Author's response to reviews

**Title:** A reduction in public funding for fertility treatment - an econometric analysis of access to treatment and savings to government.

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The Editor
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Article Re-submission:
A reduction in public funding for fertility treatment – an econometric analysis on access to treatment and savings to government

Thank for you for providing the Reviewer’s reports and editors’ comments. We sincerely thank them for the time they have taken to review this manuscript. We have revised the manuscript for the two Major Revisions required and addressed a number of the Minor and Discretionary revisions. We note that one Reviewer did not request any revisions.

Major Revision requested by Dr Connolly:
As the authors state in the Discussion, costs to consumers can influence multiple birth rates. However, in the analysis described here the authors have overlooked this element and have used a multiple birth rate from 2009 which is prior to the date of the policy change. It would seem more appropriate to make some estimate as to how the policy will influences multiples, especially considering the authors have acknowledged that costs to patients will influence behaviour and increase multiples. But this point does not appear to have been addressed in the analysis.

We initially chose to use a conservative estimate of the multiple birth rate, so that we did overstate the number of children not born following policy change, but agree with Dr Connolly that the multiple birth rate may indeed increase. Therefore we have re-analysed the data using the multiple birth rate from 2007 (2 percentage points higher than 2009). This is explained in the Methods.

In the Background section the authors state that the government anticipated that $64.4 would be saved by the policy. If the government already had performed such an analysis, what does this work add to what was already declared by the government in relation to the policy? In this respect the analysis seems to be a validation of a government policy. If cost savings is different, and it appears to be $12 million different, it would seem useful to explain why the disparity exists.

We have added a paragraph in the Discussion highlighting the significant differences between the evaluations and the substantial additional information that this study provides to the policy debate around ART funding.
Minor Essential
There is some discussion of the results in the Results section. Commentary on results should be saved for the discussion.

We note in the Instruction to Authors that results and discussion can be combined, and considered with such a complex analysis is was worth including some interpretations in the Results.

The findings here that younger consumers are less price sensitive to changes in policy is one of the interesting findings of the paper. This finding is different from previous reimbursement changes in Germany where older patients were less price sensitive. Considering the varying nature of these findings it would seem appropriate to discuss them in the results.

We agree this is a really interesting point and have now highlighted it in the Discussion.

The analysis here should be labelled as a partial analysis that only considers government medical expenditure. There is no assessment of the downstream costs associated the policy such as multiples, and cost consequences that may arise from changes in birth rates. I might be informative to highlight these points in the Discussion.

Medicare data does not allow us to analyse the long term downstream costs of the policy in terms of caring for additional multiple births, but we have highlighted in the Discussion the findings of another Australian study that did this.

Discretionary revisions
There seems to be excess Tables and Figures for what is essentially a confirmation of a government reimbursement change. I believe cutting down the amount of information would improve the quality of the paper and increase likelihood that people will read the paper.

We have added a paragraph in the Discussion highlighting the differences between the evaluations and the substantial additional information that this study provides. This is complex econometric analysis and believe it warrants all tables.

The Background section could also benefit from some trimming with emphasis given to the key elements of price sensitivity and behavioural response to price increases.

We have cut down the Background.

Yours sincerely,

Dr Georgina Chambers