Reviewer's report

Title: Using a discrete choice experiment to inform the design of programs to promote colon cancer screening for vulnerable populations in North Carolina

Version: 1
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Reviewer: Masahito Jimbo

Reviewer's report:

This manuscript used a discrete choice experiment (DCE) to learn about how vulnerable individuals (low income, un/underinsured, minority, not up-to-date with colorectal cancer screening) in North Carolina value different aspects of colorectal cancer (CRC) screening programs, and the implication for CRC screening policy. It is a well written manuscript, with specific issues as noted below:

1. Is the question posed by the authors well defined?
   --Yes. See above.

2. Are the methods appropriate and well described?
   --Yes, except that the references (e.g., #10) for DCE seems to equate it with conjoint analysis. More below.

3. Are the data sound?
   --Yes, except for the small sample size. There is no power calculation.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   --Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   --There is a concern re: sample size.

6. Are limitations of the work clearly stated?
   --Yes, except for sample size.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   --Yes.

8. Do the title and abstract accurately convey what has been found?
   --Yes.

9. Is the writing acceptable?
   --Yes.

Major Compulsory Revisions:
One would argue that DCE and conjoint analysis are not the same. Thus, Reference #10 is inappropriate. There should also be some discussion on how they are different, because a typical reader may be unfamiliar with either/both terms. See the reference below, which differentiates between the 2 methods:


There is inadequate explanation on why CT colonography was included in the CRC screening options but flexible sigmoidoscopy was not.

The description of the CRC screening options seems too brief. Regarding the statement “Requires taking stool samples and mailing the samples to a lab to check for blood,” It is unclear if the participant could actually understand the specific steps it entails. The same could be said for the preparation required prior to colonoscopy or CT colonography: “Requires cleansing the stool from your bowels using medicine.” Not sure if the participant could actually understand that copious amounts of fluid with laxative needs to be taken the day prior to testing to force diarrhea. If the participants did not actually understand the characteristics of each test, s/he may not be able to make an informed decision about which CRC screening option to choose.

There is no power calculation and thus unable to tell whether 150 is an adequate number to assess the validity of the intervention. This should be clarified or limitation clearly stated in Discussion. For example, results showing few differences in utility among small ($10) rewards, small-moderate copayments ($25- $100), and the lack of a reward or copayment may be due to the lack of power.

**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:**

No to all of the above.