Author's response to reviews

Title: Identifying outcome-based indicators and developing a curriculum for a continuing medical education programme on rational prescribing using a modified Delphi process

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Version: 2 Date: 5 March 2008

Author's response to reviews: see over
Re: Revision – Identifying outcome-based indicators and content for a continuing medical education programme on rational prescribing using a modified Delphi process

MS: 1331383761738392

Dear Dr. Zauner,

Thank you for your letter dated 13th of February, 2008 regarding our manuscript and for the valuable comments from the reviewers. We have considered the reviewers’ comments carefully and revised the manuscript accordingly. In our response letter, we have commented on each of the reviewers’ comments and also shown the changes we have made in the text.

Having considered carefully the comments we received, we have also decided to make a small change in the title to better reflect the focus of the article. It now reads, “Identifying outcome-based indicators and developing a curriculum for a continuing medical education programme on rational prescribing using a modified Delphi process”.

We hope that the corrections we have made will meet your requirements for publication.

On behalf of all the authors

Yours sincerely,

Hamideh M. Esmaily
RESPONSE TO COMMENTS FROM REVIEWERS
MS: 1331383761738392
MS TITLE: Identifying outcome-based indicators and developing a curriculum for a continuing medical education programme on rational prescribing using a modified Delphi process

Responses to the comments from Dr. John Yaphe

1. Introduction
The authors state the case clearly for the need for this study. The references to papers on effective CME and OBE are current and relevant. It might be worth mentioning here or in the discussion that other researchers have used the Delphi process to identify errors in prescribing with similar findings. I suggest they read and refer to the papers of Dean et al. What is a prescribing error? (http://qshc.bmj.com/cgi/content/full/9/4/232) and Ghaleb et al. What constitutes a prescribing error in pediatrics? (http://qshc.bmj.com/cgi/content/full/14/5/352) Walley and Webb also used the Delphi method to develop a curriculum in pharmacology and therapeutics. (Br J Clin Pharmacol 1997; 44: 167-170)

We thank Dr. Yaphe for the suggestions and have now added the references to the first paragraph under the heading Discussion.

“The Delphi technique was chosen in order to distil the opinions of several experts and reach consensus without geographical constraints [25] and with heterogenic groups as in this study [26]. A panel of selected experts has been used in other Delphi studies to identify prescribing errors in order to increase the validity of the findings [27, 28].”

2. Methods
The Delphi process was explained clearly and was well conducted. There was purposive sampling of a wide range of experts and stakeholders.

Thank you.

3. Results
I would like to know if the 9 non-responders in the first round were all from one professional group (e.g. all GPs or all medical specialists) to assess bias.

We have inserted the desired information into the first paragraph under the heading Results.

“Nine of the participants (four medical specialists, two pharmacologists and three pharmacists) did not answer, despite the reminder we sent out one month later.”

For the purposes of clarity and comparison, we have also added information on which categories the expert group represented to the paragraph under the heading Methods/Participants.

“We selected 30 stakeholders who had a background from at least one of the following categories (some represented several categories): 1) seven experienced GPs, 2) four CME decision makers from Iranian medical science universities with a background in
The main findings are clear and have content validity. Thank you.

In Table 1, I might reword Point 9 as adequate duration of treatment rather than adequate course of treatment.

We have taken Dr. Yaphe’s advice and replaced the phrase “course of treatment” with “duration of treatment” in Table 1 (entry nr 9) and Table 2 (entry nr 11).

Point 12 in Table 1, homogeneity of prescription per individual is not clear. I do not know what the authors mean. Can this be reworded?

“Homogeneity of prescription” refers to the fact that all drugs on the prescription should be for the same individual. An explanatory text has been added to Table 1 (entry12) and Table 2 (entry 16).

“To consider homogeneity of prescription per individual (all drugs prescribed pertain to the same individual)”

4. Discussion The discussion clearly reviews the major findings of the study and their importance. Thank you.

It is not clear what the reference to Bloom’s taxonomy adds on page 11.

We agree that the connection is not entirely clear and rather than develop it further, we have chosen to omit the sentence that begins “A taxonomy such as Bloom’s…” at the end of the eighth paragraph of the previous version (which is seventh paragraph of the new version) under the heading Discussion.

Perhaps the authors might give a specific example of how they would define, teach and assess important skill objectives or attitudinal objectives that are missing from the list of objectives they obtained in their Delphi process.

