

## **Reflections from the ‘Advanced search techniques for systematic reviews, health technology assessment and guideline development workshop’**

6<sup>th</sup> March 2012 York Health Economics Consortium, University of York

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### **Introduction**

York Health Economics Consortium (YHEC) is a company owned by the University of York that provides research and consultancy in health economics to the NHS and the private sector. YHEC offers a range of training days on the subject of literature searching, but this particular workshop caught my attention following a write up of the course by a previous attendee that was circulated on a regional mailing list. The workshop was intended for literature searchers and researchers with previous experience in this area and the aim of the day is to have “opportunities to learn new search techniques, to discuss best approaches, to share insights and to assess variations in current best practice.” (YHEC) The facilitators were Julie Glanville, who is the Project Director for Information Services at YHEC, and Carol Lefebvre, who is an Independent Information Consultant for Lefebvre Associates. Both have a long history of experience in the field and of researching and publishing in this subject.

My motivation for attending this particular event was threefold.

- Having quite recently returned to a health library role after several years in a corporate setting I wanted to refresh my knowledge and ensure I was up to date in this area.
- To ensure that the support I was providing to my users was efficient, appropriate and informed by the most recent evidence in this area.
- To benefit from the opportunity to network with people in similar and diverse situations, many of whom might have greater or different experience.

Finally, the fact that it was local and therefore incurred no travel costs was a particular bonus!

### **The sessions**

The overarching theme of the first morning session was search techniques. Initially focussing on how searchers and researchers identify the right search terms, this session looked at techniques such as 'pearl growing' for finding terms to search with and also several tools which might help to better systematise and support this process such as PubMed PubReMiner<sup>1</sup>. This freely available tool runs your search query on PubMed and then analyses the results and generates frequency tables for each field. For example, which words appear most frequently in the title and abstract of a set of records.

<sup>1</sup> <http://bioinfo.amc.uva.nl/human-genetics/pubreminer/>  
(Accessed: 19<sup>th</sup> March 2012)

Julie challenged participants to consider whether they ensured their search process was as systematic as the rest of the review they were working on. There was a [thought provoking](#) discussion around whether the attendees methods of finding search terms was systematic or not (not generally, as we tended to use a combination of approaches and it would often not be possible for someone to reproduce exactly how we got our results). It was interesting to reflect that although we all took certain parts of the systematic search process very seriously in terms of the resources we searched and how this was documented; many of the attendees had not considered how this might need to apply to the generation and selection of search terms in the first place.

This led neatly into a discussion around conceptual breakdowns of search questions. Julie used an example from her experience to discuss how effectively the PICO (Patient or Population, Intervention, Comparison and Outcome) method of breaking down search questions into concepts aided or hindered searching, particularly when you are working with difficult or multi-stranded questions. As many of the questions I deal with into my [day to day](#) practice do not fit neatly into this breakdown I often modify this approach when training users and literature searching and it was helpful to find that my experience mirrored that of people in the room. For example many of the nursing specific questions we receive focus on aspects of communication, team working or changing practice and they simply do not fit well into the PICO model.

Carol then introduced the very tricky area of retractions, [errata](#) and comments. The subject is too complex to cover in detail but as a [starting point retractions](#) are processed differently between Medline and Embase and it is an area where practitioners really need to know how to search effectively in the databases they use. This is true whether you are trying to provide evidence for a change in practice or supporting the development of a new or updated review or guideline.

Returning to the idea of [evidence based](#) searching, Julie introduced an 'Evidence Based Checklist for the Peer Review of Electronic Search Strategies'. For more information look at McGowan et al. Confidence around searching is an area which repeatedly features in our NHS Librarian regional discussions especially for those who are solo Librarians or new to in-depth searches. Peer review of search strategies, with the intention of ensuring our searching is as rigorous as the evidence we use and promote, not to mention able to be reproduced, is something I have thought about, and discussed informally for a long time. I really had not taken this any further and it was great to find that work is already taking place in this area and that its importance was well recognised. I have many actions to implement following this day but reading further on this and focussing on ways to implement peer review into my team's search process is a priority for me.

The second part of the morning focussed on research and practice with sessions on making our practice more evidence based and trying to build research into our everyday work. Julie

discussed several examples from practice, for using the work you are doing as an opportunity for testing the performance of a strategy either during or after development. There was then a welcome break for lunch and networking, where I had some really interesting conversations about work other people were doing to try and validate their search strategies.

The afternoon session concentrated on specific resources, looking at issues and developments in Embase, CINAHL, Cochrane Database of Systematic Reviews, Medline and finishing with LILACS (Latin American and Caribbean literature). This was great opportunity to get an in-depth update on issues such as changes in indexing and problems with specific interfaces. Julie and Carol regularly review and update the course contents to ensure they reflect the current state of play so this session is likely to be slightly different for each group of attendees.

As ever at these events, some of the value in the day was in the opportunity to learn from others in the field as well as the experts. The workshop is deliberately organized to be an information-sharing experience and discussion and participation is strongly encouraged. Having said that one of the great benefits was the sheer volume of practical information I left the day with. The involvement of the facilitators in feeding back to the National Library of Medicine (Medline) and Elsevier (Embase) on problems and improvements for the respective databases meant I gained a much better understanding of the process for requesting change and some welcome news of changes that were already in process. Carol has a long

standing interest in Embase and told us about some successes (changes in 'topic' and 'study type' indexing terms to allow better searching for trial types) and pipeline projects (better linking and indexing of retracted publications). In a time when some professionals may feel helpless about their ability to demand substantial change around the products we use it is positive to know that changes are happening in direct response to feedback from people who really know the subject.

More than ever in the current financial climate budgets for training are increasingly restricted and the impetus is to look for other ways of gaining personal development or new skills. However there are occasions when a workshop really is the best vehicle for the learning you need and in this instance it is interesting to reflect on the value offered by a specific course. Although this workshop is not at the cheaper end of the spectrum, I left feeling that not only had I got real value for money but I had specific set of actions which, when implemented, could improve my practice and that of my team. These included joining mailing lists/forums aimed at expert searchers or specialist information resource users (such as 'Expert Searching' hosted by the Medical Library Association), sharing my experiences of the day with colleagues in similar roles and implementing methods and tools to ensure our searches are systematic, with the long term goal of subjecting them to regular peer review.

I found this an incredibly useful event. Although it is aimed at people working in the field of systematic searching much of the information around database developments is directly relevant

to anyone who regularly searches clinical databases. Be warned though - this one is not for the total beginner. You do really need some experience before you will get the full benefit. However for those interested in the basics of literature searching there is a non-advanced course for those newer to the field.

## References

McGowan, J., Sampson, M. & Lefebvre, C. (2010). 'An Evidence Based Checklist for the Peer Review of Electronic Search Strategies (PRESS EBC)'. *Evidence Based Library and Information Practice*, 5 (1), pp.149-154, [Online]. Available at: <http://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/7402/6436>. (Accessed: 16 March 2012).

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