How information specialists can support a realist review: a case study of health information technologies and patient safety

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Realist reviews...

- Are a type of systematic mixed methods review, increasingly popular for public services and policy questions
- Look beyond ‘what works’ to generate an evidence-based understanding of ‘what works for whom and in what circumstances’
- Analyse ‘theories’ not ‘interventions’
- Uncover and develop explanatory theory, then test theory with evidence. Involve several iterative stages of theory development and testing
- Use a variety of evidence types sometimes from outside initial question topic area to prove theories

What we did

1. **Compared** search methods from our realist review with conventional systematic reviews on the same topic - patient safety and health information technology (HIT)
   - Systematically identified systematic reviews in Medline, Embase and our project database
   - From 65 results, 2 reviews met inclusion criteria (ie covered general HIT and patient safety, cited PRISMA/RAMESES guidance, contained 1 reproducible strategy)
2. **Reflected** on our information specialists role realist reviews compared with conventional systematic reviews.

Reflections and recommendations

- **Allow more time**
  - For search development meetings (we had at least 3x times commitment of our usual systematic reviews)
  - For answering more search questions. This example shows time for 17 different searches for the realist review compared with 2 for each systematic review questions using 4-8 databases
- **Think outside the box**, realist review purpose is different to conventional systematic review
  - Explore less familiar non-health resources. ACM Digital, EI Village and Patient Safety Network were less familiar resources in this review
  - Experiment with supplementary techniques e.g. citation usage count, author name
- **Hone your reference management skills**. Complex reference management is inevitable when importing multiple searches from multiple sources, duplicate removing, and tracking or re-assigning records found for one question but also needed for another.
- **Record your search decisions and search strategies** throughout your review. Be diligent in recording not just how but why you did each so you can report and explain the development of multiple, iterative searches for each stage of the review
- **Close collaboration and communication with research team is vital and rewarding**
  - Being embedded in research team enhances understanding of the project’s changing search requirements, gives opportunity to steer search decisions and improved teamwork with colleagues

Differences in Search Methods

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<tr>
<td><strong>Search questions</strong></td>
<td>20+ set throughout review via iterative reviewing</td>
<td>1 set at review start</td>
<td>1 set at review start</td>
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<tr>
<td><strong>Search precision</strong></td>
<td>Varied with questions</td>
<td>Sensitive search</td>
<td>Precise search</td>
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<tr>
<td><strong>Databases</strong></td>
<td>5-8 Multidisciplinary, Health &amp; IT databases per question</td>
<td>4 Health</td>
<td>3 health and 1 multidisciplinary</td>
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<td><strong>Complementary techniques</strong></td>
<td>Reference list checking, forward citation, high usage counts, named author &amp; projects, Journal and website hand search, Google scholar. Additional Studies identified by project team</td>
<td>Reference list checking</td>
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<td><strong>Study types</strong></td>
<td>All types: Editorials, comments, reviews and frameworks actively sought in early stages</td>
<td>Letters, editorial and comments excluded by search strategy</td>
<td>Reviews, frameworks and descriptive studies excluded by screening</td>
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References


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