Reviewer’s report

Title: Clinical decision support tools: analysis of online drug information databases

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Reviewer: Jean-Charles Dufour

Reviewer’s report:

General

The interesting aspect of this work is that the authors attempt to offer an objective method on which one can base the choice of a drug information database from a panel of available databases. Limitations of this work is clearly recognized and explained by the authors. But several points need to be improve in this paper:

In the Background, the authors mention that “the entire body of medical knowledge doubles every two years” but do not mention from where this evidence is issued?

Apparently in reference to a Li publication, the authors have considered that there are three primary categories of online drug databases and have named them “comprehensive or standalone”, “full-text versions of an electronic book” and “freely available online”. Unfortunately I do not have access to the mentioned publication. However the use of such categorisation doesn’t seem relevant here (maybe because the categories are not mutually exclusive). Indeed, for example, a standalone drug database can also be in full-text versions and also freely available online. What is the interest of such categories here? Are they really adapted? Moreover, the term “standalone” is commonly used to define/mention a “self consistent” application (for example a CDSS which is used without being linked to an EMR is a “standalone CDSS”). In this article “standalone” is considered equal/equivalent to “comprehensive” : this is confusing and unusual.

The authors mention that they have used fifteen different categories of drug information questions and that more important categories have received more questions. But they do not explain what they call an “important” category and why are there categories more “important” than others?.

The authors have to better explain the interest and the validity of the so call “composite score”. The question is : owing to the calculation method, doesn’t the composite score all the more favour drug databases which already have a high scope score? (Note that the rank order within the table 5 and table 2 are the same: is it not a sign of this problem?)

In the discussion, the authors say that “direct comparisons did not establish that any of the top performer are statically superior among Tier1”. That ok, but it’s wrong to consider that this absence of statistical significant difference do evidence a significant equivalence or similarity between drug databases. So the authors must reconsider their allegation (cf. the following phrase in the 2d paragraph of the discussion “However, given the […] a finding of similarity or equivalence is very significant”)

Finally, I believe that the conclusion of the article is confusing. Indeed one can possibly consider that “online drug information databases” belong to clinical decision supports. However the conclusion makes us believe that what has been found for online drug information databases can be extended to all clinical decision support, which this study does not prove.

N.B.:
The written English sound nice but English is not my native language so my opinion on this point is not so relevant.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests