

## LETTERS TO THE EDITOR

### Over 85% of included studies in systematic reviews are on MEDLINE



To the Editor:

Halladay et al. [1] are to be commended for their potentially important study “Using data sources beyond PubMed has a modest impact on the results of systematic reviews of therapeutic interventions.” Examining 50 randomly sampled Cochrane reviews, they demonstrated that 84% of all included publications were indexed in PubMed. This confirms unpublished data that I presented at a Health Libraries Group Conference in 2012 which showed a similar figure of 85.82% for 50 reviews randomly sampled from within a purposive sample of disciplines [2]. Other studies [3,4] confirm that searchers are more likely to miss relevant studies from inadequate searches on an index database, in this case MEDLINE, than to miss studies from inadequate numbers of additional databases.

While being understandably cautious of equating current practice with optimal practice, we note that the variety of teams involved gives some cause for confidence that these findings are generalizable. Although publication bias rightly remains an ongoing concern, that useful contributing studies might be missed, database bias favors identifying studies that are larger and published in higher-quality peer-reviewed journals.

Readers of Journal of Clinical Epidemiology will appreciate the irony of a study conducted to accompany my conference presentation. The Cochrane Collaboration (now Cochrane) has become synonymous with the need for comprehensive searching across multiple databases. The logo of Cochrane memorably depicts seven trials of corticosteroids in preterm distress that, individually, were insufficient to overturn existing practice until combined cumulatively in an iconic Forest plot.

Q. How many databases do you need to search to establish this important landmark finding?

A. Just one—all seven studies could be located on MEDLINE.

In a further irony, the logo should have included eight studies, not seven, as the Cochrane Web pages readily admit [5]. All eight studies are easily identifiable from

MEDLINE and from major pediatrics and obstetrics journals.

With subsequent updates, the numbers of trials and study reports increased. By 2007, when the review title changed to Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth [6] and included 21 different studies, the index article for every single trial was identifiable from MEDLINE. Additional reports are present in conference proceedings and may contribute additional data to a study. However, in terms of retrieval, the index article offers a means of backward and forward chaining (i.e., conducting searches for cited and citing articles). Identification of conference articles is unlikely to be facilitated by subject searching.

There are two implications of such findings: (1) that the priority for database searching is to construct thorough searches of the index database not to pursue the progressive futility of additional databases and (2) that efforts to identify more elusive types of literature should focus on identifying a database-indexed index article and then using supplementary search techniques (citation searching, author searching, searching by trial name or registry number, etcetera) to identify additional data.

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<http://dx.doi.org/10.1016/j.jclinepi.2016.04.002>

### Informing the patient: the “forgotten” link



In the last decades, researchers and clinicians shared great level of information regarding scientific evidence. For example, efforts to improve the communication between researchers and clinicians have been made by the Enhancing the Quality and Transparency of health Research Network, with the publication of several guidelines to improve the quality of reporting of research [1]. Furthermore, the Cochrane Collaboration has been actively publishing over the years high-quality systematic reviews for researchers and clinicians [2]. Similarly, clinical guidelines have been developed with robust methodologies [3] to support clinicians to make more evidence-based decisions in the treatment of their patients. But, what documents are available to the patients? A patient seeking for some clinical treatment may raise important questions such as “how can I find clinical guidelines that “speak my language” to help me on the decision of my treatment?” or “how can I better understand published research findings?”

The idea of a shared decision making, that is, the clinical decision made by both clinician and patient, is only adequate when both parties have comprehensive knowledge about potential benefits and harm of therapies. It is unquestionable that clinicians detain more comprehensive and in-depth information than patients, but one can argue whether this is a fair relationship. The side detaining more information will likely tend to bias the discussion on therapies, eventually leading to a biased clinical decision toward its preference.

So far very few efforts have been made to reduce the gap of knowledge between specialists (i.e., researchers and clinicians) and the lay audience (patients). One example is the partnership made by the Cochrane Collaboration and the Wikipedia [4] where the Cochrane Collaboration claims “to improve the reliability and accessibility of Wikipedia medical information online.” Nevertheless, in its current stage, the project seems not to be fully available. It is therefore clear that new approaches to better inform patients are urgently needed.

One approach to reduce this gap of knowledge would be the development of guidelines for reporting research such

as Consolidated Standards of Reporting Trials, but tailored to the lay person who has no or only superficial knowledge on methodology of research. The main structure of existing guidelines could be used by editing them in a language that a lay person can understand. Thus, an explanatory document describing in detail the items could be also provided (like in the original document for researchers) [5]. Similarly, existing high-quality clinical guidelines (such those developed with Grading of Recommendations Assessment, Development and Evaluation) and other relevant scientific tools could be “replicated” in a language where the lay patient can adequately understand the information.

A potential barrier for this approach is the potential conflict of interest of clinicians. Patients better informed will probably question more the effectiveness of treatments, and many procedures which are currently performed will not be accepted by patients. For example, in circumstances when clinicians provide self-pay services to their patients without sound evidence supporting these services (mainly in the case of tests for screening cancer and other diseases) [6].

The reduction of the gap of knowledge between clinician and patient will generate a more ethical and informed shared decision-making process.

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<http://dx.doi.org/10.1016/j.jclinepi.2016.06.004>

Funding: This letter was self-funded by the author and his institution.

Conflict of interest: The author declares that he has no competing interests.