Reviewer’s report

Title: The efficacy of computer reminders on external quality assessment for point-of-care testing in Danish general practice: Rationale and methodology for two randomised trials

Version: 3 Date: 20 May 2011

Reviewer: Bernard Croal

Reviewer’s report:

Major Compulsory Revisions - None

Minor essential Revisions - None

Discretionary Revisions - as discussed below.

1. Will the study design adequately test the hypothesis? - Yes
2. Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing? Yes
3. Is the planned statistical analysis appropriate? Not qualified to fully comment.
4. Is the writing acceptable? Yes

Overall Protocol Review

Thank you for the opportunity to comment on this protocol. Point-of-Care Testing (PoCT) as a means of primary analysis is increasing dramatically across the world. Unfortunately, the necessary quality standards that should be in place to support PoCT are in a lot of instances not. These planned studies are therefore very much welcomed as they will try to assess the impact of intervention aimed at increasing the uptake and potentially performance of an external quality assurance scheme (EQA) for PoCT.

The first comment to make however would be that the actual mechanism for assessing “EQA” for PoCT employed in this area is one that could be regarded in many settings as inadequate. Split sample analysis while providing a basic comparison between a lab method and the PoCT method would not cover the same assessment as that provided by a more standard EQA scheme employing full external analysis and peer comparison with other labs using similar methodology. While this is a criticism of the nature of the EQA scheme employed, it is not necessarily relevant to the quality of these planned studies, and so there is no suggestion that this aspect should be changed. It may that in this region, or indeed in this country, that EQA of this nature is deemed to be satisfactory. It is the case that in many instances around the world, PoCT is carried out with no associated EQA. It may be therefore that the results of this study may in some way be generalisable to other more complex forms of EQA and the associated compliance.
Overall, I find these studies very well thought out, with much thought and planning going into comparing standard practice with reminders sent by post and by electronic means. It is noted that the comparative effect will be difficult to tease out across different types of test – for example the effect of reminders may be more noted in PoCT involving INR due to the apparent more serious nature of the test/consequences for producing a wrong result. Thus, a direct comparison of electronic delivered reminders will not be made in this setting for INR with standard practice.

Not being a statistician, I can only assume the power calculations are correct. I remain unsure as to why only 4 months was chosen for the intervention period – perhaps 6 months could be considered as an alternative so as to allow more time for non-compliance to surface and for the effect of reminders to become apparent. This however is only a suggestion and will however increase the study period which may have other consequences, including the cost of the study.

I therefore find these planned studies adequate in their ability to address the research questions of whether such reminder intervention can improve compliance with their EQA scheme. The secondary outcomes of whether there is an associated change in analyser performance (i.e. comparative agreement) is interesting but I am not sure whether there is any hypothesis that could be suggested that may drive such a change. Analyser performance should be an independent function regardless of whether EQA schemes are in place. It may be however that there will be occasional “flyers” or even identification of rogue analysers as a result of EQA performance – whether there will be time for replacement/improvement to be realised within the 4 month study period remains to be seen.

These studies are therefore important and should identify whether these different interventions for improving compliance and performance within an EQA scheme for PoCT do actually have an effect. The outcomes may direct other similar laboratories/community sites to interact in this way if found to be effective.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

None