A Research Program on Rapid Reviews

Andrea C. Tricco MSc, PhD

Twitter: @ATricco

Scientist, Knowledge Translation Program, Li Ka Shing Knowledge Institute of St. Michael’s Hospital
Co-Director, Queen's Collaboration for Health Care Quality Joanna Briggs Institute Centre of Excellence
Associate Professor, Dalla Lana School of Public Health, University of Toronto
A scoping review of rapid review methods

Andrea C. Tricco¹,², Jesmin Antony¹, Wasifa Zarin¹, Lisa Strifler¹,³, Marco Ghassemi¹, John Ivory¹, Laure Perrier³, Brian Hutton⁴, David Moher⁴ and Sharon E. Straus¹,⁵*

Objective:
- To examine rapid review approaches, guidance, impact, and comparisons through a scoping review
Currently, there is no agreement on a definition for rapid reviews

“streamlined traditional systematic review methods to synthesize evidence in a **shorter timeframe**” (Ganann et al 2010)

“**fluid and flexible based on decision-makers’ needs**, and an organization’s definition of ‘rapid’, since the definition impacts both the **timelines** and the conduct of the evidence synthesis” (Polisena et al 2015)

“**a streamlined approach to synthesizing evidence**, typically for **informing emergent decisions** faced by decision-makers” (Khangura et al 2012)
Production Times

- Although reduced production time is considered a key feature of rapid review, a wide range of timeframes are reported in the literature.

![Graph showing production times in months for different studies.](image_url)

- (Reas 2011)
- (Ganann et al 2010)
- (Watt et al 2008)
- 90% took ≤ 6 months (Tricco et al 2016)
- (Jayakumar et al 2015)

Systematic reviews take >12 months to complete
Geographic Distribution of Publications

North America 20%

South America 1%

Europe (including UK) 58%

Asia 1%

Australia 15%

*3% Multiple Continents; 2% Not reported
Objectives:

- To solicit experiences with rapid reviews from rapid review producers
- To conduct a consensus-building exercise to select a rapid review approach that will be prospectively tested in a reliability study
### Results of Most Frequent Streamlined Approach

<table>
<thead>
<tr>
<th>Review Stage</th>
<th>Most frequent streamlined approach</th>
<th>Count (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying relevant studies</td>
<td>Used previous review(s) as a starting point</td>
<td>79 (92)</td>
</tr>
<tr>
<td>Limitations on search strategy</td>
<td>Limited review by date of publication</td>
<td>75 (88)</td>
</tr>
<tr>
<td>Study selection</td>
<td>Screening conducted by ONE reviewer only</td>
<td>68 (85)</td>
</tr>
<tr>
<td>Data Abstraction</td>
<td>Data abstraction performed by ONE reviewer only</td>
<td>67 (84)</td>
</tr>
<tr>
<td>Quality (risk of bias) appraisal process</td>
<td>Risk of bias assessed by ONE reviewer only</td>
<td>68 (86)</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Narrative summary</td>
<td>75 (90)</td>
</tr>
<tr>
<td>Rapid review Approach</td>
<td>Feasibility</td>
<td>Timeliness</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>Approach 1</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Approach 2</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Approach 3</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Approach 4</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Approach 5</td>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Ranked based on the distribution of "very" and "extremely" on the 7-point Likert scale, except Risk of Bias was ranked on distribution of “not at all” and “very”

- Search >1 database, published studies only, both date and language limitations, one reviewer screens, one person abstracts data and assesses risk of bias and another verifies
Objectives:

- To compare rapid reviews (RRs) to same-topic systematic reviews (SRs) for methods, studies included, and conclusions.
# Results – SRs vs RRs

<table>
<thead>
<tr>
<th>Systematic Reviews</th>
<th>Rapid Reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td># study selection (using ≥ 2 reviewers/1 reviewer &amp; 1 verifier): 10</td>
<td># study selection (using ≥ 2 reviewers/1 reviewer &amp; 1 verifier): 3</td>
</tr>
<tr>
<td># data abstraction (using ≥ 2 reviewers/1 reviewer &amp; 1 verifier): 13</td>
<td># data abstraction (using ≥ 2 reviewers/1 reviewer &amp; 1 verifier): 4</td>
</tr>
<tr>
<td># of included studies (range): 5-14</td>
<td># of included studies (range): 2-24</td>
</tr>
<tr>
<td>Mean AMSTAR score (range): 4.8 (1-9)</td>
<td>Mean AMSTAR score (range): 2 (0-4)</td>
</tr>
</tbody>
</table>
SPARKS Study
Systematic Prospective Assessment of Rapid Knowledge Synthesis

