Reviewer's report

Title: Casebook: A virtual patient iPad application for teaching decision-making through the use of electronic health records

Version: 2 Date: 2 June 2014

Reviewer: Uno Fors

Reviewer's report:

This is a manuscript describing a possible educational solution to the issue on how to more easily create Virtual patient cases for learning. However, even if improved, this version of the manuscript still has some shortcomings

Major Compulsory Revisions

Page 2 Abstract - Background

It is still stated that “However, they are also costly and time-consuming to develop, meaning they can be unaffordable for some institutions to produce”. This is not true as I see it. With modern VP-systems, the time to develop a case could be anything between 2-16 hours, even for very detailed and highly interactive VP cases.

So why still use this (not valid) argument regarding high costs etc., and not the much more interesting argument of you system — meaning how the case creator can get assistance in using data from EMRs to create cases?

Please adjust all statements re cost and time and instead argue that the possibility to use EMR data is very interesting (which it really is).

Page 2 Abstract – Results

“The application has been designed to read patient cases that consist of electronic health records, in the form of X-ray images, electrocardiograms, lab reports, and physician notes, and present these to the student”.

This is not really how Casebook works, is it? As you have described later in the manuscript, it is a manual process that creates the file that then is read by Casebook. Please adjust this.

Page 3 Abstract – Conclusions

“However, many Virtual Patient systems are rich in multimedia such as video and sound, and are therefore expensive and timeconsuming to produce. This means that they cannot be produced in the numbers required to create collections of cases.”

As said re. the similar statement in the Abstract, this is not considered by me to be the case in reality. Modern VP-systems can both the used to create cases with ease as well as to allow exchange of cases. Please modify this and other similar statements.
Page 4
“Virtual Patients, even those based on real patient cases, can potentially contain misleading simulated data, especially in lab reports. Because patient cases based on medical records do not use any simulated data, this is not an issue.”
Hmm, yes, there is a chance that when you write down a lab value, you can mistype and make it wrong. But since Casebook uses manually written annotations, your solution has about the same chance/risk of using incorrect data. So, please adjust your comments regarding this issue.

Page 5
“The creation of Virtual Patients is an expensive undertaking.”
No, that is not correct
Further on, the use of Huang’s paper and spend nearly half a page on that seems to be misleading the reader. Please instead of saying that the main problem is cost, mention your bright idea instead of using real medical records as the base for creating VP cases.

Page 7
“Virtual Patients are too costly to produce for this plurality to be achieved”
Not correct

Page 13
“By using such enterprise provisioning profiles, sensitive data stored on iPads can be considered secure”
Were these and the previously mentioned procedures used in your app? If not, please tell why not.

Illustrations
Figures 2 and 3 still contains useless info. Please correct this, or omit these images.

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 have been developing and researching the use of VP systems since 30 years, but none of those systems are commercial, so I declare that I have no competing interests.