Author's response to reviews

Title: Impacts of information and communication technologies on nursing care: an overview of systematic reviews (protocol)

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Author's response to reviews: see over
April 1st, 2015

Dear Editors-in-Chief,

David Moher, Ottawa Hospital Research Institute
Paul G Shekelle, RAND Corporation
Lesley A Stewart, CRD, University of York

Please find the responses to the reviewer's report to the revised manuscript entitled “Impacts of information and communication technologies on nursing care: an overview of systematic reviews (protocol)”. The first version has been sent out on November 6th.

We thank the reviewer Mr Paul Shekelle for his careful reading. We have made the necessary changes on the basis of the comments. Our responses to each of the specific comments of the reviewers are described below.

Thank you for your consideration. We look forward to your reply.

Sincerely,

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Comment #1

I am having difficulty determining what is the difference between two of their comparisons
ICT vs. no intervention
ICT vs. usual care.

How exactly are these different? What is different about a “no intervention” arm that separates it from “usual care”? If such a study intentionally altered usual care in any way, then wouldn’t it no longer be a “no intervention” comparison?

Response #1

“No intervention” means that nothing is done among the target population. Participants don’t even know that something is happening (regarding the delivery of any type of intervention). This is a distinct comparison group than “usual care”, because this one implies that participants receive (are provided) standard care/practice, the day-to-day intervention they are used to. Usual care are any interventions that have been already provided in health care system. Please check the highlighted modifications in the revised manuscript between the lines 226 and 233.

Comment #2

I also wonder why their primary outcomes are things like nurse satisfaction and their secondary outcomes are things like “patient safety, comfort and quality of life.” I think most policy readers would consider these latter outcomes to be more important than the former.

Response #2

We selected nurses’ practice environment, nursing processes/scope of nursing practices, and nurses’ professional satisfaction as primary outcomes based on the conceptual framework of the Nursing Care Performance Framework (Dubois et al., 2013) that we used to illustrate how ICT interventions could influence nursing care and could impact health outcomes. We believe that information and communication technologies (ICT) can directly impact on patient outcomes, but we strongly believe that health professionals have to embed and integrate these ICT into their practice. If the practices, nurses’ environment and nursing processes are supported, limited or enhanced by the use of ICT, this is plausible to believe that patient outcomes (that are the ‘nursing sensitive outcomes’ in the model) will be influenced.
Comments #3

Their next challenge, as noted already, is the great potential for heterogeneity, even after they have divided this into their 4 categories. So consider their second category, “communication systems” which includes email and texting and telemedicine. Is it valid to group all of these together as a single “domain”? The same concern is also present for their next domain, CDS. There is a large literature on the effects of CDS – both specific kinds of CDS and more broad definitions of CDS – on patient outcomes, and every one I have read notes that there is heterogeneity in effect even within what seems to be fairly similarly – described interventions. Many authorities have hypothesized that a leading cause of this heterogeneity is unmeasured or unreported context and implementation variables. How are these going to be dealt with?

Response #3

This is true that results could be heterogeneous. We think that the novelty of this overview is to map a broad picture of the effects of ICTs on nursing care and to draw a state of knowledge of existing literature on the subject. We want to explore whether specific ICTs may have an impact on specific dimension of nursing care. As you mentioned, types of interventions, that are e-health divided in four domains (management systems, communication systems, computerised decision support systems, and information systems), can vary inside their own category. As you mentioned, e-mail and telemedicine are different ICTs that have distinct purposes, and that can impact differently particular dimension of nursing care. We plan to make sub-group analysis, according to the type of intervention and its purpose (ICTs, such as electronic health records used for assessment, web-based intervention for health promotion purposes, etc.), setting (e.g.: primary care, community based) and if possible, the effects (positive, negative, no effect) on a specific dimension of nursing care (e.g.: nurses’ practice environment, nursing processes, professional satisfaction). The objective of this overview is mainly to draw a classification of what do we know, what is missing or what might be interesting to further investigate. We will also document the context and implementation aspects related to the interventions.

Comment #4

I am very skeptical that they are going to be able to get the kind of specificity they are going to need from the systematic reviews on these topics. I am not sure they are even going to be able to find what they need even by looking at the original studies themselves, but if they have any chance of success that is what I suspect they are going to have to do.
Response #4

As you already pointed out, we suspect heterogeneity in our results. If needed, we will go back in the primary studies of the included systematic reviews to further assess some results or details that could have been missed. We will contact authors to know if we could obtain more specific information regarding our subject of interest.