Objectives:

- To prospectively evaluate pairs of rapid reviews and systematic reviews on the same review topics with respect to their results, step-specific process outcomes and usability

1. Evaluate the reliability of conclusions, meta-analysis results of clinical benefits and harms, and implications to inform decisions

2. Compare step-specific process outcomes (e.g., hours spent on tasks and costs)

3. Compare feasibility, timeliness, comprehensiveness, fit-to-purpose, and perceived risk of bias from the broad perspectives of end-users of the rapid reviews and systematic reviews
**SPARKS Study**  
Systematic Prospective Assessment of Rapid Knowledge Synthesis

**Methods:**

- Collaboration between 3 systematic review centers
- For each systematic review that a center is conducting, another center will be randomized to conduct a rapid review, continuing until 25 rapid reviews and 25 systematic reviews conducted
- Will compare the conclusions, meta-analysis results of clinical benefits and harms, implications to inform decision-making, step-specific process outcomes, including hours spent on tasks
- Adjusted kappa coefficients will be calculated to measure agreement
SPARKS Study
Systematic Prospective Assessment of Rapid Knowledge Synthesis

Population of SR topics for Centre
SR topics randomly selected for study

Systematic Review (SR)

PICO

Rapid Review (SR)

Lit Search → Study Selection → Data Collection → Quality Assess → Results Synthesis → Report

12 Months

3 Months

Time -1 to T0:
- Scoping, contract, protocol
- Formation of KU panel
- Rapid review centre allocation

Time T0:
- Study start

Time T1:
- RR: surveys

Time T2:
- SR: surveys

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Two Rapid Review Programs in Canada

- The Canadian government has invested in 2 rapid review programs:
  1. Drug safety and effectiveness network
  2. Strategic Patient Oriented Research (SPOR) Evidence Alliance
The SPOR Evidence Alliance
A Canada-wide alliance of researchers, patients, clinicians, and decision-makers

Andrea C. Tricco  MSc, PhD

Nominated Principal Investigator of the SPOR Evidence Alliance
Scientist and Director of the Knowledge Synthesis Team, Knowledge Translation Program, Li Ka Shing Knowledge Institute of St. Michael’s Hospital
Co-Director of the Queen’s Collaboration for Health Care Quality Joanna Briggs Institute Centre of Excellence
Associate Professor, Dalla Lana School of Public Health, University of Toronto
Our Principal Investigators

Pertice Moffit PhD
Linda Li Msc, PhD
Fiona Clement PhD
Ahmed Abou-Setta MD, PhD
Andrea Tricco MSc, PhD
Sharon Straus MD, FRCPC, MSc
Heather Colquhoun OT Reg. (ON), PhD
Annie LeBlanc PhD
David Moher MSc, PhD
Wanrudee Isaranuwatchai PhD
Christina Godfrey RN, PhD
Heather Colquhoun OT Reg. (ON), PhD
Janet Curran PhD
Our Approach

- Our approach is governed by a commitment to shared values of respect, professionalism, trust, collegiality, & collaboration
- A culture of patient-oriented research & integrated knowledge translation
- Researchers, trainees, patients, healthcare providers, policy makers, and other knowledge users work together as equal partners in achieving our goals

Adapted from:
Our Governance

- 6 Committees
- Balanced distribution of all member types, geographic location, gender, and level of expertise
- Built on inclusiveness, supportive environment, mutual respect, collaboration, and shared decision-making

Knowledge-users, trainees & patient partners sit on all committees
Creating and Sustaining a Collaborative Environment Towards Patient-Oriented Research

Visit Our Website to Learn More!

https://sporevidencealliance.ca

LOOKING FOR RESEARCH-BASED EVIDENCE?

The SPOR Evidence Alliance can help gather information from research evidence in a systematic and transparent way to answer your health-related questions.

Ask a question
Funding Acknowledgement

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- **Co-investigators:** Dr. Sharon Straus, Dr. David Moher, Dr. Brian Hutton, Dr. Diana Sherifali, Dr. Lisa Hartling, Dr. Tammy Clifford, Adrienne Stevens, Chantelle Garritty, Dr. Jemila Hamid
Questions?