Reviewer’s report

Title: Applied public health research - falling through the cracks?

Version: 3 Date: 3 September 2009

Reviewer: Graham Moore

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The authors have for the most part addressed comments well, but some minor issues remain which could strengthen the arguments made.

Discretionary Revisions

You talk about ethical objections with withholding a programme from patients who: ‘had recently been identified as in need of a tailored exercise programme’. There is an important distinction between a person being identified as needing to become more active, and a person being identified as needing a specific form of intervention which has not been convincingly shown to be an effective means of achieving that end. The arguments surrounding the potential impacts of removing an established service and restarting it as a trial are perhaps more convincing as justifications for not using an RCT.

‘In addition, RCTs usually start from an assumption of equipoise — i.e. a position of not knowing which of two competing interventions is more effective, or not knowing whether an intervention is likely to be beneficial or harmful [17] — but in practice, previous research may suggest otherwise. In this case, a recent systematic review based on 18 studies (including six RCTs) has identified that exercise referral has a small but significant effect on increasing physical activity in some people [18].’

I'm not 100% sure I follow your argument here, so some rewording may be useful. Are you saying that this review indicates that equipoise is no longer an issue? If so this is perhaps a little inconsistent with your later comment that equipoise should consider the cost of an intervention. ER schemes may be expensive, and the small impacts demonstrated in (e.g. number to treat of 1 in 17 demonstrated in Williams and colleagues study) may not be sufficient to conclude that equipoise no longer applies.

'Methodologically weaker RCTs (for example, those with small numbers of participants, low and differential retention rates, imprecise outcome measures and lack of attention to allocation concealment) should not necessarily “trump” methodologically stronger observational studies [20].

I completely agree with this point, but I think the authors arguments could sometimes be strengthened by avoiding what sometimes reads as a somewhat one-sided attack on RCT methods. For example, whilst the authors cite one study which reported difficulties with wait list control groups to justify their objections to this approach, what about other RCT studies which have used wait
list controls without such difficulties? Is there evidence that the observational study will in fact attract a more representative sample than would an RCT, or would this too suffer selection biases, particularly perhaps where using objective measures of PA, presumably with small subsamples? You comment on the quality of RCTs in the field, but what about the quality of observational studies? Do they suffer similar limitations?

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.