Author's response to reviews

Title: An explanatory randomised controlled trial of a nurse-led, consultation-based intervention to support patients with adherence to medication taking for type 2 diabetes

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Dear Dr Muris

Thank you for inviting us to respond to a further point raised by referee 1. We are happy to add a few additional lines to our discussion, expanding on the comments already made about the discrepancy between the results of the self-report measure and the objective electronic measure of medication. We have revised the section to remove some of the text already in place and added a more detailed explanation, pointing out that the self-report and electronic monitor measure different aspects of adherence and that the self-report measure could be subject to bias between the study groups as a result of differential exposure to the intervention. The added paragraph is as follows

"Self reported adherence, as measured by the MARS self-report questionnaire, did not differ between intervention and usual care groups. MARS attempts to capture awareness of non-adherence due to forgetting, altering, stopping, missing or taking less medication than prescribed. Moreover, estimates of adherence were close to maximal in both groups as has been found elsewhere.17;27 Thus, while the MARS results did not confirm our principal outcome of electronic monitoring, it may be because the latter is measuring a different component of adherence, being more sensitive to unconscious
non-adherence, and also that it is less constrained by ceiling effects. Self-report measures, when used in trials may also be difficult to interpret as they are more susceptible to outcome preference bias."

Thank you again for your interest and, on behalf of our co-authors, we hope that this addresses the reviewer's comments.

We include both a clean and a tracked version of the revised manuscript.

Yours sincerely

Andrew Farmer

Ann Louise Kinmonth