Reviewer's report

Title: People with multiple unhealthy lifestyles are less likely to consult primary healthcare. Evidence from 267,153 Australians

Version: 1 Date: 7 April 2014

Reviewer: Mark Harris

Reviewer's report:

An interesting analysis of data of unhealthy lifestyle from the NSW 45 and up study linked to data on GP consultations from Medicare.

Major compulsory revisions

The introduction is very short and does not adequately explore some major issues. Notably several Australian studies have shown a relationship between GP consultations and consultation length with socioeconomic status (low SES patients are likely to have more consultations but fewer long consultations). Furthermore as the author notes low SES Australians are more likely to have chronic diseases such as diabetes and heart disease and have risk factors for these such as hypertension, obesity and smoking. The statement that patients with multiple unhealthy lifestyles will, therefore, be less likely to consult a GP is not necessarily true (notwithstanding the findings as presented later).

In the methods, although it is referenced to a paper, it would be useful to provide a little more information on the index of unhealthy lifestyles. It has been validated in the 45 and up study against self-reported quality of life and psychological distress and correlated this with low socioeconomic neighbourhood. However in the current study it is being analysed against service use. A number of studies have shown particular risk factors to be negatively associated with primary care service use – notably smoking. The authors need to provide more justification of the association of the index rather than one or two of the component risk factors. At the very least the paper should provide a univariate table of the associations with specific component risk factors (like that in table 1).

The description of the outcome variables is insufficient. The inclusion of the residential aged care and after-hours items (cf Table 2) was very unusual. One might expect that these would have a different distribution and set of associations to items for GP attendances

In the discussion the statement: “Current strategies for placing interventions within primary care settings support secondary prevention (e.g. of complications among people with T2DM), but have less scope for primary prevention (i.e. preventing people from developing T2DM) among a reasonable proportion of people with multiple unhealthy lifestyles” needs to be referenced. The study looked at a broad range of GP items many of which could not be expected to be
relevant to primary or secondary prevention. There are however some specific items (e.g., health assessments) that could be specifically explored.

Prevention is not the only issue that this study raises. The paper alludes to the fact that patients with multiple risk factors may have sought care elsewhere. It would be useful to expand on this issue. It is possible that this paper has major implications for the prevention of hospitalisation as patients with multiple risk factors not seeking care from GP may indeed present to hospital ED departments. Improving access to these patients may be a useful strategy for preventing hospitalisation.

Minor Revisions

The title should delete the second sentence as sample size is not appropriate for the title and the sample is confined to one state – NSW.

The tables in appendices should be referred to in the paper and attached rather than being appendices.

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

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests