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Title	**The effects of catastrophic drug plan deductibles on older women's use of cardiovascular medicines: a retrospective cohort study**
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Reviewer 1	Dr. Fiona Clement
Institution	Deptartment of Medicine, University of Calgary, Calgary, Alta.
General comments (author response in bold)	This paper addresses an important, under-studied question: what is the association between cost-sharing (particularly deductibles) and medication use? The authors have developed an innovative way to study this question as most of these analyses are limited to time series as the policies apply to large populations. However, I have a few major concerns: 1. It appears that more people in the enhanced plan (lower deductible) have hypertension and cardiovascular diagnosis. In this case, more people in enhanced plan should be prescribed hypertensive and cardiovascular meds. Thus the findings of higher odds of prescription in the enhanced plan may have absolutely nothing to do with the deductible but, appropriately so, more people in the enhanced plan SHOULD be prescribed the drugs and thus are more likely to fill prescriptions. **Response: We suspect this is a matter of misunderstanding owing to how the results were presented. As noted in the original methods section and in the footnote to table 3, all models were adjusted for category-specific indications for use that are listed in Appendix B. Thus, the effects of assistance level reported were/are adjusted for the difference in prevalence of conditions for which the medication types are commonly prescribed. Thus, our study does not have this obvious design flaw.** **This question does highlight an important methodological point. We reported the "1+ diagnosis" information in Table 2 to give a parsimonious sense of the prevalence of one or more of these diagnoses for each of our study cohorts. But we did not operationalize the data in that way for our statistical analysis. In the logistical regressions reported in Table 3, we adjusted for each individual diagnoses that could be potentially relevant because conditions with varying prevalence would logically have different levels of association with medicine use. We only combined EDC codes for diagnoses for hypertension with and without complications (CAR14 and CAR15) and diabetes with and without complications (END06 and END07 for Type 1, and END08 or END09 for Type 2) for parsimony and because the individual effects of the individual codes in those clusters were of similar magnitude.** **Though it complicates the table significantly, we now report these detailed, diagnosis-specific findings in Table 3. We defer to the editors as to whether those detailed results should be provided as an appendix of in the text of the paper itself.** 2. The result section is very meandering with many differences between the enhanced and standard plan. This includes observations such as more prescriptions among different ethnicity, different age groups, different disease severity. The paper would benefit from a clear analysis plan with more focus. **Response: We believe the results section contains a concise report findings concerning our study cohorts and regression results. The regression results are reported in a manner that discusses each cluster of potentially correlated variables. We begin with standard HSR covariates (age and health status; ethnicity; geography, a proxy for local health system; and income). We conclude with the findings concerning our primary explanatory variable of interest: pharmacare assistance level. This is a classic approach to health services and policy research papers of this sort - one we have used in reporting the results of many peer reviewed papers in the past. We don't consider this meandering but rather a reasonable and structured approach to reporting of all of the various factors that influence our outcome variables.** 3. Based on comment 2, it then seems unbalanced to solely focus on the difference observed difference between enhanced and standard coverage in the abstract, conclusions and discussion. The manuscript reads as cherry-picking the findings to tell the story that best suits the objective of advancing universal drug coverage. A more balanced presentation of the findings would be helpful to the manuscript. **Response: As stated in the abstract and introduction, the purpose of the paper was to test the association between assistance level and use of the medicines in question. To do so, we leveraged a unique form of natural experiment by policy design and controlled for other variables that could potentially explain differences in medication use. We feel we have presented a reasonable discussion of the natural experiment and the medical, social, and income-related variables in the paper. We nevertheless focus the abstract and conclusion on the effects of our primary exposure variable of interest: Fair PharmaCare assistance level.** 4. Lastly, the paper is a little thin. This reviewer thinks that might be an explanation for the meandering nature of the results. The authors may wish to consider a shorter, more focused piece on just the analysis of the impact of the enhanced and standard care in the form of a short research letter, **Response: We respectfully disagree. If we had prepared a research letter that jettisoned the discussion of the cohorts created by this unique natural experiment and the many other potentially explanatory variables that we were able to control for in each cohort, readers would justifiably believe we had set out to "cherry pick" findings without discussing the potential confounders.**

Reviewer 2	Dr. Laura Anderson
Institution	The Wellesley Institute, Toronto, Ont.
General comments (author response in bold)	Thank you for the opportunity to review this manuscript. It is well-written and provides a thoughtful analysis of a natural experiment that contributes to the literature on the impact of improving prescription drug coverage on filling prescriptions. **Response: Thank you. We appreciate the comment.** I have just one suggestion to add to the analysis: 1. One finding which I would like to see further exploration of is the differences in the use of medications by ethnicity. As you did for income, it would be informative to test for an interaction between ethnicity and your core finding - that enhanced assistance increased the likelihood of filling one or more prescription. I would suspect there would not be a difference, but it would be helpful to further support the argument that income and access to coverage are the primary drivers. **Response: We agree that it would be useful to test for differences in the effect of enhanced drug benefits on different ethnic groups. Our results are, of course, adjusted for the effects of ethnicity (and other co-variates); however, we just don't have the sample size to power an "ethnic-benefit" interactions (confidence intervals are very wide) or to conduct entire analyses on ethnic groups. If a larger group of the population had been exposed to different levels of public subsidy, we might be able to pursue such an analysis. This is certainly something for further analysis in studies that have larger cohorts or that can control enrolment into different arms of subsidy level.**