Reviewer's report

Title: Rural-Urban and Racial-Ethnic Differences in Awareness of Direct-to-Consumer Genetic Testing

Version: 1 Date: 28 Nov 2017

Reviewer: Kristi Graves

Reviewer's report:

Review:

Introduction:

1. The authors correctly indicate that genetic services typically require multiple office visits; however, no mention is made of recent developments related to the provision of genetic counseling by telephone. Two prior trials have demonstrated the equivalence of the provision of genetic counseling by telephone, a modality that is likely of use for rural populations. The authors are encouraged to update the introduction to include this information.

2. Another key barrier to accessing genetic counseling and testing is language; this should be noted.

Methods:

3. The primary outcome based on the question noted on page 4 is awareness of direct-to-consumer tests and may or may not have captured awareness of genetic testing through clinical providers. The authors appropriately note this distinction on the bottom of page 6. Although a nuanced difference, the authors are encouraged to also make this clear in both the introduction and in the discussion (e.g. First sentence on page 6).

4. Were all HINTS surveys completed in English? If so, then the caveat about the results not being generalizable to Spanish-speaking Hispanics should be noted in the discussion.
5. Was family history of disease assessed (e.g., cancer)? If so, this may influence awareness of genetic testing and could be an important covariate. If not, this could be noted as an unmeasured factor that may have influenced awareness of genetic testing.

Results:
6. It is not clear why for the primary outcome the results are reported as (OR = 0.74, 95% CI = 0.63-0.87; results not shown). Which results are not shown? The mean response for this question by geography residence?

Conclusions:
7. This reviewer agrees with the authors for the need for greater awareness about genetic services; however, there is a distinction between greater awareness of appropriate use of genetic services among high risk populations or for use as 'precision medicine' within clinical care and the utility of information obtained from DTC genetic tests. The authors are encouraged to provide greater distinction in the conclusion about level of awareness, appropriate use of recommended genetic services and the currently limited evidence regarding health benefits following DTC testing.

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.
No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?

If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Acceptable

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