Reviewer's report

Title: Development and Initial Testing of a Computer-Based Patient Decision Aid to Promote Colorectal Cancer Screening for Primary Care Practice

Version: 1 Date: 29 August 2005

Reviewer: Mary Ann O'Brien

Reviewer's report:

General
Thank you for inviting me to review this interesting manuscript. It is the report of the development and initial testing of a computer-based patient decision aid by a group who have previously developed and tested a video-based decision aid. The new study used a before-after design in which 80 patients attending an academic internal practice were approached to view a decision aid. The primary outcome measures were reported as 1) change in intent to ask providers about screening and 2) change in interest in CRC screening. Patients used the decision aid either before or after their visit. After viewing the decision aid, patients' intent to ask for screening increased as did their interest in screening. An interesting and somewhat concerning finding was that only 28% of patients had the test that they preferred and that 40% of patients who indicated that they were not ready to be tested actually had tests ordered and one-third completed screening tests.

All sections of the manuscript are well-written. In particular, the discussion section is clear and appropriately highlights several limitations of the study. I have several comments that I hope will be helpful to the authors.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. A major issue in the design is the inclusion of patients (18%) who were up-to-date with their screening. This appears to have been handled in a secondary analysis by comparing the proportion of patients with completed tests among patients who had previously been screened, were up-to-date with screening, or had previous conversations about screening versus those who had not (page 11). On page 13, the authors state that "screening test completion rates did not differ significantly between those who were already up-to-date with screening and those who were not in compliance". It is not clear whether the authors had sufficient power to detect an important difference between these two groups. As the authors state, patients who are up-to-date may be less likely to have test ordered or completed. Conversely, these patients may be more interested in screening in general as evidenced by the fact that they have completed screening appropriately. Therefore, these patients could be quite different from those who would be the actual target of the intervention that was developed. The main analysis should be clearly reported for both main outcomes (intent and interest) with and without patients who were up-to-date. Further, all data (Tables 1-3, Figure 4) should be presented separately for those who were up-to-date with screening and those who were not.

2. The second issue relates to the low response rate (31%) and selection bias. The authors state that many patients who declined to participate did not have time to use the decision aid. It is unclear why patients were not asked to come in early for their visit so that more patients could be enrolled. The authors also state that they “attempted to enroll patients who were interested in learning about different options for CRC screening”. The meaning of this sentence is not clear. Was there another eligibility criterion, ‘interest in learning’?

As a result of the low response rate, the sample is highly selected and is likely not representative of the typical patient. This is addressed by the authors in the discussion.
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

3. Section 2.1 Development of the decision aid. The authors state that the aid was developed in an iterative manner. More detail is needed about how readability was assessed. The authors should also indicate whether or not there was attempt to balance the information on risks and benefits for each option.

4. Section 2.8 Outcome measures. The use of the word “change” in this section is somewhat confusing. I suggest that the word ‘change’ be dropped here so that the text reads “The primary outcome measures were: 1. intent to ask providers about screening; and 2) interest in CRC screening”.

5. Section 2.9 Line 2. I suggest that ‘standard deviation’ rather than ‘standard distribution’ be used.

6. Section 3.2. Could the authors comment on the clinical importance of a difference of 0.3 (3.2 to 3.5) in patient interest in being screened and a difference of 0.4 (2.8 to 3.2) in intent to ask for screening?

7. Section 3.4. Presumably, some patients received both FOBT and endoscopies (23% had FOBT and 29% had endoscopies which adds to 52% but 43% completed either test). It would be clearer if the authors indicated the percentage of patients who received both tests.

8. The authors should report which IRB approved the study.

9. How was the study funded? Did the support received by Drs. Kim and Pignone also provide funding for the study?

10. Abstract. The conclusion could be more consistent with the aims of the study. I suggest deleting the sentence beginning “We conclude..” and replace it with “We conclude that a computer-based decision aid can increase patient intent to request screening and interest in screening.

11. Regarding the usability testing, more detail should be reported about how these patients were selected.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.