Reviewer’s report

Title: Assessing the implementability of telehealth interventions for self-management support: a realist review

Version: 1 Date: 23 January 2015

Reviewer: John Powell

Reviewer’s report:

Thank you for asking me to review this interesting paper on an important and timely topic – examining the mechanisms associated with successful telehealth adoption. The authors state “the objective of the evidence synthesis presented here was to review and integrate evidence about telehealth interventions with a focus on identifying generic structuring factors that should be taken into consideration when developing and deploying telehealth interventions” (which I think does reflect what the contribution of this paper is).

I am certain it would be of interest to your readers and would recommend acceptance subject to some revisions which I think are required.

My comments are in the order in which the issues they refer to appear in the paper.

BACKGROUND

I think this needs to state a clear definition of telehealth. Throughout the paper there is some blurring of the distinction between telehealth and telecare (and related concepts such as telemonitoring). I know that definition in this area is debated but it would be helpful to have a clear understanding of what the authors mean by using the word ‘telehealth’ in their title and objectives.

I think the Ziebland citation [5] in the background section does not quite fit where it is placed and I would suggest moving this sentence about the domains identified in a related field to Section 2.1 of the results (relationships) where I think it might fit better.

I think the first two sentences of the second paragraph of the background section need citations at the end of each. Also the sentence in this paragraph which contains “…introduced at a rapid pace” would benefit from a citation after this clause.

METHODS AND FIGURE 1

I found the search strategy a little curious and I think it needs more explanation and justification. For example why wasn’t a term like telemonitoring included (when this is referred to in the results section as something which was of interest). Why were diabetes and heart failure searched for as specific illnesses, but COPD was added as a later filter? And did they only use “COPD” as the later
filter (i.e. only the abbreviation?). Why were gaming devices included in the search strategy? Do the authors really mean that they only included studies which contained one of the following words in the title: mobile OR internet OR xbox OR game platform OR web OR playstation? If so, this should be discussed as a limitation. Why were mixed-methods studies excluded? Perhaps this is worth a discussion point in the limitations – do the authors consider that these studies may have contained valuable (qualitative) insights or not? I accept that this is a qualitative synthesis and that the aim is not comprehensiveness per se but an in depth understanding from a spread of the literature, but I still think some of these issues need explanation and/or discussion.

The methods section states that all three reviewers reviewed the full papers – can more detail be provided here – was there an agreed approach to coding/analysing the papers? How many papers were rejected on the basis of quality? (the figure groups together the exclusions on the basis of ‘quality and fit’). Was the review limited to English language papers (as well as OECD countries)?

RESULTS AND DISCUSSION

At the bottom of page 5 there is a section with the sentence “Professionals expressed the view that telemonitoring added to workload as it required additional time to checking online data, dealing with additional administration, and increased communication and interaction with patients [16,17].” For me this is not so much about the RELATIONSHIPS theme as about the FIT. The same applies to the rest of this paragraph “helping them to integrate the activities into their everyday routine and to maintain the focus on exercise as a normal part of their everyday lives.” Isn’t this about FIT? If not then I think the authors need to reword it a little to demonstrate that this is more about relationships. If it is about FIT then I think this maybe should move to the section 2.2. This links with a further comment about how the FIT section is presented from the patients’ perspective – how do the technologies fit in their everyday lives and practices – which is fair enough and very interesting. But what about the professionals’ everyday lives and practices in their telehealth roles? Is FIT important here? The authors do touch on this in their conclusions section when they say “In terms of ‘fit’, the literature pointed to the importance of acceptability and ease of use of telehealth interventions for patients and professionals.” (my italics). I guess I wanted to see some more discussion about what the literature said (or did not say) about FIT in relation to professional practices.

Given that this is a qualitative synthesis on a selected sample of papers (and I have no problem with that – it is the right approach for this research question!) I just think sentences such as the ones in section 2.1. which state “There was evidence to support the notion that telehealth can work without professional input” or (e.g.) “Cases where telehealth intervention could work in the absence any professional input were rare [4]” should perhaps have a small qualification at the end of the sentence such as “… in our sample”, “in the papers we reviewed”. Etc.
In 2.1.3 the quote “If this popped up, I think people would laugh at me” may need a tiny bit more explanation as to how this links with comfort and disclosure (I can guess but I think it is not immediately clear).

On page 6, final sentence I think needs a citation(s) at the end of it (ending “... successful interventions”). (I know the following quotes refer, but would prefer cites at the end of this sentence too).

Section 2.2 FIT – see my earlier comments about the professional dimension.

First paragraph of 2.2. Sentence states “home blood pressure readings were evaluated” - evaluated by who as being more ‘natural’? I think this is important in terms of interpretation.

The middle paragraph on page 8 illustrates why I think some definition in the Background section would be helpful – this paragraph uses the words telecare, telehealth, telemonitoring, and teleconference.

In section 2.3 VISIBILITY, first paragraph, the authors discuss positive elements of being monitored. There is then a final sentence which says that not all patients welcomed this. Anonymity is state as reason for not welcoming this. I think this final sentence needs a citation. Also were there other reasons why some people found visibility/monitoring unwelcome? I ask because there seems to be debate about patients concerns about intrusive surveillance (not quite the same as anonymity I don’t think) – which may (perhaps) threaten autonomy and dignity, as well as privacy. If this was not evident in the papers then I think it is worth noting. I know that earlier in the papers the authors note that most of their included papers (not intentionally) told a positive story of telehealth and perhaps this lack of negative evidence is worth revisiting (and its consequences) in the limitations section on page 12?

2.4 DISCUSSION. I think the sentence ending “(notably the Web)” probably needs a citation?

The authors state “There were positive and negative dimensions of visibility” but I don’t really think this reflects what is written in the visibility section (as noted above). Very little is actually written about the negative dimensions.

LIMITATIONS section – I think the authors should discuss the extent to which using an a priori 3-item framework may have limited (or enhanced) their review. Did any new dimension emerge in their reading and coding of the 15 papers? Or did it just confirm the validity of the 3-item model?

Also in the theory development and testing section the authors identified that one of the three reviews they used to identify their framework (relationships, fit, visibility) was a review of studies of depression. I accept that the other two reviews which were used to derive the framework would have included studies similar to the 15 studies included in the current paper, but I was interested to know whether the authors considered any issues of validity in using a framework partly derived from these depression studies?
In the final paragraph a sentence states “for some conditions, notably mental health, visibility may have negative connotations as patients may wish to remain anonymous when using the system” – given that mental health was not a topic for this review I think a citation would be useful here.

A possible question for further research which I think might be worth adding by the authors is to consider factors which may help maintain these technologies over the long term (years) which I think is underresearched. With this in mind I think an extra column (or just extra information) in Table 1 might be useful – on length of follow-up of the implementation study.

**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