Reviewer's report

Title: Factors associated with hepatitis B vaccine series completion in a randomized trial for injection drug users reached through syringe exchange programs

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Reviewer: Esther Aspinall

Reviewer's report:

General comments
This is a large randomised controlled trial of accelerated versus conventional HBV vaccination among people who inject drugs. The strengths of the study are large sample size, multicentre trial which has clearly been well-organised and is well described in the paper. Weaknesses are the lack of context to the results presented – in particular, are they new findings, and what are the implications for practice?

Major Compulsory Revisions

Background
What I felt was really lacking was any real information in the background/introduction about what is already known about factors affecting completion of HBV vaccine course. Because of this it’s very difficult to assess what this work might add.

E.g. background paragraph 1- which convenient locations? Have studies previously taken place in NSPs, like this one?

There is no discussion of whether there is existing evidence for the effectiveness of the accelerated schedule, even from the same study.

Methods
This section is clear and well-reported

Discussion
Paragraph 1 discusses the main finding of the study – that completion was higher among those receiving the accelerated schedule. However, second paragraph goes on to say that this finding already documented by at least five other studies. The study by Hwang et al has very similar findings, and the authors would need to really focus on what additional info their study adds. In addition, the authors state that the difference with their study is that it is conducted in SEP, but at least one of the studies referenced (Altice et al) appear to be conducted at SEPs also. This is not a problem in itself; I just feel it needs to be better articulated why this study is different. It is possible that the authors are potentially really playing down
their results here, but without a bit more description of the previous studies, it isn’t possible to tell.

Minor Essential Revisions

Paragraph 3 – discussion of the booster dose appears out of place here, was not the stated aim of the research

Last paragraph – ‘as with any observational study, this evaluation….’ – I think I see what the authors are getting at, but potentially confusing when the study is a randomised trial with a clear intervention.

Background first paragraph – reference 6 regarding HBV vaccine coverage remaining poor among PWID is from 1990, and other reference is from an Advisory committee – is there any primary research you could also reference here?

Analytic methods – should this be univariate not bivariate, or have I misunderstood?

Methods last paragraph – minor point, but presumably should read ‘all participants were invited to return’, not ‘all participants returned’

Discretionary Revisions

Use of term ‘people who inject drugs’ (PWID) rather than ‘injection drug users’ is now more commonly used – authors could consider revising

I am unsure about the format of combining results and discussion section – as far as I can tell it is not a required BMC Public Health format, and may be confusing to readers

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.