Combining systematic review methods with philosophical analysis for a review of medical research ethics: a case study in bridging disciplines

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Background
Systematic reviews of empirical and analytical literature regarding the ethics of recruiting preterm and sick neonates into trials were conducted as part of a research programme ‘Improving quality of care and outcome at very preterm birth’.

Conducting research for preterm new-borns requires study designs and protocols that are both scientifically sound, and ethical. Drawing together what is known about the ethical conduct of randomised controlled trials requires appropriate methods for synthesising bodies of literature spanning ethics and health services research. This synthesis draws upon both those academic disciplines, as well as information science and clinical and parental experience.

Objectives
To review contributions of the different disciplines
To compare philosophy and social science approaches to reviewing literature
To identify challenges and solutions in integrating different perspectives
To reveal advantages and disadvantages of this approach

Methods
• We captured reflections on the process of developing the systematic reviews
• The philosopher reviewers, information specialist and systematic review methodologist kept diaries of their main activities and reflections.
• All project team members were interviewed with a standard set of questions by the review methodologist, who had previously noted her own responses to the same questions.
• Data from the diaries, interviews and meetings were collated and analysed to produce a chronology of methods and to identify the challenges and solutions for bridging disciplines and review methods.

Results

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<thead>
<tr>
<th>Methods</th>
<th>Philosophical Analysis</th>
<th>Systematic Review (Health and Social Science)</th>
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<tbody>
<tr>
<td>Similarities</td>
<td>• Aims for impartial, unbiased results and conclusions for important public dilemmas</td>
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<td></td>
<td>• Uses conceptual frameworks and coding to summarise and synthesise the literature</td>
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<td>• Proceeds iteratively, configures ideas</td>
<td>• Proceeds iteratively, configures concepts and data</td>
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<td>Differences</td>
<td>• Tend to work as lone scholars in reviewing literature</td>
<td>• Work in teams including an information scientist</td>
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<td></td>
<td>• Emphasise the coherence of arguments</td>
<td>• Emphasise how they have found the research they review</td>
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<td></td>
<td>• Language used describing all stages of the review process</td>
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Contribution of different disciplines
• Philosophical ethics provided a framework to encompass the range of ethical challenges addressed
• Contributed informed questioning and detailed critique of the alternative arguments, whether identified in the studies reviewed or not
• Health services research raised the methodological and ethical challenges for RCTs in this population; clinicians’ and parents’ experiences emphasised their importance
• Contributed explicit procedures and methodological rigour
• Search strategy informed by information science, with an emphasis on specificity of searching to allow for the time reviewers required to recognise the value of individual papers for each synthesis

Benefits
• All team members felt it produced a ‘richer’ product through involving expertise from all disciplines and providing reviews that would be recognised and valued by the different disciplines
• Many felt it aided their knowledge and skills development in unfamiliar methods and disciplines
• It contributed to the design of an oral assent pathway into the subsequent randomised trial

Challenges
• Time and effort required by all staff to learn unfamiliar research methods, terminology, and information resource
• Effective communication with other team members to develop understanding across the team
• Identifying what individuals already know and where (and when) it is necessary to develop skills

Conclusions
It was possible to apply configurative synthesis methods to reviews of empirical and argumentative ethics. Involving experts from different disciplines enabled appropriate use of methods and resources to achieve a robust review recognised by those disciplines.

Developing understanding of the methods, resources and terminology of other disciplines requires effective communication and ‘extra’ time. Benefits include insights into alternative methods that could be applied to disciplines and creating a wider network of collaborators. Reflections on the review process improved communication and identified challenges and solutions.