Reviewer’s report

Title: A Personalized Intervention to Prevent Depression in Primary Care: Cost-effectiveness Study Nested into a Clustered Randomized Trial

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Reviewer: M. E van den Akker-van Marle

Reviewer's report:

This is a clearly written article on the cost-effectiveness of a personalized intervention to prevent depression in primary care.

I only have a few questions:

- Costs of the intervention included costs of a booklet for the patients and the cost associated with the training of the physicians. How have these latter costs been translated to patient level? Are they divided by the number of participants in the trial or by the total number of patients in a GP practice eligible for the intervention, as in real practice this would be the target population.

- How is this intervention going to be implemented in practice? Are eligible GP patients screened once during lifetime with the PredictD algorithm, or are they screened yearly? In the latter case, the current first screening might be more effective than subsequent screenings as (most) patients at risk will already be detected at a previous screening. What would be the consequences for the cost-effectiveness? Please elaborate on this.

- Do all patients have individual risk factors after screening with the PredictD algorithm? In a general population I would not expect this. If there are no risk factors, I assume that no plan have to be made. Which percentage of the patients do have risk factors and need a plan to manage those individual risk factors? How much time does it take to make such a plan following a bio-psycho-family-social framework? Is this time included in the cost of the intervention shown in table 1? Please give a more detailed description of these intervention costs.

- Table 1: why do the individual cost items not sum up to the total costs? Especially in case of the mental health care costs in the control group, as both the outpatient mental health visit costs and antidepressant costs are lower than in the intervention group, but total
costs are much higher? What is meant by total public health costs, are these total hospital costs or total healthcare costs? The number of patients admitted in an inpatient psychiatric care unit are low, but for how long are they admitted, as long admission may still result in considerable costs, please add to the footnote in table 1.

- Table 2 and page 12: One or two decimal places in reporting ICERs suggests too much precision, round to whole numbers. In table 2 'Dominant' should be added for the ICER (cost per QALY gained) from the societal perspective.

- The combination of table 2, figure 2 and 3 seems a bit overdone as they all have overlapping information. In figure 2 titles on the axes are missing. What kind of scale is used on the x-axis of figure 3? It seems to start as a logarithmic scale, and to continue as a normal scale? This is somewhat confusing.

- In the conclusion it is stated the PredictedD intervention is likely to be perceived as cost-effective. However, an intervention is not cost-effective in itself, but in comparison with another intervention. Please add 'compared to usual care'.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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