Reviewer’s report

Title: Lay and professionals’ views on predictive testing for diabetes based on DNA test results or family history assessment: a qualitative study

Version: 1 Date: 1 April 2011

Reviewer: Richard W Grant

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Summary
This manuscript addresses perceptions of genetic testing vs. family history assessment as they apply to type 2 diabetes. The authors present their analysis of 8 focus group interviews involving a range of patients and contrast with themes raised in individual interviews of 13 “professionals” with a heterogeneous set of expertise. The main findings are that “lay” individuals anticipate potential harms and benefits from genetic testing and that professionals question the predictive value of currently available diabetes genetic testing.

This is an ambitious project in an interesting area with important future clinical implications. However, it is not clear how much useful new or insightful information is provided by this report. The issues that may arise are relatively self-evident. The fact that lay participants did not mention the predictive value is not a surprise since it wasn’t part of the presentation. The meaningfulness of the contrast between “lay” and “professional” is unclear given that most of the professionals were not clinicians. Other (albeit smaller) studies have used focus group interviews to elicit anticipated impact of diabetes genetic testing (e.g. Markowitz et al, Perceived Impact of Diabetes Genetic Risk Testing among Patients at High Phenotypic Risk for Type 2 Diabetes. Diabetes Care March 2011 34:568-573). This paper would be stronger if it focused on important, clinically-relevant questions, such as the contrast between obtaining family hx vs. DNA testing for diabetes in terms of: perceived utility, perceived differences, differences in negative implications, etc. This focus would then lend itself to a discussion that addresses the potential clinical utility of family hx (inexpensive, time consuming) and/or DNA testing (expensive, quantitative).

Major Compulsory Revisions
There are a number of design issues that detract from the utility of the analysis:

1) Participants are given no information regarding predictive value of DNA testing; thus, it is a false comparison to emphasize that professionals are concerned with low predictive value. Patients might be similarly concerned if they were informed of the predictive value. Given that DNA testing was very vaguely described, it is no surprise that respondents focused on more general issues.

2) The definition of “professional” is too broad. This is essentially a clinical question and thus it makes more sense to interview clinicians rather than
These drawbacks need to be fully discussed. The opinions of the “professionals” (other than the clinicians) were somewhat distracting. The paper may be improved by actually deleting them, since there appears to be a fair amount of info from the “lay” persons themselves. Were there any important contrasts between focus groups, particularly between patients with and without diabetes?

Minor Essential Revisions
1) The authors do not emphasize the gender disparity: Over three-quarters of focus group participants are women. This should be clearly acknowledged and discussed in the limitations section.
2) The study was conducted in the Netherlands. Were the interviews conducted in English? If yes, this should be stated. If not, then the translation/back translation methodology should be described.
3) 3rd sentence of Background doesn’t make logical sense: Genetic testing is expected to have less predictive value when traditional risk factors are included in the assessment.
4) P.3, 2nd para, 2nd sentence: “Data” is plural
5) P.5: No need to say “positive” family history; family history of diabetes is enough

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
'I declare that I have no competing interests'