Reviewer's report

Title: Increasing utilization of Internet-based resources through the dissemination of evidence-based medicine

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Reviewer: Nai Ming Lai

Reviewer's report:

Thank you for giving me the opportunity to offer my views on this manuscript. First, I think the paper is valuable in providing readers worldwide a record of longer-term change in the usage of internet-based medical information resources in a country following a coordinated national-scale effort to promote evidence based medicine (EBM). Barring some typos or grammar issues, I think the manuscript is sufficiently well-written and easy to follow, the research question is clear and the handling of data is sound. The findings should encourage stakeholders in EBM in other countries to examine similar trends in the usage of EBM resources in a national scale. All my comments relating to this manuscript are relatively minor, the main one pertains to a lack of information provided by the authors on their efforts to promote EBM, as I think such information is critical for the readers to interpret the findings and possibly replicate or adapt the authors’ efforts to suit their own settings. My specific comments are listed as follows:

Minor Essential Revisions

Overall

I think the script will benefit from a round of proof-reading, in particular, there appears to be some grammar issues such as inconsistent use of tenses. I would suggest the authors use past tense throughout the script when they refer to their study.

Introduction, paragraph 1

“In recent years, development of medical informatics has provided an opportunity for easy access”

This sentence appears incomplete to me. Should it be “easy access to up-to-date medical information.”?

Introduction, paragraph 4

“Since the beginning of 2007, the National Health Research Institutes (NHRI) has overseen a collaborative project to provide information systems in support of clinical practice with evidence for regional hospitals of Taiwan”

I believe that specific details on what exactly were provided by NHRI might have been described in other papers, but as a stand-alone paper such information is
critical to be included here as well. I would suggest that the authors add a brief description on their efforts to promote EBM, either here in the introduction following the statements above, or under a separate heading of ‘Measures implemented to promote EBM” in Materials and Methods. Specific details desired may include what facilities that NHRI has provided, the frequency and location of educational interventions such as EBM workshops, any databases that were emphasized in the authors’ efforts to promote EBM and any other initiatives by the NHRI to up the awareness and skills in EBM.

Materials and methods

The authors appear to use the terms “questionnaire” and “survey” interchangeably. I suggest the authors use the term “survey” when referring to the conduct of the study, an “questionnaire” when referring to the tool.

Sampling

“Since the 2009 survey was more efficient than the earlier one, we continued the same cluster sampling for the questionnaire survey in 2011.”

What is meant by “more efficient”? The authors may wish to be more descriptive here. A suggestion would be “Since we achieved a higher response rates using the cluster sampling method in the 2009 survey compared to the earlier survey, we continued the same cluster sampling method for our subsequent survey in 2011”.

Results

Demographic data of respondents

Paragraph 1

“This study enrolled 1156 participants in 2007 (605 physicians and 551 nurses), 2975 in 2009 (563 physicians and 2412 nurses), and 3999 in 2011 (645 physicians and 3354 nurses)”

I assume the numbers quoted were the number of returned questionnaires. If so, how many questionnaires were sent out (and hence the response rate)?

Discussion, paragraph 2

“The results highlight that the Internet has become an increasingly important source of medical information, which is consistent with research indicating that the Internet has become the most common source of medical information”

This sentence reads a bit awkward to me. Suggestion:” …..which is consistent with recent research findings”.

Discretionary Revisions

Title

The title may not be clear to some readers. I think " Increasing utilization of Internet-based resources following efforts to promote evidence-based medicine: a national study in Taiwan” would provide the readers a more appropriate context
to read the rest of the paper. The authors may wish to consider modifying their title along this line.

Survey questions, paragraph 3
Regarding the characteristics of the respondents, it might be interesting to include information on whether the participants had attended any of the EBM training run by NHRI if the authors have the data. The findings might enable interpretation on whether those who had attended such courses translated their skills learnt into behaviours and whether or not they had passed the skills on to others.

Discussion, paragraph 6
“These results can provide stakeholders and promoters with valuable information to increase access to evidence-based information”

The authors may wish to pen down their thoughts on how the findings of differing access patterns between gender, working period and profession (doctors versus nurses) influence their future efforts to promote EBM.

Discussion, Paragraph 7
“As our survey had no identity of individual healthcare professionals, the respondents of the three surveys did not overlap completely”

I am not sure this would be considered a limitation. If the authors were examining general trends of usage on a national scale with large samples such as that included in this study, it might not matter whether or not they sampled the same group of people. If they decided to do so from the outset they would have needed a different methodology to link the three survey responses and analysed as matched sample. Otherwise, I think the statement above need not be included.

Discussion, paragraph 4
“The current survey has further extended the inquiry by demonstrating a sustaining increase in the utilization of four Internet-based resources over 4-year period.”

This shows that there has been a sustained effect following the authors’ efforts in promoting access to EBM resources. It is perhaps more relevant now to examine the quality of usage, in particular how often the search had been fruitful or how often the users had their queries satisfactorily answered through their searches. The authors may wish to briefly describe any future research along this line or others that they plan in response to the findings.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests