Reviewer's report

**Title:** Bridging health technology assessment (HTA) with multicriteria decision analyses (MCDA): field testing of the EVIDEM framework for coverage decisions by a public payer in Canada

**Version:** 1  **Date:** 9 May 2011

**Reviewer:** Paule Poulin

**Reviewer's report:**

This objective of this study was to field-test a decision support framework (EVIDEM) and explore its utility for a drug advisory committee. Essentially there appear to be three Field test components to the paper’s argument:

1. Weight (weighting the importance of each decision criterion)
2. Score to appraise Tramadol on each criterion followed by the calculation of a “Quantitative Appraisal Score” and a systematic consideration of qualitative impacts of contextual decision criteria on the appraisal
3. Utility and validity of the framework was explored using discussion, survey and test-retest

Arguments are presented to show that the committee found the framework useful in supporting the systematic consideration of a broad range of issues when appraising technologies, and to show that the framework is good to lead group discussions and ensure transparent and consistent consideration of important elements that may affect decision making. This is very important and well demonstrated.

The paper presented an HTA report tailored to each decision criterion regarding Tramadol – Synthesized info for each criterion is important and the lack of available data for many of them is also well documented. This is good because it clearly documents the lack of data and this may be helpful in describing gaps in our knowledge. This is excellent and well demonstrated

The paper makes these arguments in an articulate manner, drawing on the literature and an illustrative example. The paper makes a useful contribution to the need for the development of practical framework to help bring evidence along with others factors that needs to be considered when evaluating technologies (drugs in this case) for funding consideration. Overall paper well written and the information provided useful.
I have a number of comments and suggestions which translate into a series of recommendations, some optional, others considered compulsory. These are:

1. The main difficulty I have with this paper is the “Quantitative Appraisal Score” which has limited appeal. It attempts to squish many dimensions into a single number. People have a lot of trouble with costs per quality. I struggle with these, even though they are simple ratios. I'm always apprehensive of attempts to compress complicated information into a single number. Quantitative appraisal of Tramadol has an estimate of 0.44 (normalized Weight x Score) –what does that mean for decision makers? Are they able to interpret such number? The Authors mentioned that there is no reference point so interpretation is difficult, but even if there was some reference points, are such numbers useful? Would there be other analytical approach that may be more helpful? For this issue I recommend that a statistician be consulted to investigate alternative quantitative analytical approach.

2. The second difficulty I have with this paper is the claim that the framework is useful in making decision. While the Field-Test of EVIDEM was well carried out, and clearly demonstrated that the framework promoted the explicit consideration of a wide range of criteria by decision makers, because there was no “decision” reported from the case study, the authors cannot claim that the EVIDEM framework supported decision making in practice. It would be more accurate if the authors stated that the EVIDEM framework supported the evaluation of a technology in practice. Alternatively, the authors could present the decision made with regards to the Tramadol case study and how has the framework helped in making that decision.

Minor essential amendments

1. A more critical treatment of the “Quantitative Appraisal Score” including a discussion of potentially more appropriate analytical approach (with the help of a statistician) or the removal of the quantitative analysis.

2. Removal of the claim that the framework was useful in supporting decision making unless the decision is presented in the context of the framework.

3. Tramadol was selected by the drug advisory committee as a good case study–Why?

4. Background 3rd para: The authors stated “if kept simple, it facilitates….”, My question is: Did the Committee find the process simple? How long did the Committee take to go through the weighting and scoring process? The authors reported that there was a concern about developing HTA report but was there an issue with the time involved in using the framework to make a decision? Was there a decision made? It would be useful to have a discussion on this point.

5. Also, it would be useful for the audience to know if the authors have done work to describe whether or not the criteria overlap? If they overlap, this would indicate one limitation of the framework.
Discretionary
The order and the headings of the items described in the methods and results and discussion section is not always consistent. Revision for consistency of presentation would be useful

Discussion 5th para: While the authors describe that (… MCDA value estimates obtained by applying this framework are committee-specific…) it would also be informative how much similarity or differences there may be between different committees that have field-tested the framework.

Health Technology Assessment Report: I am not sure if describing how the reports were done is relevant to this manuscript unless the decision made is also reported.

The authors should be careful in their use of the term “Value” It has different meaning in different line of the manuscript – sometimes it represent the “Weights” (the importance of a criterion), sometimes it represents the calculated MCDA Matrix Estimate.

Result, 2nd paragraph: MCDA value estimate paragraph may be best as part of the discussion

Results: I was not able to evaluate the validity of the HTA report and appraisal of tramadol for chronic non-cancer pain section. I believe this section should be reviewed by an expert in the field.

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

Quality of written English: Good

Statistical review: Yes, the manuscript needs to be seen by a statistician

Declaration of competing interests:
I declare that I have no competing interests

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
'I declare that I have no competing interests'