Reviewer’s report

Title: Epidemiology of hepatitis C virus infection among opioid substituted patients (ECHO): study protocol

Version: 2 Date: 18 October 2015

Reviewer: Jason Grebely

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A better understanding of HCV incidence and prevalence among people in the OST setting is important for the development of strategies to address HCV-related disease burden in this population. Further, this information is crucial for HCV modelling exercises which can inform health policy.

Strada et al. provide a study protocol for the ECHO study, which is a large proposed cohort study of 2,500 people receiving opioid substitution therapy (OST) in Germany. The primary aim of this study is to estimate the national incidence and prevalence of HCV infection among people receiving opioid substitution therapy in Germany and to evaluate HCV treatment uptake (and associated factors).

Overall, this study should provide some important information on the prevalence and uptake of HCV therapy in this population. The strengths of this study is that it is large (2,500 people) and will provide good estimates of the prevalence of HCV and HCV treatment uptake. Further, this study will provide important information on injecting risk behaviours in this group (which will be useful for mathematical modelling studies). However, one weakness is that the incidence estimates may be biased (further information on this below).

Major Compulsory Revisions

1) Methods (Page 5, 2nd paragraph) – I would make it clear whether the plan is to take a blood sample at baseline or whether the HCV status will be just recorded from the participant’s chart. From reading later on, it seems as though the answer is the latter, but please clarify whether everyone will be required to have an HCV antibody and/or HCV RNA test performed at the baseline visit. Same for the second visit. Is HCV antibody and/or HCV RNA testing performed?

2) Methods (Page 5, 2nd paragraph) – Somewhat related to the above point, how will HCV incidence be monitored? Will you be relying on testing performed through the standard of care within the clinics? How will you ensure that there will be enough follow-up HCV antibody testing to measure incidence?

3) Methods (Page 5, 2nd paragraph) – The measurement of incidence will rely on the fact that there will be a high proportion of those who return for follow-up. Will there be any potential for bias if only a small subset return for follow-up? If so, this really should be mentioned as a potential limitation in the discussion. Also,
the sample size assumes a follow-up of 1 year for each individual (which is likely an overestimation). This should also be mentioned as a potential limitation.

4) Methods (Page 6, 2nd paragraph) – It would be useful to have a confidence interval around the estimate of HCV prevalence. This would be 66%, 70%, which is quite narrow and a strength of this study.

Minor Essential Revisions

1) Abstract and throughout manuscript - The term “opioid substituted patients” is somewhat odd. Perhaps people receiving opioid substitution therapy (OST) might be better.

2) Introduction (Page 3, 1st sentence) – Perhaps use injecting drug use instead of intravenous drug use. Drugs can be injected through means other than intravenously (e.g. intramuscular).

3) Introduction (Page 3, 1st sentence) – These are somewhat old references re: IDU as primary mode of transmission. I see you use Hajarizadeh Nat Rev Gastro Hepatol 2013 later on. That would be a more appropriate recent reference.

4) Introduction (Page 3, 2nd sentence) – I would use people who inject drugs (PWID) instead of injecting drug users (IDUs) as the field has moved towards this terminology to reduce stigmatization.

5) Introduction (Page 3, last paragraph, 1st sentence) – There is also a recent systematic review by Wiessing et al (PLoS One. 2014) which on HCV epidemiology among PWID in Europe which might be worth referencing.


7) Methods (Page 5, 1st paragraph) – I would highlight the proposed years of recruitment upfront in the first paragraph.

8) Methods (Page 7, 1st paragraph) – In the last sentence, it says randomization. As there is no randomization in this study, is that meant to read “sampling”?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

None