Reviewer's report

Title: Teaching students about uncertainty: the findings of a qualitative study focusing on cultural diversity

Version: 2 Date: 28 July 2006

Reviewer: Desiree Lie

Reviewer's report:

General

This is a research paper that addresses the concept of uncertainty and ambiguity as an important pedagogy in medical education and presents a cogent argument from the education literature, especially from medical student selection, psychiatry and medical specialty comparisons, that the practice of medicine should not ignore the explicit teaching of ambiguity and uncertainty as part of the humanistic dimension of healthcare. The paper asserts or opines that tolerance for ambiguity is a positive attribute for the practice of medicine, should be explicitly documented in the medical school selection process and should be taught and encouraged during training. From this perspective the paper then argues for using diversity teaching as a model of ambiguity teaching and goes on to present the results of a qualitative study of stakeholders from UK educational institutions as an example of the importance of teaching diversity as a way to teach ambiguity and uncertainty. The premise for selecting diversity or cultural competence as the model topic for teaching uncertainty (as opposed to clinical reasoning, the Humanities, bioethics, palliative care or integrating this into within existing courses such as Family Medicine, Women's Health or Internal Medicine) is not clearly explained. As a result the reader has to make a conceptual leap (i.e. accept as fact that diversity is a good topic within which the hypothesis fits) to then find justification for the composition of the stakeholders interviewed, and the questions used for the interviews. Unfortunately these questions were not about uncertainty and ambiguity but about cultural diversity. So another conceptual leap has to be made to link the questions, which are framed around cultural diversity (where and how it should be taught in undergraduate medical education), to fit the primary hypothesis. The discussion of the results of the study focuses around the influence that stakeholders and students have on diversity education and assert that self-reflection and a realistic depiction of uncertainty may be missing in current models of medical education. Within the results section, discussion is provided after selected quotes from respondents, to highlight and make points about pedagogy, the administration of educational programs and inadequacies of current models of teaching diversity and uncertainty. In the discussion section, clinical reasoning and the Humanities are brought up as other models within which the teaching of uncertainty can occur and mention is made of the role of the informal curriculum (teaching or learning outside the classroom). However a linkage between these models and diversity training is hard to discern at this stage. The conclusion is general, and expands on the dichotomy between techno-centered vs. humanistic educational approaches already alluded to in the introduction, and does not tie together the qualitative research findings and the original hypothesis - that greater emphasis should be paid to the teaching of ambiguity or uncertainty. The conclusion fails to adequately explain how the research findings support the hypothesis.

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

A major revision that justifies the use of diversity teaching as THE model for teaching uncertainty and ambiguity in medical school is recommended. If this is in fact not the premise of the research hypothesis, then a second approach would be to ask the stakeholders about how and where uncertainty and ambiguity should be taught in the curriculum and to allow a much broader conclusion within which cultural diversity is only a part of the equation. This is clearly a different study altogether. If neither of these suggestions adequately describe the rationale for the project then some other way of presenting the link between uncertainty teaching and cultural diversity as a model that advances this teaching (taking precedence over other models like clinical reasoning or Humanities) needs to be argued. In other words, a clear description and definition of the nature of this study needs to be made - is this a descriptive study that simply summarizes what selected stakeholders think about diversity training, or is this a paper about whether the teaching of uncertainty in medical school is best addressed through the diversity training curriculum (and if not, where is uncertainty best taught then?).

A second major revision suggested is to shorten and focus the introduction and reduce the emphasis on ambiguity, instead focusing on diversity teaching and the role of the selected stakeholders (why they are
important in this particular research). For example, it is not clear why patients, residency program directors and medical students or other health professions involved in their training are not included as stakeholders since studies using these types of respondents are included in the introduction.

A third major revision suggested is to provide a discussion of general points outside the context of selected individual quotes in the results section (p. 18 to 23) as is the norm in research reports. Since the authors provide only a selected number of quotes it would not seem to be appropriate to use these quotes to advance their position without a clear overview of other quotes that are not selected. The reasoning behind the selection of quotes is not transparent, which introduces a suggestion of bias.

A last major revision suggested is to expand the discussion section (using the current discussion embedded within the results section) to really argue for why diversity education is eminently suited to the teaching of uncertainty, if this is in fact the true conclusion reached by the authors (this is currently only a conjecture based on my reading).

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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)

The suggested major revisions preclude comments about minor revisions at present.

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Discretionary Revisions (which the author can choose to ignore)

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

Declaration of competing interests:

I have no competing financial or non-financial interests in this paper.