physician diagnosis. On the other hand, this methodology captures abscesses among IDU who do not seek care.

Major compulsory revisions: Regrettably, I think the cost section of the manuscript is weak because the authors make a number of assumptions to overcome limited data on annual frequency of abscess (they assume one per year), length of hospital stay (they assume one to four days) and unit cost data. One is left with very large ranges of estimates that would not be helpful to public health or policy. I would have preferred to see a more detailed analysis of the occurrence, description and risk factors for abscess, and to save the cost analysis for subsequent manuscript that could include better data, perhaps using National Health Service billing information for hospital and outpatient visits related to soft tissue infection among IDU.

Minor essential revisions:

Methods, paragraph 1: although the sampling methodology is said to be an “established method” (attention spelling error for established) as detailed in reference 19, it would be helpful to give a brief description of this methodology so that readers will not have to look up the other paper.

Methods, second paragraph: how exactly was the likelihood ratio used to determine inclusion or exclusion from the model?

Results, second paragraph: did the authors gather any more information about the injection site infection? For example, number and dates of episodes within the past year, severity, treatment (antibiotics versus surgical), length of hospital stay, etc.? If not, that should be noted as a limitation in the discussion section. I would have liked to see more information on this primary outcome and less on the cost data.

Discussion, third paragraph: the authors admit to results on costs are tentative
and recommend a more rigorous economic evaluation. I agree; perhaps the cost data should be saved for another manuscript, as suggested above.

Discussion, top p 9: regarding the finding of a higher frequency of injection site infection among women, did the authors check for a statistical interaction between gender and site of injection in their logistic model? Perhaps women utilize the femoral or hand sites more frequently.

Discussion, top p 12: spelling mistake “participants”

Discretionary revisions:

Abstract: The abstract seems a bit long although the word count is given at 306

Methods, paragraph 1: were HTLV-2 test results available? Some authors have reported increased infections among IDU with HTLV-2 infection, while others have not.

Discussion, second paragraph: it's a matter of writing style, but I would generally prefer to see this “limitations” paragraph later in the discussion rather than near the beginning. The phrasing “However, in particular,…..” is awkward.

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: None