Reviewer’s report

Title: The evolution of mobile apps for asthma: an updated systematic assessment of content and tools

Version: 1 Date: 17 January 2015

Reviewer: Hilary Pinnock

Reviewer’s report:

Thank you for inviting me to review this comprehensive review of smartphone/tablet ‘apps’ available for people with asthma

1. Is the question posed by the authors new and well defined?
The question is not new – the authors are updating a previous review – but the question is well defined. Given the fast moving field, an update is appropriate.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
Yes, the methods are described in considerable detail.

3. Are the data sound and well controlled?
The data are presented in considerable detail and appear sound. Statistical analysis is used to compare 2013 findings with data from the 2011 review, with appropriate correction for multiple testing.

4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
I have no reason to suspect any manipulation of data

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
This is clearly not a standard systematic review, so the usual PRISMA standards do not necessarily apply. Nevertheless the authors have adapted good review practice to undertake a rigorous review

6. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes. The authors have, helpfully, picked up on issues about implementation and the need for stability if clinicians are to encourage patients to use ‘apps’ as part of clinical care. They also address the issues of accreditation, and medical devices.

Another related issue is how the ‘app’ communicates with the professional, and vice-versa. Direct communication with the patients’ electronic health record, is probably the ‘Holy Grail’ at the moment, but cloud-based data storage may help.

7. Do the title and abstract accurately convey what has been found?
8. Is the writing acceptable?
Yes

I have very few revisions as this is a well written report of a well conducted piece of research.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

• Is there any information about the ‘apps’ that have disappeared since the 2011 assessment, and whether there are any features that suggest an ‘app’ may stay the course?

• Self-management needs to be supported by professionals, and I wondered if more could be said about the ability of ‘apps’ to enable communication between the patient and their healthcare professional

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

• I note that table 1 lists ‘running on Google or Apple platforms’ as inclusion criteria, whereas the methods says ‘All apps from the two most widely-used mobile platforms (Android and iOS) …. were automatically eligible for inclusion’. I suppose that this is the same thing, but maybe use consistent terminology to avoid confusion.

Major essential revisions

• I noted the criterion in Additional file 1 which states that ‘all patients with asthma should have a peak flow meter’. This is not correct. The chapter on self-management is very clear that action plans may be based on symptoms or peak flows. This choice of criterion needs explanation.

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I am working in the same field, but otherwise have no conflicts of interest relevant to this paper