Author's response to reviews

Title: Care Management for Patients with Type 2 Diabetes: A Systematic Review and Meta-analysis of trials in the last decade

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Version: 3 Date: 10 February 2012

Author's response to reviews:

Dear Dr. Persell:
Thank you for providing us with reviewer comments so that we may better address the needs of your readership. The following provides a point-by-point response to reviewer concerns and the applicable changes are reflected in the updated manuscript version:

REFEREE 1 (Dr. Bonnie Wakefield)

Concern A. Literature strategy includes any language, any population. This is vague.
Remediation: This language was redundant in context of other descriptors and is now deleted, (pg. 8.)

Concern B. “Care Management” and “Carve-out” not adequately defined.
Remediation: We have defined these terms better, (p. 7).

Concern C: Wide variation in study interventions not adequately addressed.
Remediation: We agree. We highlighted this as a limitation in (p. 16). We attempted to explore heterogeneity in subgroup analysis although such analysis were underpowered.

Concern D. Unclear if attention control and low intensity controls were in usual care group.
Remediation: They were, and this language has been added, (p. 8).

Concern E. Forcing singular assignment to delivery method biases toward the null as many studies had multiple delivery methods.
Remediation: Reviewers made consensus assignment when there was a discernible primary intervention. Doing so when the study was less clear is a
limitation of our analysis and is more explicitly addressed as such (p. 17).

Concern F. Study quality assessment method(s) unclear.
Remediation: While we did not use an explicit scale to assess study quality (eg, Jadad); we did assess study quality based on several common methods: patient inclusion criteria, study arm balance at baseline, randomization, blinding and group allocation. We added summary statements summarizing the overall quality (P. 11). Study features can be found in an attachment, (Supplemental Table 2. Quality of Studies).

Concern G. Meta-analysis exclusion criteria unclear.
Remediation: Studies could not be included in meta-analysis if the A1c and or LDL values with measures of precision (i.e., standard deviation, standard errors, etc) were not provided at two time points, and/or if the patient sample size was not given at two time points. This has been better described, (p. 10).

Concern H. Some segments of results too vague.
Remediation: “Laundry listing” of studies without end-noting was redundant and has been removed, as it did not meaningfully contribute to the report. Elsewhere, when multiple studies are cited, and meaningfully develop the discussion, citations are present. When a singular example is used, PI author last name is employed, followed by endnote citation. Further, studies’ categorizations can be seen in supplements, (throughout, and supplements).

Concern I. The Meta-analysis approach is not described in enough detail.
Remediation: We have added more specifics regarding our meta-analytic approach in the Research Design and Methods section. (p. 10)

Concern J: The Discussion is under-developed.
Remediation: We have added structure and significant content to the discussion section, specifically with regard to a large CMS demonstration project featured and the Chronic Care Model. (p. 17)

Minor Revisions: Link the study purpose more clearly to the Chronic Care Model; clean up sentence clarity and correctness; be clear if we are listing examples or an exhaustive list.

Remediation: We have more thoroughly defined the study purpose in relation to the Chronic Care Model (introduction and discussion sections), and have tightened up the grammar, (p. 7 and throughout).

We thank Dr. Wakefield for the time in providing these constructive comments.

REFEREE 2 (Dr. Patrick O'Connor)

Concern A. Add CMS care management results to discussion: there is no cost savings, and (as yet) no clinical impact has been reported.

Remediation: We are particularly grateful for this late-breaking NEJM article, and have added it to our discussion, (p. 17) This study shows similar conclusion to ours (i.e., these care models lead to process measures improvements with unclear effect on patient important outcomes).
We thank Dr. O’Connor for the time in providing these constructive comments, and the endorsement for publication.

REFEREE 3. (Dr. Xuanping Zhang)

Concern A. Explain limited time frame, as it magnifies publication bias.
Remediation: Our intention was to look at the last decade because others have summarized data published previously. We hoped to present a somewhat contemporary evaluation of these care models. The reviewer astutely points out that this view maybe biased as it ignores older data. We have made this more explicit in our discussion. The primary purpose of the time frame was to make it a paper on current/emerging trends in diabetes care management, (p. 18).

Concern B. “Delivery method type” and “leadership type” categories were confusing and not mutually exclusive.
Remediation: We agree that these may not always be mutually exclusive. Nevertheless, assigning a category is needed to perform some sort of a subgroup analysis. Multiple reviewers met to discern modes and leader types, and categorized them by consensus. We added this text to highlight reviewer’s concern:

… Lastly, we used a consensus process to categorize study intervention methods to allow comparison across these methods. However, assigning intervention methods to mutually exclusive categories could have biased the observed effects toward the null.

Concern C. Length of Follow up should be taken into account in the meta-analysis.
Remediation: Length of follow-up was evaluated in sub-group analysis within the meta-analytics, by dichotomizing to \(\leq 1\) year; \(>1\) year, with no significant effect. This is clarified in the methods section, (p. 10)

We thank Dr. Zhang for the time in providing these constructive comments, and the endorsement for publication.