Reflecting over this point that Dr. Yaphe raised, we have worked on more clearly explaining why we believe that adverse drug reactions (ADR) were not mentioned in the Delphi process, although this topic was later incorporated into the curriculum. Based on this more clear explanation, we would argue that knowledge about ADR is a prerequisite for certain outcomes, such as avoiding prescribing drugs with negative interactions or similar pharmacological effects. As ADR is thus related to the already existing outcomes, there is less of a need to develop a method to complement the process used for determining outcomes and developing content and the curriculum. To lessen the possibility for confusion, we have also omitted the formerly sixth paragraph under the heading Discussion that began with “One explanation could be that…” and changed the eighth paragraph of the previous version (which is seventh paragraph of the new version) under the same heading so that it reads:
“Another more distinct explanation for why the initial Delphi process did not elicit a topic that content developers deemed essential could be the formulation of the instructions for the Delphi process. The task was to identify what should be included or considered when doctor writes a prescription. We believe this to be the main reason for not suggesting ADR as an outcome indicator as information on ADR cannot be written directly in the prescription. However, since ADR has to be considered before a particular drug is chosen, content developers included this topic in the curriculum. While it would have been possible to develop direct outcomes and indicators for ADR, ADR can be seen to indirectly be part of and important in achieving some of the other outcomes, such as avoiding prescribing drugs with negative interactions or similar effects or prescribing injections too frequently.”

I agree with the authors’ emphasis on the constructive alignment approach. Outcomes need to be tied to content and assessment as well as teaching methods. The next step would appear to be involvement of the target audience, i.e. the GP’s themselves in the construction of the course. This was the key message in our paper (Reference 9) that the authors kindly quoted.

We completely agree with Dr. Yaphe on this point and have rewritten the second paragraph under the heading Discussion to make this more explicit.

“We began the Delphi process by creating a preliminary list of potential learning outcomes through a literature review and then made use of experts’ opinions to develop and prioritize these outcomes. These experts were involved in CME either as decision makers or trainers. GPs representing the target audience were also included as a way of improving the relevancy of the programme as has been described previously [9]. In these ways, we aimed to bridge the gap between the actual learning needs of individual practitioners and the educational content that is considered to meet assumed needs, a problem that has been described in the educational literature [29, 30].”

5. References: There are small technical editing corrections required in references 1, 3, 4, 5 and 19 so that the journal names of the BMJ and JAMA conform to Vancouver style.

These have been corrected so that they conform to the BMC guidelines. We have also made some other corrections in the Reference list. EndNote has been set to BMC Medical Education.
Responses to the comments from Dr. Anne Hesketh

Reviewer’s report:
Discretionary Revisions
1) Re the 2nd stage of the Delphi did you feedback the 1st round scores at this stage or were the raters again scoring blind? Also reason for this choice.

In the second round of the Delphi process we did not feedback the responses from the first round to the expert group. In the first round we had one answer choice labelled “uncertain”. In the second round, we omitted that answer option. Since we had many uncertain answers in the first round, we did not want to influence the process with this information and chose therefore to present the new list without the results from the first round.

1) I was initially happy with the Delphi process described which identified the 21 outcomes and drafted appropriate assessment indicators. My concern was the next stage when there seemed a big jump and a whole new section in the curriculum ie Adverse Reactions to Drugs. I appreciate the authors have put forward suggestions as to why this section did not emerge in the Delphi but it unsettled me about the authenticity of the Delphi results. I am not a pharmacist, but could ADRs not arise for reasons other than irrational prescribing? Should some relevant outcomes relating to this not have emerged from the Delphi? My personal feeling is that the paper would be better to simply focus on the first two phases of the project which were methodically conducted, the third phase being agreement between the team resulting in a big jump/addition from the earlier phases. If the paper stops after phase 2, the discussion could focus on the omissions perceived.

We thank Dr. Hesketh for bringing up this issue. We have given much thought to this comment and a similar one by Dr. Yaphe and rewritten this section to more clearly explain what we think are the reasons for adverse drug reactions (ADR) not being mentioned in the Delphi process, but later incorporated into the curriculum. Based on this explanation, we would argue that knowledge about ADR is a prerequisite for certain outcomes, such as avoiding prescribing drugs with negative interactions or similar pharmacological effects. As ADR is thus related to the already existing outcomes, the apparent jump or addition becomes much less dramatic. We have also changed the title to “Identifying outcome-based indicators and developing a curriculum for a continuing medical education programme on rational prescribing using a modified Delphi process” in order to better reflect the aims and content of article. With the article, we wish to describe the whole process from decisions on outcome indicators to the actual implementation of these in the curriculum development process.

In order to lessen the possibility for confusion, we have also omitted the formerly sixth paragraph under the heading Discussion that began with “One explanation could be that…” and changed the eighth paragraph of the previous version (which is seventh paragraph of the new version) under the same heading as follows:
“Another more distinct explanation for why the initial Delphi process did not elicit a topic that content developers deemed essential could be the formulation of the instructions for the Delphi process. The task was to identify what should be included or considered when doctor writes a prescription. We believe this to be the main reason for not suggesting ADR as an outcome indicator as information on ADR cannot be written directly in the prescription. However, since ADR has to be considered before a particular drug is chosen, content developers included this topic in the curriculum. While it would have been possible to develop direct outcomes and indicators for ADR, ADR can be seen to indirectly be part of and important in achieving some of the other outcomes, such as avoiding prescribing drugs with negative interactions or similar effects or prescribing injections too frequently.”