Evidence-based Research Network
A call to action for more (efficient) systematic reviews

Hans Lund
on behalf of the
EBRNetwork
The scientific ideal

"If I have seen farther it is by standing on the shoulders of giants"

Letter to Robert Hooke, 15. February 1676.
“If, as is sometimes supposed, science consisted in nothing but the laborious accumulation of facts, it would soon come to a standstill, crushed, as it were, under its own weight…….

The work which deserves, but I am afraid does not always receive, the most credit is that in which discovery and explanation go hand in hand, in which not only are new facts presented, but their relation to old ones is pointed out.”

Lord Rayleigh at the 54th meeting of the British Association for the Advancement of Science held in Montreal in 1884. (Thanks to I. Chalmers, LV Hedges, H Cooper, 2002)
"The Helsinki Declaration states that biomedical research involving people should be based on a thorough knowledge of the scientific literature. That is, it is unethical to expose human subjects unnecessarily to the risks of research.

Ideally, the introduction should include a reference to a systematic review of previous similar trials or a note of the absence of such trials."

Altman et al 2001
The assumption

One would think: *No paper has ever been published without references to earlier published scientific results. What's the problem?*
The assumption

“Strictly speaking it seems hard to imagine any research not evidence-based. At least it seems impossible to imagine that articles published in journals with a high impact factor do not relates to earlier research”

Norwegian Accreditations Committee, in 2014 (nokut.no)
After 1994:
More than 2500 received unnecessary placebo!

Fergusson et al. 2005
The evidence

Cumulative number of published trials assuming a one-year lag in publication

For each trial publication, the number of prior published trials cited

Figure 6  Citations of prior publications.

Fergusson et al. 2005
A Systematic Examination of the Citation of Prior Research in Reports of Randomized, Controlled Trials

Robinson et al. 2011
The evidence

Table 3. Summary of Results From Qualitative Review of Selected Randomized, Controlled Trials

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current Study</th>
<th>Results from Clarke et al*</th>
<th>1997 (n = 26)</th>
<th>2001 (n = 33)</th>
<th>2005 (n = 18)</th>
<th>2009 (n = 29)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claimed to be the first trial assessing the question</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Actually the first trial to assess the question</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Contained an updated systematic review integrating new results</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Discussed a previous review but did not attempt to integrate new results</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>No apparent systematic attempt to set new results in context of other trials</td>
<td>15</td>
<td>19</td>
<td>19</td>
<td>27</td>
<td>10</td>
<td>13</td>
</tr>
</tbody>
</table>

PRCI = prior research citation index.
* References 1–4.

The evidence

Other studies indicate the same picture, for example:

**RESEARCH**

*BMJ* 2014;349:g5219 doi: 10.1136/bmj.g5219 (Published 26 August 2014)

Ability of a meta-analysis to prevent redundant research: systematic review of studies on pain from propofol injection
The solution

To address this problem a group of researchers have initiated an international network, the ‘Evidence-Based Research Network’ (EBRNetwork).

http://ebrnetwork.org/
The solution

At the ‘Bergen meeting’ (December 2014) partners agreed the aim of the EBRNetwork is to reduce waste in research by promoting:

- No new studies without prior systematic review of existing evidence
- Efficient production, updating and dissemination of systematic reviews
The solution

The EBRNetwork now issues a call for interested individuals and organizations to join the EBRNetwork and work together in developing a consensus statement to address this challenge to the very heart and values of research.
Thank you for your attention!