Reviewer's report

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

Version: Date: 29 January 2007

Reviewer: Wendy Smith

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General
Overall, I think this is a very well-written and well-organized paper in response to a very important question. The authors did an outstanding job in their attempt to objectively evaluate subject matter that is difficult to study because of its subjective nature.

The authors performed a very fair assessment of the study's weaknesses. However, the study's largest limitation is the selection of the question. The authors state that the questions were "written by the authors." This was undoubtedly done so that the "gold standard" answer could be identified. The flaw in this methodology would be the possible lack of reproducibility when a different set of questions were derived by different authors. Also, the authors ranked the "importance" of the differing categories and scaled them accordingly. One could argue this rationale by stating that the level of importance is most dependent on the nature of the question and not the category unto which it falls.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. The second sentence of the 1st paragraph: "However, the choice of which online database to consult, purchase, or subscribe to, has long been made based on subjective elements such as history of use, familiarity, or availability during professional training." Overall, I agree with the authors on this point. However, if the authors are going to state it as fact, there should be a reference there. If not, I would use less strong language and not state it as fact. We don't know if there are other contributing factors (ie, cost, person in charge of making decision, etc.). This sentence is also repeated in the first paragraph of the background section

2. 1st sentence of Background section: The statement is being made that health information technology (HIT)--which is used later in the body of the paper to abbreviate heparin induced thrombocytopenia--and computer-based decision support resources have demonstrated their value in enhancing safety and improving outcomes. This is an overstatement of the references that are listed and I don't know of any published literature which demonstrated improved outcomes based on computer-based decision support. I think a more fair statement would be HIT and computer-based decision support resources have the potential to enhance safety and improve outcomes.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. In the abstract--results section -- you refer to Facts & Comparisons Online. This database is now known as Facts and Comparisons 4.0.
2. Background --1st paragraph-- you refer to online databases such as PubMed--PubMed is really not a database but rather an interface to Medline
3. Throughout the text you write: e.g. -- I have looked this up in several style and grammar references and the correct way is either eg, or e.g.,
4. In the results section you refer to brand name drugs. I am not sure of the style of this journal, but I think generic names would be more appropriate (ie, Levaquin (not capitalized in the text), Epivir, Refludan)
5. You do not define HIV
6. You use the abbreviation HIT in the context of heparin-induced thrombocytopenia but you have previously defined it in the text as health information technology.
7. In the results section you are inconsistent in whether or not to place a space between the dose and dosage units (eg, 3mg vs 3 mg). The information I have read places a space in between the number and unit.

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Discretionary Revisions (which the author can choose to ignore)

1. I think it may be fair to include all of the wrong answers in a table rather than pointing out a few in the text. This seems unfair for the databases that you selected to include in the text.
2. You may want to be more precise in defining which section of Micromedex you used. I assume you used DrugDex and Identidex but it may be more helpful to point that out in the beginning of the paper.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Needs some language corrections before being published

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