Reviewer's report

Title: Physical and mental health comorbidity in adults with intellectual disabilities: population-based cross-sectional analysis

Version: 3
Date: 29 June 2015

Reviewer: Andre Strydom

Reviewer's report:

This study is a valuable addition to existing literature on the health needs of individuals with ID, and I don't agree with one of other reviewers that findings are not novel. It is important to describe the health and mental health needs of individuals with ID in different settings, and at different timepoints. There has not been to my knowledge another comprehensive and large scale study of health needs associated with ID in the UK.

Minor essential revisions

1. The prevalence of intellectual disability is lower than expected (0.6% vs. 1% found in a meta analysis by Maulik et al, 2011 - doi:10.1016/j.ridd.2010.12.018) and therefore the comment by a previous reviewer that the study may be slightly under representative of those with Mild ID is justified. The slightly lower prevalence is to be expected but the authors should acknowledge this as limitation. However, the prevalence of 0.6% is generally higher than that found in studies relying on service definitions of ID, which is a strength.

2. Related to the above, it is possible that the authors may have missed some individuals with ID by using a fairly narrow list of read codes. In another primary care database study of health checks for individuals with ID in England it was found that a significant proportion of individuals with ID syndromes such as those with Fragile X syndrome or Down syndrome did not have a read code for intellectual disability ("mental retardation"). The authors should explain why they have chosen to use a narrow list of codes, or else give consideration to extending their ID definition by including an additional list of read codes, such as those for childhood autism and genetic ID syndromes, that has been used in other primary care database studies. A list of additional codes to use has been published previously as supplementary material http://www.thelancet.com/cms/attachment/2021261287/2041361619/mmc1.pdf. This may help to improve representativeness of their sample.

3. It is not clear what read code lists have been used for important conditions such as coronary heart disease. Do they have a reference for these code lists, or could they give more information?

4. One of the results is puzzling - the authors reported an OR of 2.2 for dementia in ID compared to the general population, based on a prevalence of 0.8% in ID, and 1.1% in those without ID. Although adjustment may have affected the reported OR, it still seems curious and a typo may be a possibility. The authors
should check to confirm that the reported prevalence rates are correct.

5. Finally, the authors make the following statement in the discussion: "The majority of adults with intellectual disabilities do not drink alcohol at all, although some misuse it, and at a slightly higher rate than the general population in this study." But I don't think they reported the data to support this statement?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests