Reviewer's report

Title: Reaching the hard-to-reach: A systematic review of strategies for increasing health and medical research with socially disadvantaged groups

Version: 2 Date: 9 December 2013

Reviewer: Mark Rodgers

Reviewer's report:

This review addresses an important issue of perennial concern to researchers. However, in its current form it is difficult to see what new information it provides.

Major compulsory revisions

Tables 1-8 provide a nice concise overview of the barriers and strategies identified across the literature. However, much of the manuscript simply elaborates on this information with extra description, without a great deal in the way of evaluation or analysis. Obviously, only a small proportion of the primary studies were concerned with evaluating strategies, which were included in the relevant 'comparative studies' subsections - but even these sections provided more of a fragmented description rather than any higher level synthesis. It is not until the discussion section that an actual 'synthesis' of the material begins to emerge. I would recommend that the authors emphasise this over the less compelling (and fairly well established) descriptive material.

The authors have identified 31 previous reviews on this subject, including the 2007 UyBico systematic review, which actually appears to address some of the questions raised in this manuscript. The authors should make it clear what the current review adds to the existing literature, other than a greater breadth of scope.

The discussion of methodology and study design seems overly simplistic given the breadth and complexity of the material they are trying to bring together. The hierarchy in Table 2 and various parts of the text suggest that RCTs are the ideal form of evidence, and that qualitative studies are 'poor'. How true this is depends on the question being asked, and the authors are asking more than one question in this review. In their identification of barriers, then qualitative research is likely to be more helpful than RCT evidence; for evaluating strategies, the reverse is likely to be true. I'm sure the authors are aware of this, but it doesn't really come across at the moment.

Minor essential revisions

As this is a systematic review, the authors should check that it fully meets the PRISMA reporting standards. For example, though a study selection flow chart is given in figure 1, it does not state the reasons why studies were excluded at each
stage. It is also unclear whether there was cross-checking during the study selection process (it sounds as if two researchers selected independent sets of studies).

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

**Quality of written English:** Acceptable

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