Reviewer's report

Title: A Targeted Decision Aid for the Elderly to Decide Whether to Undergo Colorectal Cancer Screening: Development and Results of an Uncontrolled Trial

Version: 2 Date: 7 May 2010

Reviewer: Robert Volk

Reviewer's report:

This is a very important study as it addresses the challenging issue of providing decision support to patients who may not benefit from screening because of comorbidities associated with diminished life expectancy. The USPSTF recommendation for patients 75 years of age and older is CRC screening be considered at an individual patient level. The fundamental challenge becomes, how to best engage patients in a decision making process when they may not realize the benefit because of competing causes of mortality. Or, as the authors note “…elderly may not understand the effect of competing causes of mortality on the net benefit of screening.”

Major compulsory revisions:

1. Because this is a complex and sensitive topic, more detail is needed about the content of the aid and how these issues were communicated. The 4th key message is the tricky one, and it would help the reader to see more specifics about the aid content/format. This might be done through descriptions in the text, screen shots of the tool, etc.

Minor essential revisions:

1. The development phase is well conceived and described. Was there any feedback during cognitive testing of the key messages about competing causes of mortality and were people able to make a connection that testing might not be worth it for some people?

Given the importance of this area of research and the lack of studies on CRC screening decision making in the elderly, the use of a pre-post design with no comparison group seems justified.

2. Please provide a rationale for using death due to stroke and heart disease in the aid. It is assumed stroke and heart disease were included because they are leading causes of mortality, but this is not stated.

3. The values clarification exercise is well described and interesting. How were the 9 constructs used to develop the card pairs identified? One potential concern is the constructs do not represent the many concerns patients have about CRC screening. This criticism is not unique to this study but should be acknowledged.

Discretionary revisions:
1. Criteria thresholds are used for adequate knowledge (67% percent or greater) and clear values (score of 25 or lower on values subscale of the DCS). These are subjective but appear to be reasonable. A better approach might be to identify key facts which seem to be essential in making an informed decision about CRC screening, but again the current approach may be reasonable for a pilot study.

2. The finding about less favorable outcomes among patients with lower literacy and poorer current health is important as well. Do the authors have any suggestions for how to improve the impact of the aid for these patients?

In summary, this is an important and novel study of decision making in the elderly. The uncontrolled design of this pilot study is appropriate given the population and associated challenges of communicating an uncertain benefit of screening within the context of other comorbidities.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.