Reviewer’s report

Title: Using and interpreting cost-effectiveness acceptability curves: An example using data from a trial of management strategies for atrial fibrillation

Version: 1 Date: 11 November 2005

Reviewer: Jeff Hoch

Reviewer’s report:

General

I found the paper very interesting. I wondered whether people who did not know how to make a CEAC would also not know how to bootstrap. If so, the paper will not actually help these people make CEACs since they will be unable to figure out how to do the bootstrapping step.

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

See below.

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

1) The ICER formula on page 6 could benefit from the specification of "average" in front of Cost and Effect.

2) Page 9: "however, these independent observations..." Do you mean observations as in the points you have raised earlier in the paragraph or do you mean observations as in the points on the cost-effectiveness plane? If it is the latter, then I think the points provide a lot of information about the joint uncertainty in the estimate of incremental cost-effectiveness.

3) Page 12: Perhaps making reference to the Fenwick et al. (2004) reference, please explain why the CEAC has a decreasing slope.

4) Page 13: Consider discussing why the CEAC is a 100% when lambda = $0 and what the CEAC is when lambda = $\infty$. This could be done in the context of stating that there is no magic lambda (e.g., $50,000) that is more correct than any other lambda. This could be facilitated by reporting right on Figure 2, the % of dots in each quadrant.

5) Page 14: "The graphic representation using..." Another reason the CEAC is good is because it discourages perpetuating the myth that some lambdas are more correct than others (e.g., $50,000 is better than say $23,000). With the CEAC, the decision-maker can choose the lambda that suits her, and then look at the results. There is no need for analysts to make their value judgements about what represents value for money in a decision that is not theirs to make.

Discretionary Revisions (which the author can choose to ignore)

i) Page 8: "How sure can the clinician or decision-maker be
that this is the correct conclusion to make?”

Missing a word here?

ii) Page 8: “This uncertainty introduces the possibility of error into decision-making” Did you want to explain why? That is, why would uncertainty lead to error?

iii) Page 11: Consider noting that a CEAC is like a sensitivity analysis with lambda.

iv) Page 11: Consider using a $ for values that lambda equals.

What next?: Accept after minor essential 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

Declaration of competing interests:

I declare that I have no competing interests