Author's response to reviews

Title: Are family physicians comprehensively using electronic medical records?: A Canadian Perspective

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Author's response to reviews: see over
Response to Reviewers

Thank you for the opportunity to address some of the concerns brought up by the reviewer. We have considered all the suggestions and provide you with a revised manuscript.

Associate Editor’s comments
I would personally encourage you to revise the paper further taking the following matters into consideration. The paper needs to demonstrate a clear framing of your research questions, purpose and contribution and, in relation to this, a better clarification of the relation between data use and EMR implementation. The paper also needs to be positioned in a clear literature and to outline how and in what ways it contributes to this literature. The reviewer suggests that the paper can make a methodological contribution and provides substantial guidance as to how to do so; it could also contribute to health data re(use) and add to the debate on big data. The paper should also end with a discussion that brings together relevant literature with the findings of your study and highlights the contributions made.

We have revised the paper and hope that you will find the revisions acceptable for publication.

Reviewer's report
Title: Are family physicians comprehensively using electronic medical records?: A Canadian Perspective
Version: 4
Date: 11 January 2015
Reviewer: Valentina Lichtner

Reviewer’s report:
Thank you for the opportunity to review the revised version of this paper. I have read the paper both in view of the original version and the improvements made, as well as in its new form, as a new paper, independently from the suggestions made through the review process. In view of the original, I believe this to be much improved. The introduction is more clearly focused on Canada, the method is clearer and some additional analysis has been done, with the addition of benchmarks. However, the paper as it stands still appears to need further work. I highlight below areas that could be improved, though the authors may decide to improve it in other ways. It is essential (Compulsory Revision) that the purpose is strengthened and consequent relevant literature, method and findings given greater depth.

1. The introduction is quite short, covering four areas of study: Canada and Ontario; the role of EMR in quality of care, and the need for data quality; relationship between implementation programs and extent of use (adoption); methodological aspects of data quality for secondary purposes/research. Each of these (or a selection) needs to be looked at in more depth and detail. For example, there is no mention (?) of Canada Health Infoway (an international
reader may not know of the program - this is essential knowledge).
It seems that the main contribution of this paper is methodological, re: data
analysis for secondary purposes. Then much more needs to be said on this in
the introduction.
Essentially the introduction needs to provide the rationale for why this study is
important, directly supporting the research questions.
We have reframed the introduction and objectives of the study.

2. Method: one (or more) clear, explicit research questions – the purpose for the
data analysis – still missing or unclear. In their cover letter, the authors explain
that “We are trying to determine the duration of time required to have a patient
chart reasonably complete and useable for secondary purposes” - was this the
aim of the study?
Yes this was the aim we have rewritten the aims of the study for clarity.
Or was the aim to know how many doctors in Ontario are using EMR?
This was not the aim of the study
All throughout the paper seems to suffer from a vagueness of purpose. (It made
me wonder whether this is something that characterises ‘big data’ analysis – we
can do lots of analysis on the data, but we don’t really know what for; the
analysis tries to discover a purpose out of the number crunching?).
My understanding is that the main contribution of this paper wants to be
methodological. If so, the method is of course important for policy makers who
may have a need for it (and points about this are/can be made in introduction and
conclusion), but the contribution needs first of all to demonstrate how it fills a gap
in the method literature (expanded in the introduction). For example, I imagine
there is a literature on Measures of Utilisation and on Measuring Time – how do
the methods described in this paper compare to those described in the
literature/used by others?
We were unable to find literature with similar methods although we did find some papers
that described a theoretical framework for evaluation and we have added these papers
to the introduction.
Setting benchmarks: This seems now a core aspect of the analysis. Could even
become the ‘purpose’ of the paper (and find space in the title). More needs to be
said of how these benchmarks were set – the methods. Do they demonstrate
validity and how.
We have described the rationale behind how we set the benchmarks, the benchmarks
we set were based on expert opinion and thus are somewhat arbitrary. We feel it is less
important what the benchmark actually is and more important to how physicians fall
relative to this benchmark. We have not been able to find any other literature that
provides analysis in this way so we hope that providing this data and relative to our
arbitrary benchmarks it will be useful to others in evaluating the completeness of their
data in order to have some comparison.
3. Results: a very short section that needs expanding.
Much more could and should be said about the findings re: the benchmarks. The
figures 4-5 need to be commented on and explained. What are they telling us
about : 1. Use of EMR (and perhaps clinical utility of EMR); 2. Validity of the
benchmarks themselves (what if all doctors are way off the benchmark?)
We have added to the results section
4. The discussion/conclusion would need to be revised in view of the clarification of the research questions and the more in-depth analysis of the findings.
Accordingly we have revised the discussion
Other aspects/typos to look at:
Lines 95-100: these two sentences are unclear to me, how they fit in the logic of the argument
They have been deleted.
Line 106: programs… are sufficient … (check the verb)
Line 108-111: ....”Evaluating the data quality of EMR .... Therefore we evaluated data population … as a proxy”: as it is written this is unconvincing; if data quality is important, evaluate data quality, not a proxy. Furthermore: needs to explain ‘data quality’: the literature says completeness is one of the measures of data quality, but then it is not a proxy for it?
Line 222: less medications, less tests: fewer medications, fewer tests?
Line 283-4: ‘our study illustrates that both analysis of physician and patient time … ‘: unclear what is the subject of this sentence – the analysis or the times variables?
Thank you, we have corrected all the above errors.
Incidentally, some of the systems used by the GPs in the UK automatically provide to commissioners/managers details of doctors who are outliers and performance in relation to prescriptions, for example – without a need of separate data elaboration. This information is provided in ‘dashboards’. Is this something also provided by the system in Canada? We know nothing about the EMR from the paper.
Dashboards are not routinely provided in Canada, however EMRALD physicians do receive feedback on quality of care indicators. Nonetheless, we felt that discussion of this feedback to participant physicians was beyond the scope of this study.