Reviewer's report

Title: Systematic review of networked communication interventions to promote access and engagement of young people with diabetes into healthcare

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Reviewer: Claudia Pagliari

Reviewer’s report:

It is useful to have a new review focused on the potential of ICT to support young people with diabetes. The following comments and suggestions are offered constructively.

1. Is the question posed by the authors well defined?

The term ‘networked communication interventions’ has not been well-defined. Throughout the paper, the authors refer to “interventions”, “technologies” and “devices” interchangeably, although these are somewhat different concepts. At different points in the introduction it appears that the review is about the comparative effects of different communications media (e.g. mobile telephony, videotelephony), about active interventions (e.g. educational, psychological) whose delivery happens to be facilitated by electronic media; or about technology-enabled remote interaction between clinician and patient, including passive monitoring with biofeedback or two-way dialogical communication (usually bracketed under the term telehealth or its variants) or, similarly, as “remote access to a service” which provides tailored information and support. This is reflected in the abstract where the subject of the review is described as “e.g. social networking sites (a sociotechnical phenomenon), mobile phones (a device), forums (similar to the former) and email (a communications medium). In the ‘Background’ section it is even stated that “the current review evaluates networked communication interfaces”. (Substituting ‘mobile telephony’ for ‘mobile phone’, would help to focus the reader on process rather than device.) At the top of page 6 it is stated that “The review will assess the effectiveness and impact of networked communication technologies compared with usual packages of care...” Should this read ‘technology-supported packages versus usual packages’?

I’m not sure whether the term ‘networked’ is necessary, since there is potential for confusion with web-based technologies. It may be worth avoiding the reference to ‘social networking sites’ in the abstract, as none of the reviewed studies considered these and it is therefore misleading.

The abstract makes much of the increase in ‘frequency of contact’ observed when new communications tools are put in place without acknowledging (as rightly happens in the discussion) that this is often the basis of the intervention itself (as in poorly controlled patients who need more regular support). This is a bit like reporting that getting a telephone increases frequency of contact.
2. Are the methods appropriate and well described?
In general these are appropriate and well described. However it would be useful to have greater clarification on the processes through which articles were screened and rejected or included at each stage (this is linked to the questions above). There is an inconsistency in the reported number of retrieved articles in the abstract/results, compared to Figure 1, and this should be resolved. Light is shed on the massive number of initial hits when, on p 7, it is reported that initial searches covered all long-term conditions.

The search terms described in the appendices are suitably general and do not appear as Cochrane-style strings; however given current indexing of this literature, well-planned free searches are likely to be just as reliable. Nevertheless the methods section refers to information specialists and combining terms, so if there is a more formal set of searches then it would be useful to supply this in an appendix.

On page 6 the sentence starting “We utilized the pathway of action documented by Murray et al....” needs some work; firstly because it is not made clear what the 'pathway of action' is and, secondly, because the different parts of the sentence do not hang together, making it difficult to decipher.

Also on p.6 (upper paragraph) - Have the terms effectiveness and impact been confused with efficacy and effectiveness?

The Downs and Black checklist is appropriate, for the reasons stated, but it may be worth saying a few words about why other, often used, quality checklists were rejected in favour of this one.

3. Are the data sound?
I am not able to comment on the specific results without having the time to review the included studies myself; however these generally appear sound. I am somewhat uneasy about the emphasis on aggregated patient numbers, as this implies more robust evidence than is actually available from the included studies.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
As above.

The results section labeled 4. Novel electronic communication, is dominated by digital glucometry, with various add-ons. It is important in this section to clearly differentiate between remote monitoring alone and interactive systems which link monitoring with patient-specific feedback, motivational support, or education. Suggest re-labelling this section.

Top of p18, section starting with “Franklin (2008)… is a bit disembodied and needs a connecting sentence.

P 19 Section labeled “3. Care coordination outcomes.” I’m not sure whether this is a good way of describing what is in this section (e.g. how are cost reductions and self care outcomes “care coordination”?). Another term should be considered.
5. Are the discussion and conclusions well balanced and adequately supported by the data?
On p 18 parag 3 a key summary point is that these technologies may reduce levels of problem solving. This is based on very limited data and, whilst possibly accurate, should probably be downplayed here.

6. Are limitations of the work clearly stated?
Generally, yes, although the problems with grouping different types of intervention, media and device could be discussed a little further.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes, but there is some inconsistency in referencing, with author names used more frequently in some paragraphs and only reference numbers in others.

8. Do the title and abstract accurately convey what has been found?
As above.

9. Is the writing acceptable?
Generally yes, but improvements to consistency could be made and a couple of sentences could be tidied up.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests.