**Reviewer's report**

**Title:** A review of the prevalence and determinants of nonadherence to phosphate binding medication in patients with end-stage renal disease

**Version:** 1  **Date:** 15 October 2007

**Reviewer:** Elisa Gordon

**Reviewer's report:**

**General**

Overall, the paper was well organized, well written, and provided a clear review of the state of empirical research on rates of adherence to phosphate medications in the literature. The analyses and interpretations are appropriate. There are several moderate concerns that, if addressed, would help to strengthen the paper. These are outlined below.

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**Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)**

First, what makes it timely to do the review? That is, what is the motivation for or what prompted the review? What will readers do with the findings obtained from the review? Of course reviews are important to do, but say why this is important. That is, give the rationale beyond merely stating (as in the abstract) “There is a need to establish the level of nonadherence to phosphate binding medication”.

Second, have there been previous reviews of adherence to phosphate binding medication? If so, these should be reviewed in the background section of the paper. If not, say so.

Third, in the methods section, the inclusion of additional terms in the literature search criteria (for column 1) may have helped to broaden the set of articles found within the literature review, e.g., consider adding ‘peritoneal dialysis,’ and ‘ESRD.’

Fourth, and importantly, the search criteria did not include qualitative studies. This is problematic because many studies that examine psychosocial factors in adherence are qualitative in nature. So, in a way, the results of the review are biased by not including this type of research in your search criteria. And then the manuscript expresses concern about the limited number of quantitative studies that include the psychosocial factors. So, this limited number of psychosocial variables examined in the literature is not surprising. The paper would be strengthened if qualitative studies were included in your review. Otherwise, you should justify why you excluded the qualitative studies, as this is not self-evident.

Fifth, I would have liked to have more discussion in the conclusions about the
value or importance of this literature review, and what take home messages the reader should come away with. Adding your evaluation of these studies would help. That is, when considering that 22-74% of patients are nonadherent, it would help to add something roughly along the lines of “such figures must be interpreted in light of the variation in definitions and methodology used.”

Sixth, there should be a section on Analysis that describes how you approached the analysis of the literature and statistically analyzed the quantitative data within the reviewed articles.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Minor grammatical: page 11, pp 2, line 3, insert ‘as’ between ‘limitations’ and ‘discussed’.

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Discretionary Revisions (which the author can choose to ignore)

Based on experience interviewing dialysis patients, another difficulty that patients raise about taking phosphate pills is their large size. Accordingly, patients have repeatedly referred to them as “horse pills.” On page 8, your point about the ‘large tablet burden’ could be bolstered by adding a statement that the large pill size is also perceived as burdensome to patients.

Your findings about the quality of social support rather than the quantity of social support serving as a predictor variable of adherence is consistent with what the broader social support literature generally states (as it pertains to other outcomes).

Do you want to add any comment about adherence in dialysis more broadly? That is, this review reveals the same demographic and other correlate trends as adherence to other aspects of dialysis treatment/regimens. Stated differently, your review findings are not surprising given that the same trends occur in other studies of dialysis adherence. It may be worth adding this point and what this may mean for dialysis patients overall and the study of adherence in general.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.
Declaration of competing interests:

I declare that I have no competing interests.