Reviewer's report

Title: Prevalence and Clinical Impact of Magnesium Disorders in End Stage Renal Disease: A Protocol for a Systematic Review

Version: 1 Date: 5 November 2014

Reviewer: Mark Rodgers

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. Please see below for my detailed response:

1. Is the study design appropriate?
   Yes.

2. Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing?

   No. The objectives are clearly stated, and the authors outline some standard systematic review processes, but the rationale for the approach is not clear, and there is very little detail on the nature of the data to be reviewed. To be replicated, the authors would need to provide substantially more detail. For example, the authors mention that both observational studies and clinical trials will be included and imply that specific eligibility criteria for each type of study design will be set out in a PICOS / PECOS format. However, the selection criteria outlined in the protocol are actually quite broad and generic.

   The authors later state that QUADAS-2 will be used to assess quality. This is usually used to assess diagnostic accuracy studies; it is not clear why they have chosen this tool to assess observational studies and trials in which the measures of interest are prevalence and CV outcomes. The sources of bias are likely to differ between the different study designs and measures; it would be worth knowing (a) which aspects of study quality are of interest and (b) specifically how quality assessment will inform the analysis/discussion.

3. Is the planned statistical analysis appropriate?

   Unclear. There is a generic paragraph on meta-analysis but is is not clear how this relates to the proposed review. For example, it states that the results will be expressed as odds ratios, relative risks or risk ratios, all of which are dichotomous measures. A synthesis of prevalence data would not use dichotomous measures, but would have certain other considerations that need to be mentioned here.

   The authors are clearly knowledgeable on this clinical topic, but may benefit from the input of a statistician or health service researcher to help expand upon some of the methodological content of this protocol.

4. Is the writing acceptable?
Yes, though greater detail is needed on the proposed methods, including the reasons for choosing these methods.