Reviewer's report

Title: Cost-effectiveness analysis of timely dialysis referral after renal transplant failure in Spain

Version: 2 Date: 7 April 2012

Reviewer: Marta Trapero-Bertran

Reviewer's report:

Dear author,

Thank you very much for this interesting piece of work, is well written and easy to follow. The question established in this paper is well and clear defined. However, I would suggest some major compulsory revisions:

1. Results in Figure 3 show that a percentage of Monte Carlo Simulations appear to be in the north-west quadrant and south-west quadrant, however Figure 4 does not seem to show the probabilities of getting these results. These results are quite worrying showing that there is a notorious probability for the on-time intervention not to be cost-effective. The authors quite strongly conclude that this on-time strategy is cost-effective and advice authorities to promote this alternative, whereas I do not think that this is possible looking at the results from the probabilistic sensitivity analysis. Probably, further deterministic sensitivity analysis should be carried forward to detect which are the most sensible parameters and which parameters are the responsible for this wide variability on results;

2. Results reported at the end of page 7 regarding the multivariate sensitivity analysis?? (I imagine that this refers to the probabilistic sensitivity analysis!!) are not good results regarding how efficient is the on-time strategy (i.e. 26.20% of dominance is just showing that this new strategy does not seem to be dominant in many of the simulations. Therefore, you can never recommend a new strategy with this low percentage of being dominant or cost-effective);

3. Results in Table 3 should be reported with the main correspondants statistics (95% CI and standard errors). Therefore, the reporting of results does not adhere to the relevant standards for reporting economic evaluation results;

4. The discount rate used in the model is for a UK context. There are some recommendations in the Spanish literature about using a 3% discount rate (Lopez Bastida et al. Gac Sanit.2010; 24(2):154–170);

5. In page 6, just before the results section, the different distributions assumed for each of the parameters are described. However, no details for each parameter are given regarding the standard deviation and 95% CI used to carry out the probabilistic sensitivity analysis;

6. In page 7, the first paragraph states that “the univariate sensitivity analysis showed that model results were robust”. However, no further details are given
about which parameters are tested in this univariate deterministic sensitivity analysis;

7. There are not clear stated weaknesses/limitations of this analysis in the discussion section;

8. Along the whole analysis, the group of patients modelled is not really justified and clear. It looks like is a group of patients aged 40, but there has no been justification for it (i.e why patients only 40 should only receive this intervention? Why not other older or younger patients?);

9. Cost-effectiveness ratios and cost-effectiveness threshold are expressed with differentials. This is not correct. For instance, when talking about the cost-effectiveness threshold authors should refer to 35.000€/QALY, or when reporting results such as an ICER of 25143€/QALY. The differentials in here has got no sense;

10. The paper does not justify which are the consequences for the Health System of late referral (page 3);

11. In page 6, authors refer to costs as “transition costs”. I do not know exactly what does this mean;


Minor Essential Revisions

13. Information on Tables 1 and 2 could be combined;

14. Authors report in the results section (page 6) life years gained as a measure, whereas in the methods section this measure is not established as a result that would be used or studied;

15. Along the whole analysis, no information on which year costs have been calculated for (i.e. prices 2012?).

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests