

# Living Systematic Reviews

Methods Symposium  
Seoul Colloquium 2016

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Trusted evidence.  
Informed decisions.  
Better health.



# Declaration of interests

- HIV clinician and clinical researcher
  - Institution receives research and educational funding from public and commercial sources
  - No travel support, speakers fees or advisory boards
- Chair, Australian HIV Guideline Committee
- Founder and CEO, Covidence
- Cochrane
  - Lead, Evidence Systems, Cochrane
  - Co-lead, Project Transform
  - Senior Research Fellow, Cochrane Australia



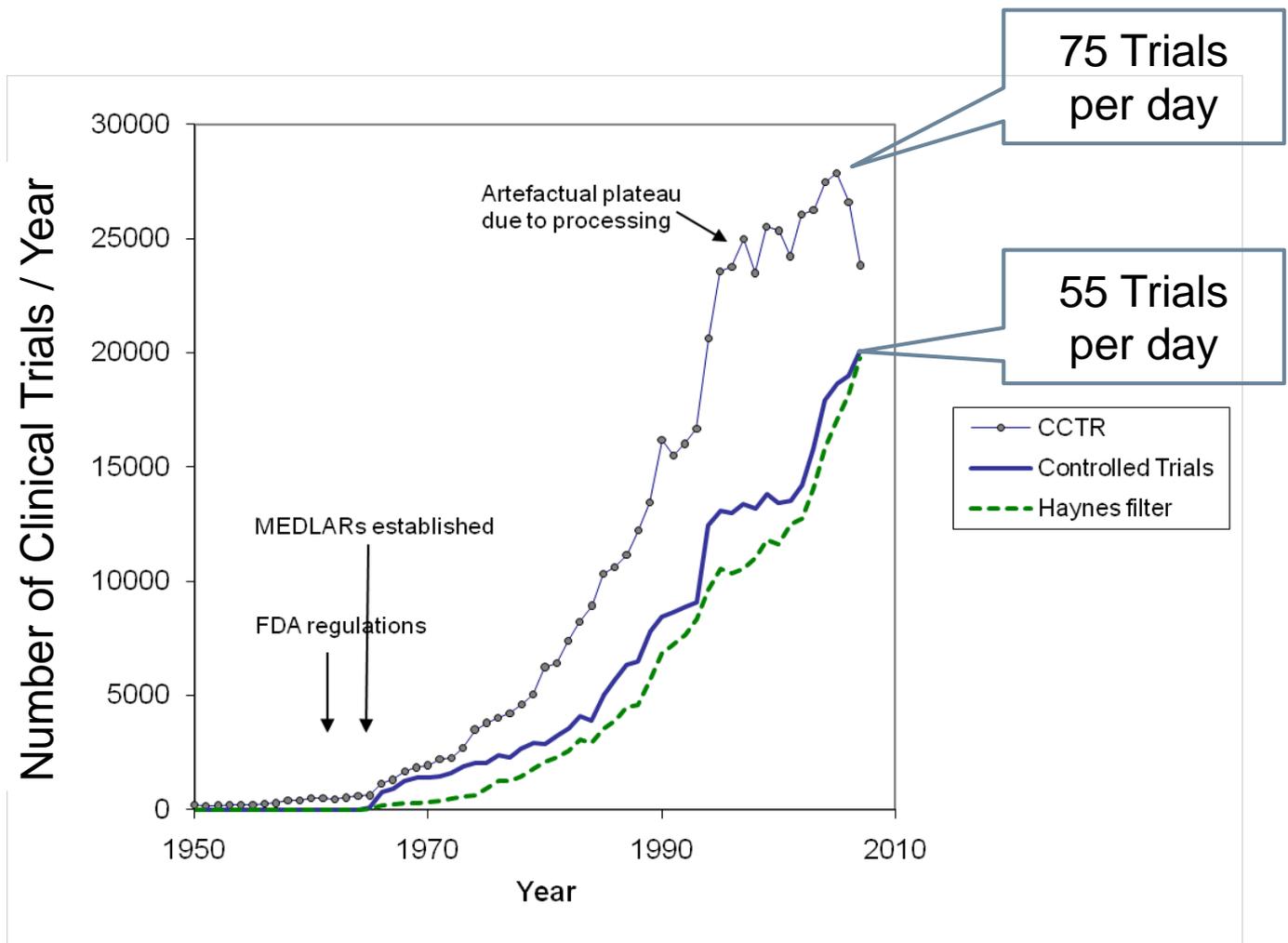
something to offer. Next year the *Oxford Database of Perinatal Trials*<sup>3</sup> will be published by Oxford University Press in electronic form. Besides registers of published<sup>4</sup> and unpublished trials and trials in progress or planned, the data base will include a library of trial overviews which will be updated when new data become available.

Oxford Database of Perinatal Trials,  
National Perinatal Epidemiology Unit,  
Radcliffe Infirmary,  
Oxford OX2 6HE

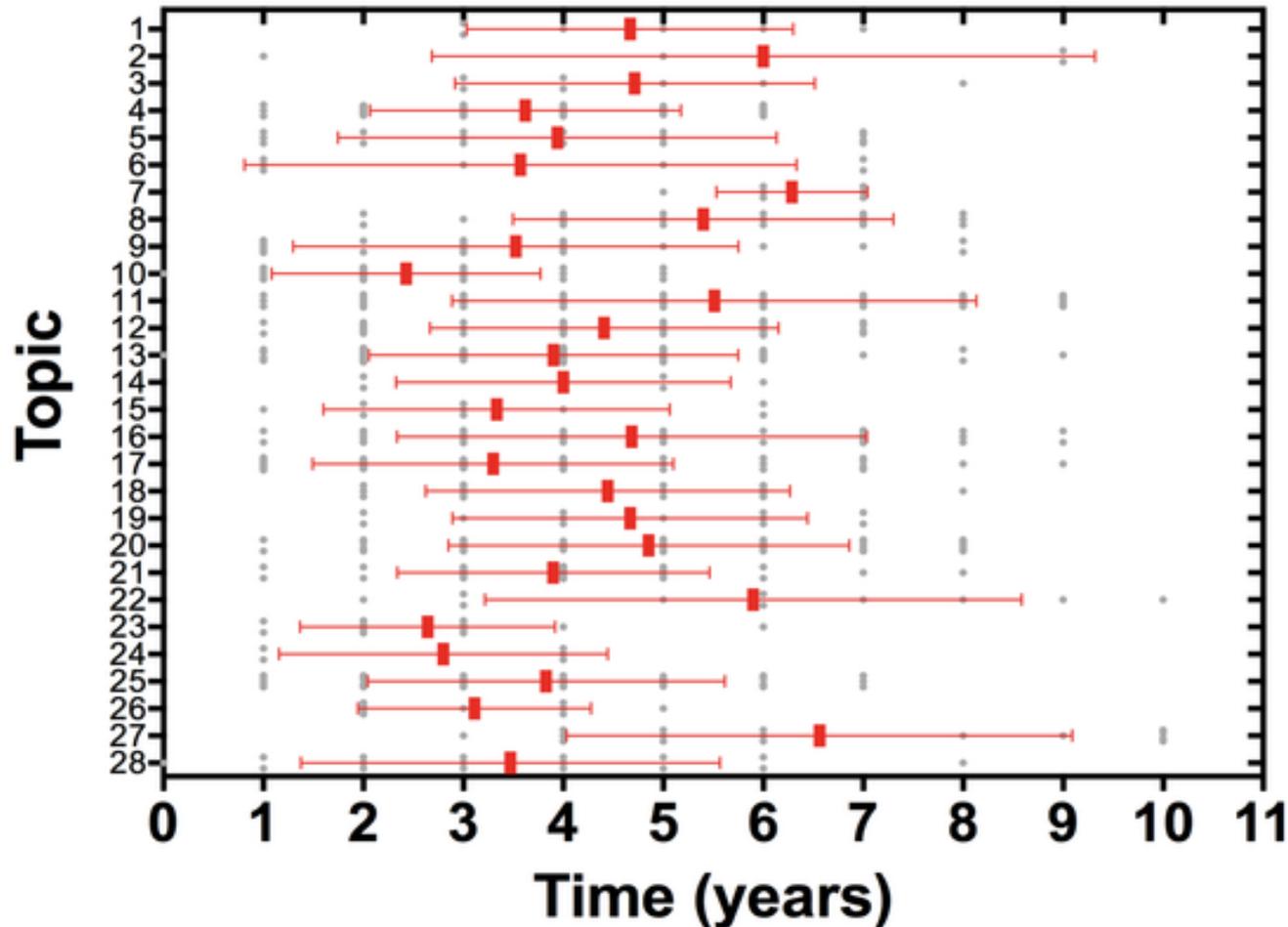
IAIN CHALMERS

# Seventy-Five Trials and Eleven Systematic Reviews a Day: How Will We Ever Keep Up?

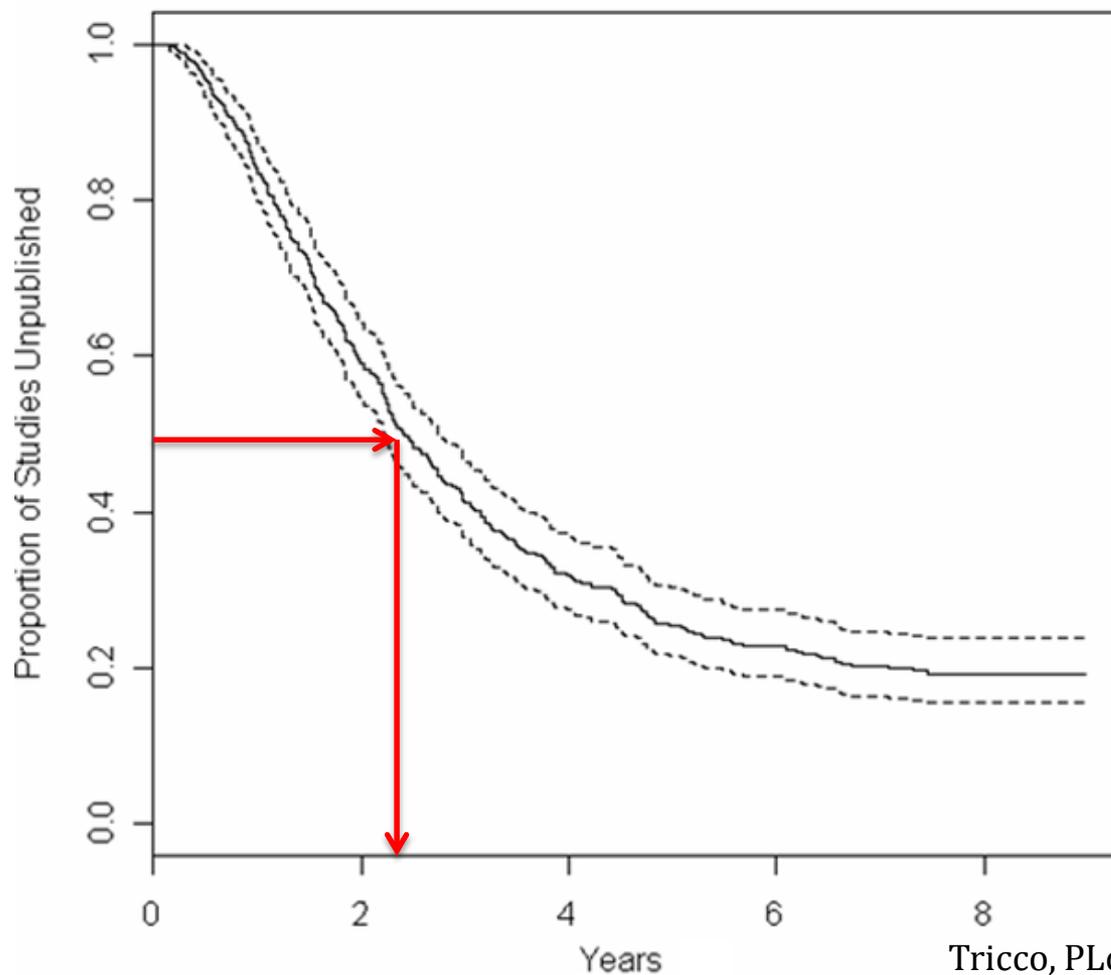
Hilda Bastian<sup>1\*</sup>, Paul Glasziou<sup>2</sup>, Iain Chalmers<sup>3</sup>



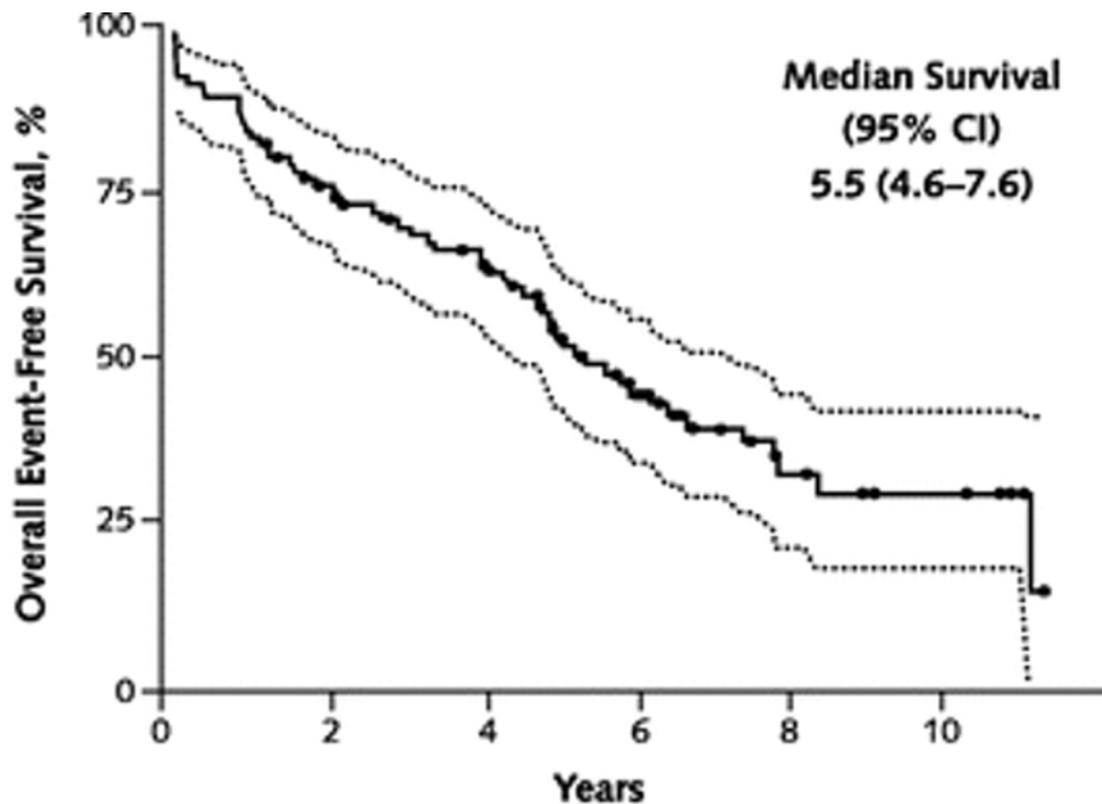
# Time from study to systematic review



# Time from protocol to SR publication



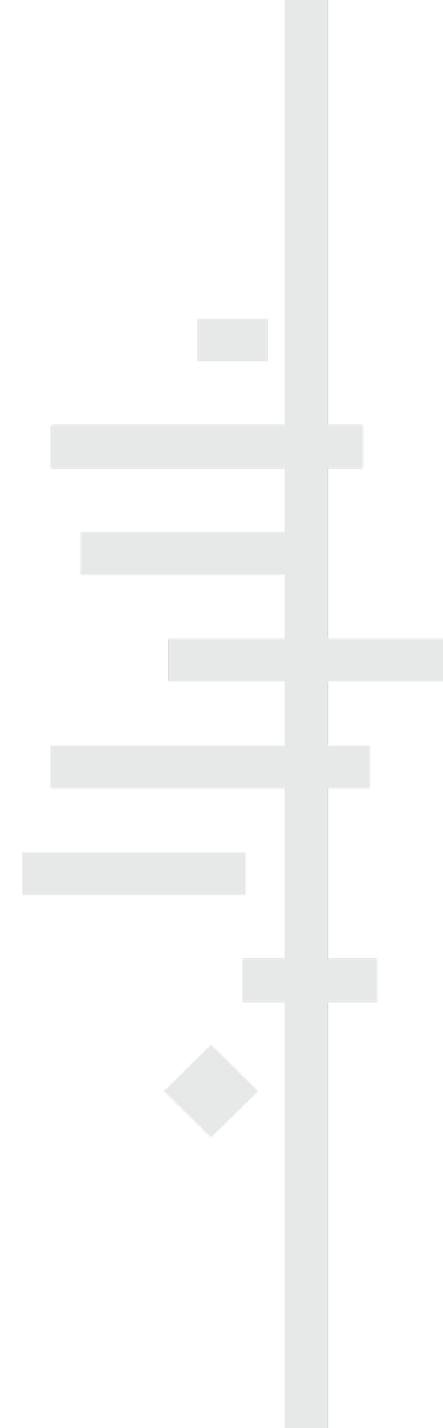
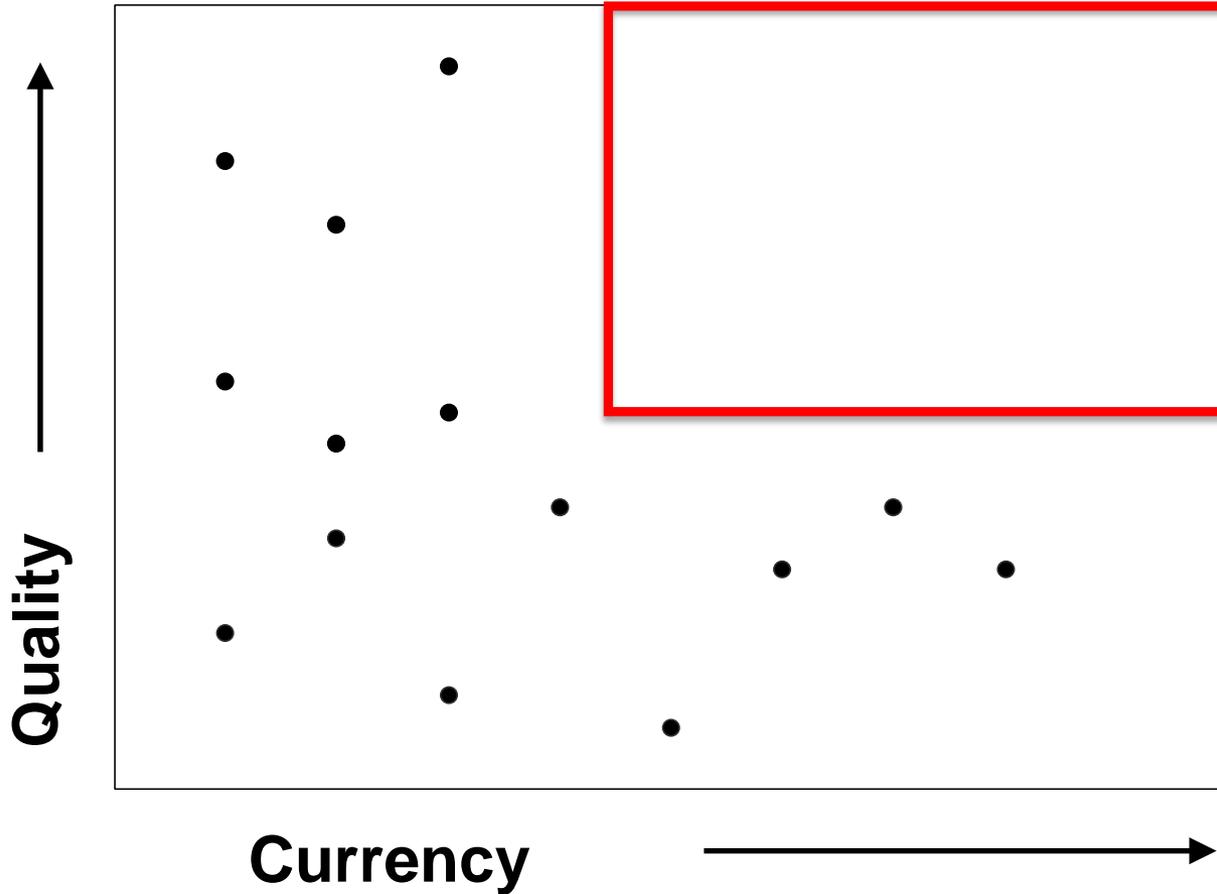
# Survival of systematic review accuracy



Systematic reviews  
at risk, *n*

100    73    59    34    14    6

# Break the trade-off



# Living Systematic Reviews: An Emerging Opportunity to Narrow the Evidence-Practice Gap

**Julian H. Elliott<sup>1,2\*</sup>, Tari Turner<sup>2,3</sup>, Ornella Clavisi<sup>4</sup>, James Thomas<sup>5</sup>, Julian P. T. Higgins<sup>6,7</sup>, Chris Mavergames<sup>8</sup>, Russell L. Gruen<sup>4,9</sup>**

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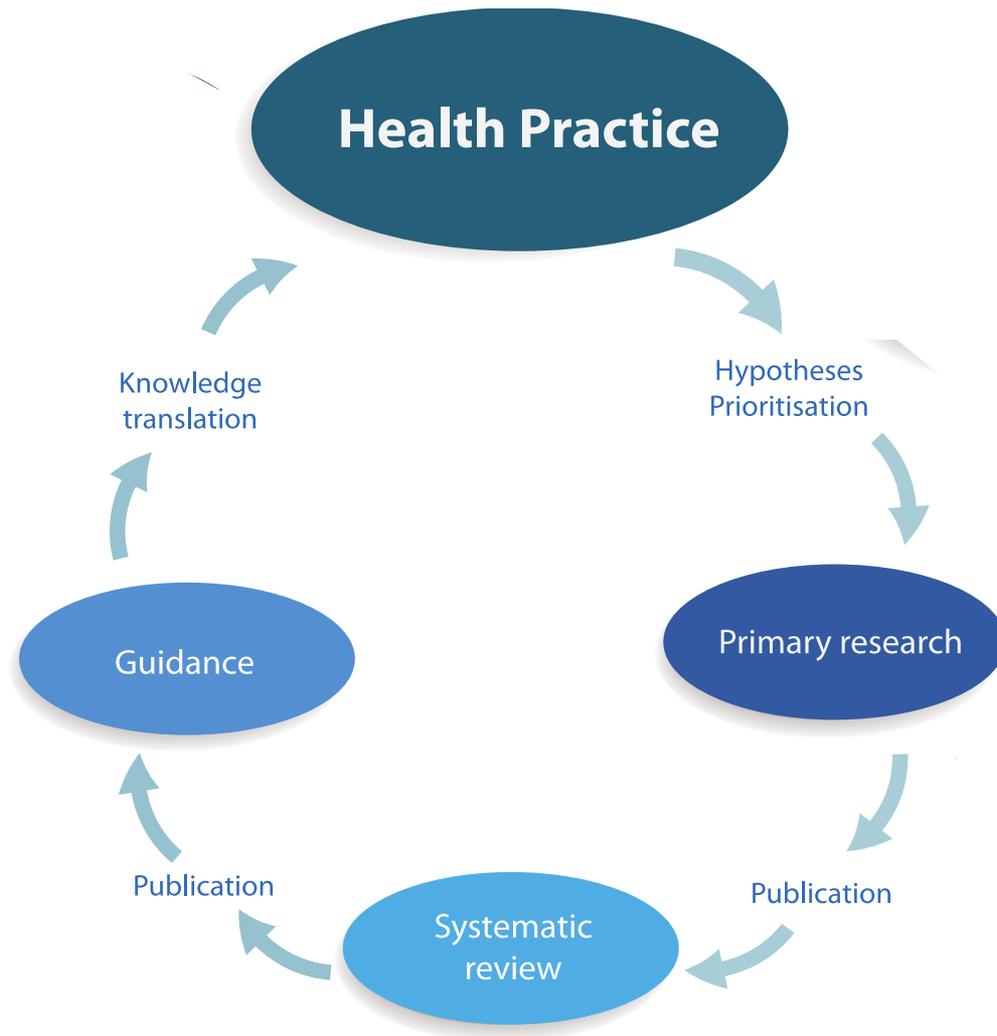
## The Bridge from Evidence to Practice

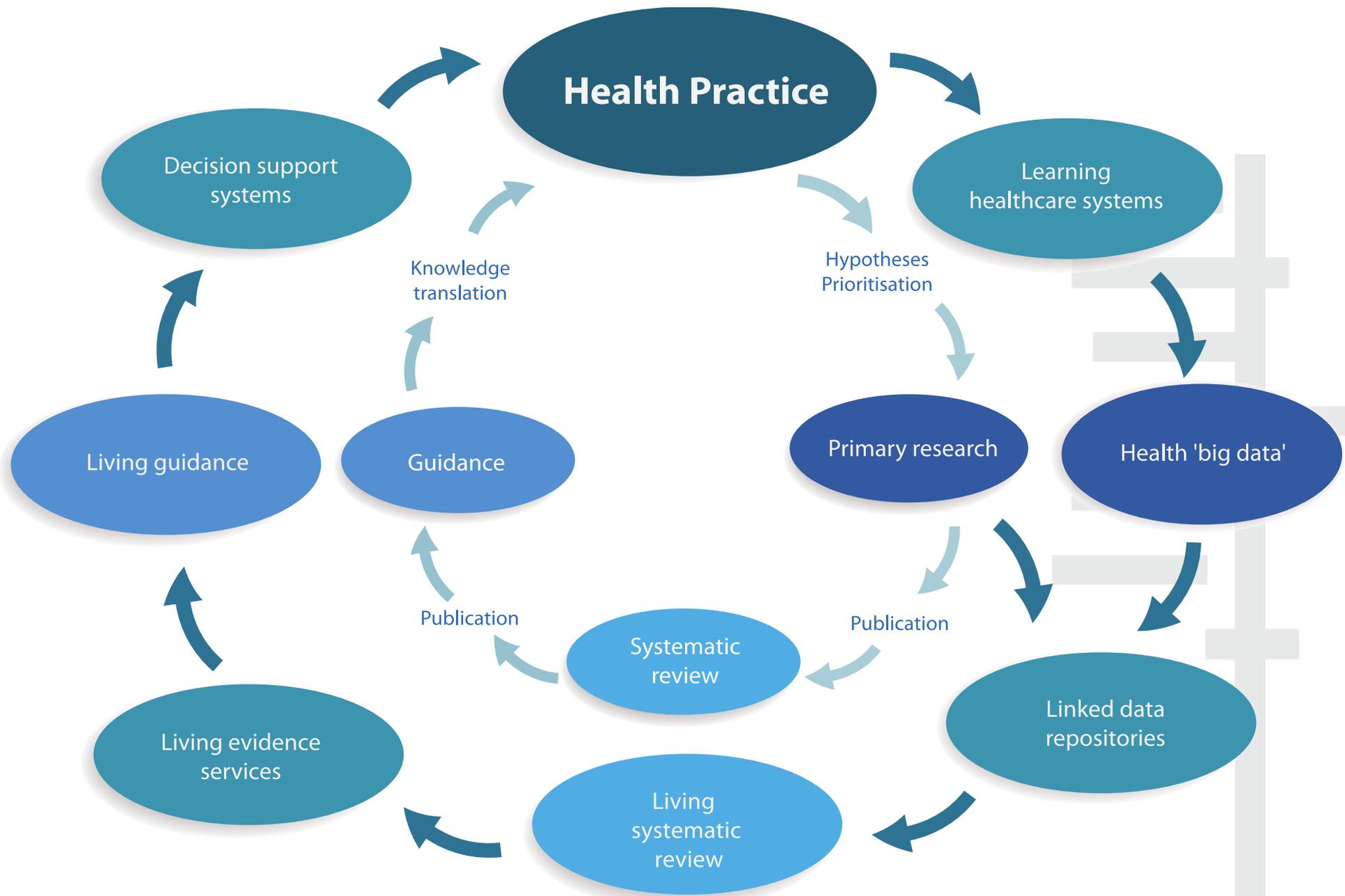
Health research promises societal benefit by making better health possible. However, there has always been a gap between research findings (what is known) and health care practice (what is done), described as the “evidence-practice” or “know-do” gap [1]. The reasons for this gap are complex [2], but it is clear that synthesising the complex, incomplete, and at times conflicting findings of biomedical research into forms that can readily inform health decision making is an essential component of the bridge from “knowing” to “doing.”

Systematic reviews (SRs) and meta-analyses have provided incalculable benefit for human health by contributing to the

## Summary

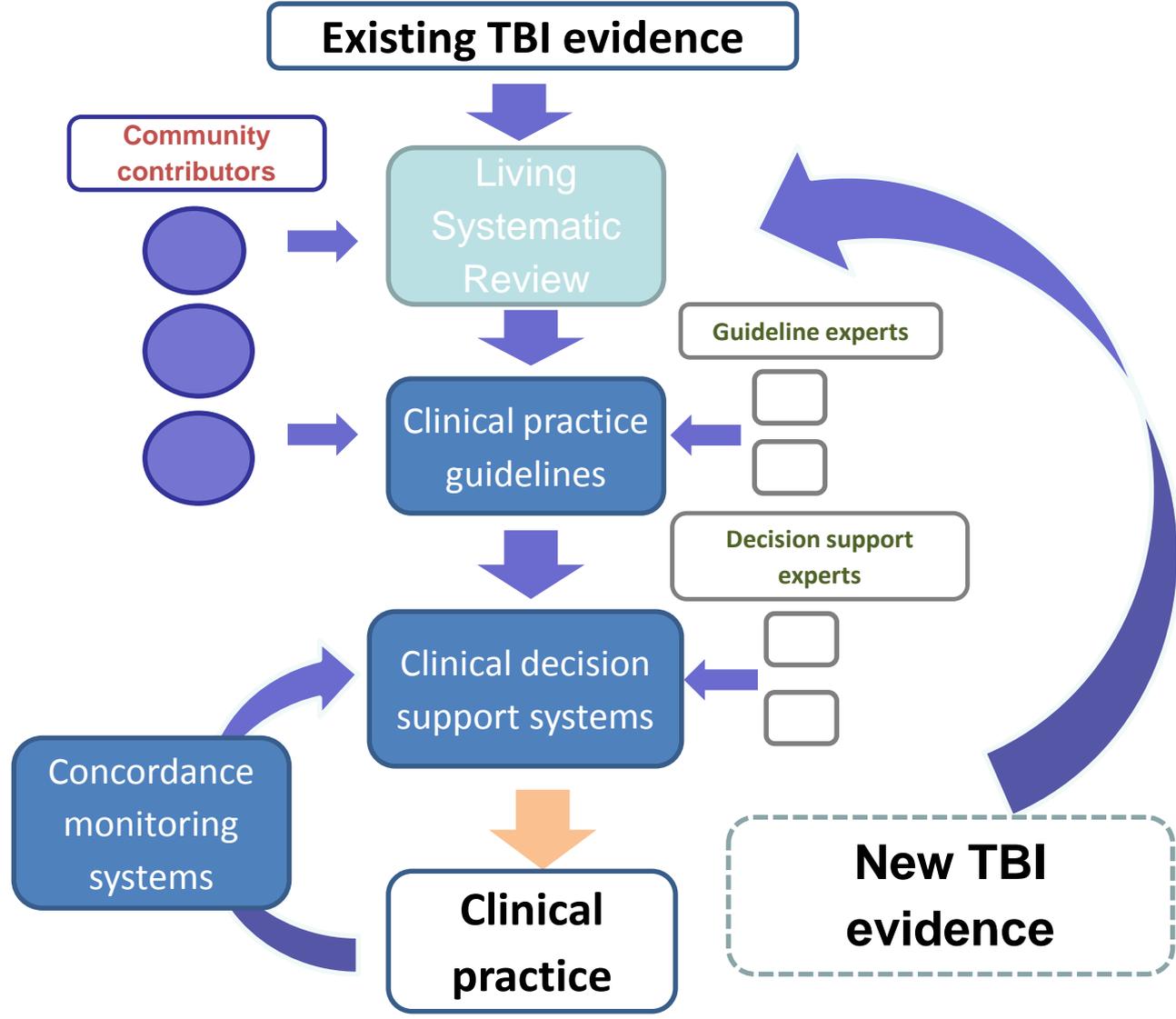
- The current difficulties in keeping systematic reviews up to date leads to considerable inaccuracy, hampering the translation of knowledge into action.
- Incremental advances in conventional review updating are unlikely to lead to substantial improvements in review currency. A new approach is needed.
- We propose living systematic review as a contribution to evidence synthesis that combines currency with rigour to enhance the accuracy and utility of health evidence.
- Living systematic reviews are high quality, up-to-date online summaries of health research, updated as new research becomes available, and enabled by improved production efficiency and adherence to the norms of scholarly communication.
- Together with innovations in primary research reporting and the creation and use of evidence in health systems, living systematic review contributes to an emerging evidence ecosystem.







# KNOWLEDGE COMMUNITY



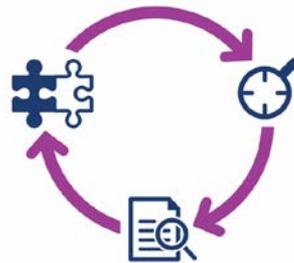
# Why should Cochrane do LSRs?

- Consistent with the original vision
- Cochrane has a strong commitment, infrastructure and practice of updating
- Cochrane has the methodological capacity to pilot, evaluate and refine new SR methods
- Cochrane is investing in the ‘enablers’ that make LSRs more feasible



# What is a Living Systematic Review?

“Systematic reviews which are continuously updated, incorporating relevant new information as it becomes available”



# What are LSR methods?

- Continuously updated
- Active, ongoing evidence surveillance
- Updates provided whenever new evidence, data or information is identified
- Explicit, transparent, predefined decisions about:
  - How frequently new evidence is sought and screened;
  - When and how new evidence is incorporated into the review;
  - What thresholds cause the review to cease being ‘living’
- No difference in core methods
- Can be applied to any review type

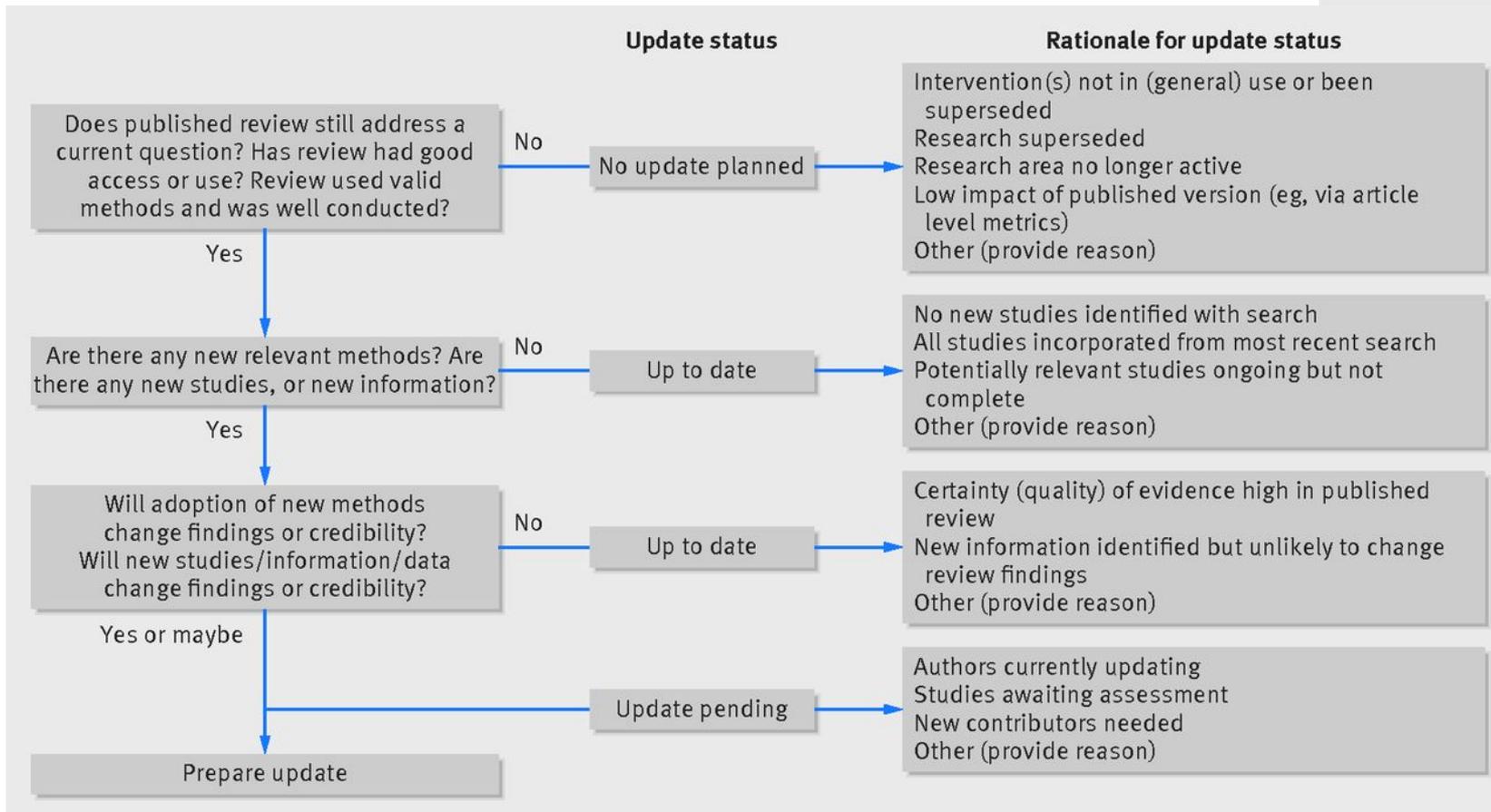


# How do LSRs differ from other reviews?

Feature	LSR	Frequently updated SR	Rapid Review
Explicit methods for 'when' and 'how' of updating	✓	X	X
Continuous evidence surveillance	✓	?	X
New evidence rapidly incorporated	✓	X	X
Standard SR methods	✓	✓	X



# When should I do an update?



# When should I do an LSR?

- The review question is a priority for decision making
- There is likely to be a high volume of emerging research
- There is capacity to maintain ongoing workflows



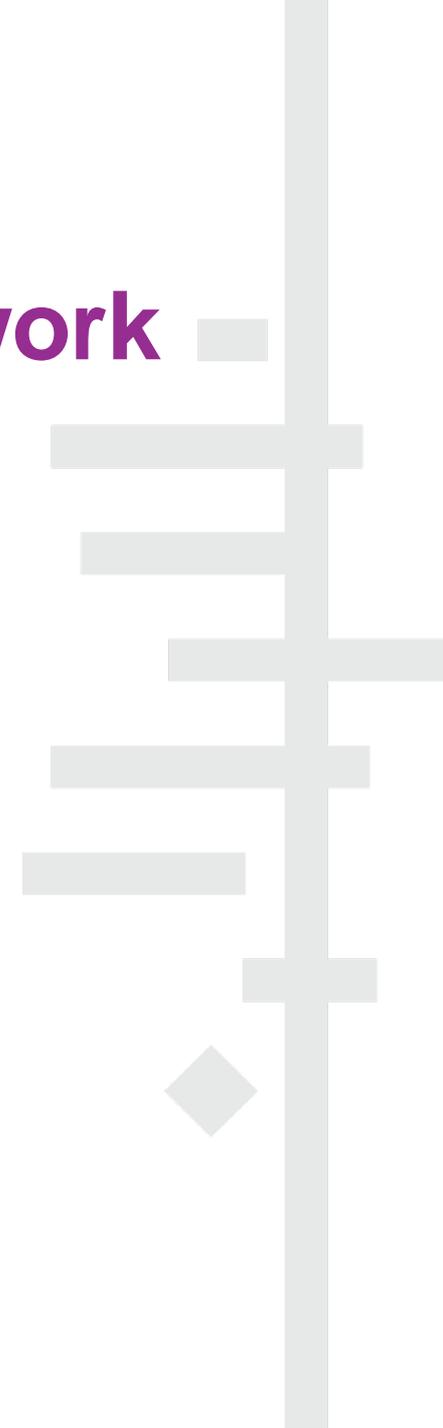
# How do I do an LSR?

- 1 Search
- 2 Production
- 3 Technology enablers
- 4 Statistics
- 5 Publication
- 6 Guidelines and knowledge translation



# Living Systematic Review Network

- 1 Search
- 2 Production
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- 4 Statistics
- 5 Publication
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Project Transform

# Cochrane Living Systematic Reviews

Interim guidance for pilots  
(Draft version 0.2)





## Project Transform

### **Living Systematic Review Network interest group leads**

Elie Akl, John Hilton, Harriet Macle hose, Steve McDonald, Joerg Meerpohl, Georgia Salanti, Ian Shemilt, Mark Simmonds, Anneliese Synnot, James Thomas, Tari Turner

### **Living Systematic Review Network members**

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## Project Transform

### Project Executive

Chris Champion, Julian Elliott (Co-Lead), James Thomas (Co-Lead), Sally Green, Chris Mavergames, Steve McDonald, Anna Noel-Storr, David Tovey, Tari Turner

### Research Committee

Mike Clarke, Julian Elliott, Paul Glasziou, Sally Green, Chris Mavergames, Steve McDonald, Anna Noel-Storr, James Thomas, David Tovey, Tari Turner

### Project Team

Clive Adams, Lorne Becker, Linn Brandt, Rachel Churchill, Agustin Ciapponi, Gordon Dooley, Ruth Foxlee, Demian Glujovsky, Toby Lasserson, Geraldine Macdonald, Sue Marcus, Rupert McShane, Melissa Murano, Charlotte Pestrige, Daniel Perez Rada, Gabriel Rada, Jacob Riis, Ian Shemilt, Emily Steele, Anneliese Synnot, Chris Watts, Karla Soares-Weiser, and IKMD developers.

### Project Component Co-Leads

Evidence Pipeline: James Thomas, Steve McDonald

Cochrane Crowd: Anna Noel-Storr, Chris Mavergames

Task Exchange: Chris Mavergames, Julian Elliott, Tari Turner

Production Models: David Tovey, Julian Elliott, Tari Turner

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